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# EKONOMSKI VJESNIK ECONVIEWS

Review of contemporary business,  
entrepreneurship and economic issues



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Ekonomski fakultet u Osijeku

JOSIP JURAJ STROSSMAYER UNIVERSITY OF OSIJEK  
Faculty of Economics in Osijek

# EKONOMSKI VJESNIK / ECONVIEWS

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# ORIGINAL SCIENTIFIC ARTICLES

## IZVORNI ZNANSTVENI ČLANCI

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# THE DIFFERENCES IN PURCHASE BEHAVIOR BETWEEN REDEEMERS AND NON-REDEEMERS OF COUPONS AT TILL UNDER RETAIL LOYALTY PROGRAMS

## ABSTRACT

Despite the popularity of loyalty programs, evidence on the effects of rewards on consumer behavior is inconsistent. Behavioral loyalty is important for a company as it represents a consumer's tendency to purchase on a regular basis. The goal of this paper is to explore the differences in behavioral patterns between loyalty program members who redeem coupons at till (redeemers) and those who do not (non-redeemers). A survey was carried out using a sample of 750 loyalty cards obtained from a national retail chain. The results show that coupons at till, as a monetary reward, reduced the time between purchases and increased the volume of purchases and average expenditure.

**Keywords:** Loyalty programs, monetary rewards, behavioral loyalty, coupons at till

## 1. Introduction

Loyalty programs are a very popular marketing strategy used in many industries. Retail companies operate in a highly competitive and rapidly changing environment, which is why they need to adapt to the changes in the market and become customer oriented. Grocery retailing is one of the least profitable sectors of the economy with net margins of 1–2%, and the competition for shoppers is fierce (Lal, Bell, 2003). For instance, according to a report by Deloitte (2015), nearly one quarter of the top 250 European and North American retailers experienced declining retail revenue in 2013 and, for both regions, top-line revenue grew at the slowest pace since 2009 (Filipe et al., 2017). Across the retail industry, disruption of traditional business models has given way to unprecedented and transforma-

tive changes - changes required online and offline to better serve more demanding shoppers, and re-defining customer experience.<sup>1</sup> In retail it is difficult to earn customer loyalty because they cannot satisfy all their needs in a single store. Shoppers say they are loyal, and prefer to shop at a single store, but when it comes down to it, only 19% actually do their grocery shopping at a single store in a typical week, and only 7% spend more than 90% of their food budget at a single store.<sup>2</sup>

Today, loyalty programs have become nearly ubiquitous among major service providers, which may be viewed as an industry-standard offering to customers (Lin, Bennett, 2014). Consumer attraction to loyalty programs is based on a sense of belonging, a feeling "that the retailer is prepared to listen, is willing to innovate on behalf of the customer and is

caring, concerned and considerate” (Uncles, 1994). Loyalty card programs are an incredibly data-rich environment for exploring relational outcomes. Moreover, development of database technology helps companies to identify their loyal customers and implement their business philosophy of rewarding the right customers (Yi et al., 2013). When loyalty cards are scanned at the point of purchase, data are captured automatically cataloguing the consumer, time, date, products bought, prices, and a variety of other pieces of information (Allaway et al., 2006). Retailers have chosen to adopt rewards as a way of increasing profitability by encouraging behavioral loyalty on the part of their customers (Worthington, 2000). However, the effectiveness of loyalty programs is questionable. As a result, several firms across the globe have decided to terminate their loyalty programs, e.g. supermarkets such as Safeway (USA), Edah, Jan Linders, Coop (The Netherlands) and Coles (Australia); as well as some banks: ABN Amro (The Netherlands) (Melnyk, Bijmolt, 2015). The question is how to create an effective customer loyalty program that would have a proper relationship with customer. If customers feel the need for affinity, or desire an explicit reward for their loyalty, they will join the programs of the brands they buy (Dowling, Uncles, 2003).

Starting towards the end of the 1980s, computerization allowed for the development of new approaches to loyalty marketing and, in a crucial development, permitted the linking of actual purchasing behavior with reward schemes. Rewards can be differentiated into so-called hard (i.e. tangible) and soft (i.e. intangible) rewards (Hoffman, 2013). Reinartz (2006) proposed that the first category consists of all financial and other tangible rewards, while the other contains rewards that are based on psychological or emotional benefits. Hard benefits are tangible rewards to the consumer, and soft benefits are considered emotional rewards for the consumer (Arbore, Estes, 2013).

According to Meyer-Waarden (2013), utilitarian rewards tend to encompass three fields (Frisou, Yildiz, 2011): (1) economic rewards and monetary savings, which correspond to motivation for purchasing (e.g. price reductions, purchase vouchers (Gable et al., 2008); (2) convenience, in which case they satisfy commodity motivations (e.g. facilitate purchasing, reduce purchasing time (Kwong et al., 2011); or (3) informational rewards, which are

similar to a sense of exploration (Babin et al., 1994; Chitturi et al., 2008; Dreze, Nunes, 2011).

Loyalty program designs that contain various types of monetary-based rewards are mainly aimed at providing economic advantages to a selected number of the firm’s customers and come in the forms of real cash, bonus points, vouchers and so on, but despite the various forms, customers are usually able to convert the reward value into its equivalent cash value (Furinto et al., 2009). Rewards that provide psychological benefits (e.g., gold status, personalized service) are an attractive alternative to stimulate customer loyalty (Melnyk, van Osselaer, 2012). There are the loyalty programs within which the customers get a discount or a gift if they manage to collect a certain number of points/credits from their previous purchases, or where the provision of a discount or a gift is bound to a certain volume of purchases, or where a discount is bound to buying some goods in the previous period (Patak et al., 2014). Adequate rewards can create a perceived value to the consumer for their participation (Meyer-Waarden, 2015). By leveraging the information in the database and the power of sophisticated analysis, companies can identify individual customer-level differences to design rewards that are relevant and perceived as high value by their customers (Kumar, Shah, 2004).

According to Meyer-Waarden (2013), although not quite adequate, some research has been performed investigating customer perception of program rewards (Bridson et al., 2008; Mimouni-Chaabane, Volle, 2010; Meyer-Waarden, 2013); however, studies suggest that loyalty program effectiveness depends on the design of these rewards (Kivetz, Simonson, 2002; Yi, Jeon, 2003; Kivetz, 2005; Kivetz et al., 2006; Demoulin, Zidda, 2008; Smith, Sparks, 2009a; Bagchi, Li, 2011; Dreze, Nunes, 2011). The main reasons for customer dissatisfaction with loyalty schemes include rewards not being accurate or difficult to redeem, and changes in scheme rules (Berman, 2006).

In recent years, coupons have also been used as an important tool in marketing campaigns, and promotional campaigns featuring retailer-customized coupons (for the best customers only and customized to fit their preferences) have been increasingly used to build customer loyalty (Ye, Barat, 2012). According to Wierich and Zielke (2012), in practice, a number of retailers use loyalty card data to launch targeted coupon promotions in cooperation with

manufacturers (Rossi et al., 1996; Ziliani, Bellini, 2004). The “cents-off” coupon was the most prevalent type, but there were many others including free samples, in-store demonstrations, and tie-ins to movies and sporting events (Doolan, Karmarkar, 2014). In 2009, British retailer Sainsbury’s and Aimia launched coupon at till rewards that were based on basket content or Nectar data triggered at the counter.<sup>3</sup> In 2008, a Croatian retail chain also issued coupon at till rewards as a personalized reward for their loyalty program members.<sup>4</sup> This loyalty reward concept contains the monetary aspect of rewarding while the coupons at till offer savings and are personalized according to the consumers’ buying habits. Coupons at till are dispensed immediately after the payment for a product and could be redeemed with the next purchase during a defined period at the same retail chain.

Although a lot of research has been undertaken in studying the effect of coupons on purchasing behavior (Chatterjee, 2007; Kwon, Young, 2010; Barat, Ye, 2012; Zielke, 2014), there has not been a systematic attempt to review and analyze the effect of coupons at till as a reward in a loyalty program. This article will focus on the impact that coupons at till as a reward in loyalty programs have on purchasing behavior. In practice, only repeat purchase behavior is rewarded, and not attitude, as loyalty schemes are often based on classic promotional techniques, with delayed, or immediate rewards (gifts, price reductions, points etc.) or relationship marketing techniques (access to privileges or services, special status, individualization, meals), which encourage customers to purchase more often and remain loyal to the store (Villacé-Molinero et al., 2016). This research is focused on studying behavioral loyalty in retail using data obtained from a retail chain in Croatia.

## 2. Literature review and hypotheses

Customer relationship management (CRM) and loyalty programs have one major commitment, which is to understand customers and meet their expectations. CRM strategy operates in two ways: “structural CRM”, the means by which a company incorporates its operations to deliver better services to customers and greater value to the business; and “active CRM”, the means by which it exploits structural investments to drive sales, reduce costs and improve customer experience (Humby et al., 2007). The fact is that across a vast range of indus-

tries a 5 percent improvement in customer retention rates will yield a 25 to 100 percent increase in profits (Reichheld, 1996).

Loyalty is described here as a deeply held commitment to rebuy or repatronize a preferred product/service consistently in the future, thereby causing repetitive same-brand or same brand-set purchasing, despite situational influences and marketing efforts having the potential to cause a change in behavior (Oliver, 1999). Loyalty is also defined as the intention of a buyer to continue the purchasing relationship with a supplier and to expand the quantity and volume of this relationship (Homburg, Giering, 2001). Consumers are taught to become loyal in a cognitive sense first, then later in an affective sense, still later in a conative manner, and finally in a behavioral manner, which is described as “action inertia” (Oliver, 1999). Loyalty is principally valued for its outcomes since it is the outcome behavior of loyal customers that exercises a huge impact over the revenues and growth of a firm. The literature provides a multitude of behavioral, attitudinal and cognitive outcomes of customer loyalty, some of which are widely recognized and accepted whereas others demand further probing for clarity (Kumar Rai, Srivastava, 2012). The effective relationship between the seller and the buyer could affect the customer’s satisfaction. Although satisfaction may not be the core element of loyalty, particularly after loyalty has been established, it is difficult to entertain loyalty development without satisfaction (Oliver, 1999).

Although much research has been done on the various aspects of loyalty, “it is far from clear what sets a successful loyalty program apart from an unsuccessful one” (Kumar, Reinartz 2006). When retailers look at winning and keeping the loyalty of their customers, they are looking to achieve a little extra goodwill, a slight margin of preference, an incremental shift in buying behavior (Humby, et al., 2007). To a large extent the predecessor of current retail reward schemes was the frequent-flier program that U.S. carrier American Airlines introduced in 1981, where customers earned “free” flights based on the number of miles they had flown with American Airlines (Alvarez, Sessia, 2011). Many researchers argue that in a competitive market, good loyalty programs simply get imitated, which means that the market eventually returns to its base position, but with increased marketing costs - a highly inefficient situation (according to Meyer-Waarden, 2013; Dowling, Uncles, 1997;

Sharp, Sharp, 1997; Leenheer et al., 2007; Liu, 2007; Meyer-Waarden, 2007; Meyer-Waarden, Benavent, 2009; Cedrola, Memmo, 2010). Moreover, whilst some customers can feel the incentive to alter their behavior, some do not see the rewards as worthwhile, and others are suspicious of the whole idea of identifying themselves and their shopping habits, fearing possible misuse (Wright, Sparks, 1999).

Loyalty programs tend to change the shopping behavior of some consumer segments after they join the program, even if some loyal buyers were already being rewarded for their established shopping patterns (Meyer-Waarden, 2007; 2008). However, most loyalty programs do not produce the results they promise: lower customer churn, higher sales and profitability, and more valuable insights into customer behavior (Nunes, Dreze, 2006). Loyalty program membership decision plays a role in customer behavior. The differences in consumer spending between members and non-members (Van Heerde, Bijmolt, 2005) may be partly driven by self-selection of the most loyal customers into the loyalty program. Self-selecting members are already loyal to the store and enrolling in the loyalty program allows them to reap saving and discount rewards without becoming more loyal (Leenheer et al., 2007). In this research, no method to reduce the self-selection bias was applied as the data were obtained from a national retail chain.

According to Demolin and Zidda (2009), with loyalty cards a retailer's objectives are threefold: (1) to retain customers (e.g. Leenheer et al., 2007), (2) to increase customer loyalty (e.g. Meyer-Waarden, 2007), and (3) to collect data about their shopping behavior (e.g. Kumar, Shah, 2004).

The first aim is to retain customers and it is usually fulfilled by rewarding loyal customers. Monetary rewards can stimulate customer purchasing and could include cash rewards, saving points, discounts, or some other combination (van Heerde, Bijmolt, 2005). The second aim is to increase customer loyalty. There is no consensus as to the best means of gauging customer loyalty (Uncles, 2003). According to Melnyk and Bijmolt (2015), some studies report zero effects of such programs on loyalty (DeWulf et al., 2001; Sharp, Sharp, 1997), while other studies found positive effects (Lewis, 2004; Meyer-Waarden, 2007, 2008). Loyalty programs are generally found to influence share-of-wallet (Leenheer et al., 2007) and number of visits (share of visits - SOV) (Maegi, 2003). The basic idea of loyalty

schemes is to reward a customer's repeat purchases and to encourage loyalty by providing targets at which various benefits and rewards accrue for the customer (Alvarez, Sessia, 2011). Behavioral loyalty of participants in loyalty programs is indicated by frequency of visits to the retailer, purchases and percentage of purchases per customer (Gomez, 2006). The third aim is enabled by the technology developments that have become necessary to understand customers' needs and wishes. The data can both produce insights about general buying behavior and allow the seller to target promotions to individual customers (Nunes, Dreze, 2006).

One way to measure the success of a loyalty scheme is to look at the affect the scheme has on the frequency of customer visits and the average amount of spending per visit (Alvarez, Sesia, 2011). All behavioral indicators show that members and non-members of loyalty programs demonstrate significantly different purchasing behavior, irrespective of other factors. The emphasis in most retail loyalty schemes would seem to be on developing an ongoing or long-term relationship, with an expectation that redemption will occur, and that redemption behavior reinforces this relationship (or involvement) over time (Smith, Sparks, 2009).

The purchasing intensity of cardholders, in terms of total and average shopping baskets, share of purchases, purchasing frequency and inter-purchasing time, is significantly higher than that of non-members throughout the entire three-year period and trading areas (Meyer-Waarden, 2008). Buyers prefer monetary rewards the most (Verhoef, 2003). Nunes and Dreze (2006) suggest that, to be attractive, a loyalty program must lead to redemption; that's when the benefits really become more salient to the consumer. Loyalty schemes favor repeat purchasing behavior and retention if they provide higher levels of usefulness (Meyer-Waarden, 2008). According to the historical research results presented above, the following hypotheses have been formulated:

### **H1. Buyers that redeem coupons at till spend more in comparison with buyers that do not redeem coupons at till.**

The main goal of a loyalty program is to encourage customers to visit supermarkets and purchase more products. Customers do not use their loyalty card every time they make a purchase. Being aware of the "laziness" of consumers, retailers reward them in return for their continuous use of the card. These

rewards usually take the form of promotional incentives tied to specific behavior (Mauri, 2003). Promotions of loyalty programs typically aim to increase the frequency and volume of purchases by rewarding cardholders with additional loyalty points or discounts over a limited time period (Dorotic et al., 2011). Frequency reward programs take the form of “buy X times, get something free”, and they typically require customers to proactively redeem their points (Kopalle et al., 2012). Frequency can be a powerful lever to drive revenues and profitability.<sup>5</sup> Therefore, customers increase their purchasing frequency as they get closer to earning a frequency reward. Following previous research, the second hypothesis suggests:

**H2. Buyers that redeem coupons at till are more frequent buyers than those that do not redeem coupons at till.**

Consistent and repetitive purchasing is an indicator of loyalty (Kursunluoglu, 2014). A consumer’s perception of preferential treatment is positively related to their sense of commitment toward the firm (Lacey et al., 2007). Among customers with an economical purchasing orientation, economic rewards that grant monetary savings and informational benefits about good deals (e.g. flyers, brochures, e-mails about good deals and monetary savings) should create intrinsic motivation as they engage in an activity for its own sake (e.g. budget optimization) (Meyer-Waarden, 2013).

On average, buyers who do not redeem any received points visit the stores less often, spend less and purchase a fewer number of products in total (Smith, Sparks, 2009). Taking this into account, the following hypothesis was proposed:

**H3. Buyers that redeem coupons at till have higher average spending per visit than buyers that do not redeem coupons at till.**

### 3. Methodology

The research was carried out at a retail chain in Croatia. The frequent shopper program data were obtained by a retail chain that prefers to remain anonymous. The chain has a dominant market share and started a loyalty program in 2010, thus providing a variety of benefits to its cardholding customers. Loyalty program members collect points to gain future rewards with a delay between collection and redemption. The retail chain has 800,000 loy-

alty program members and is the largest program in Croatia. Customers collect points by using a loyalty card when making purchases. The loyalty card points encourage customers to collect and spend more to increase the possibility of getting rewards. Throughout the year, customers are treated to specially designed offers: seasonal discounts on products and services, promotional pricing, appreciation gifts, contests, additional points and so forth.<sup>6</sup> During 2014, the chain implemented a new reward program with coupons at till to increase sales to its loyal customers. The customers are rewarded according to customer purchase behavior at the cashier receiving the coupon at till that can be used during a period of three weeks. Depending on their purchase behavior, the customers are rewarded with a coupon they receive at the till, which they can use within three weeks. Coupons at till refer to discounts for a specific product, the whole amount of purchase, or a specific group of products. The research was conducted on a randomly selected data set from 750 loyalty card holders from different parts of Croatia in the period from January till December 2014. The retail chain launched the coupons at till as a reward in a loyalty program in April 2014. The records were drawn, using random sampling, from an identified segment of loyalty cards from the database of active data holders. The retailer anonymized the data set of loyalty cards (removing personal data or descriptions) in order to satisfy data regulations and privacy concerns. The obtained database consists of 24,897 customer transactions (max. 39,000=750 loyalty cards\*52 weeks). The data set consists of real world recorded behavior which included coupons at till data (card number, coupon, date of coupon printing, type of coupon reward, date of coupon redemption), and data on purchases made with or without coupons in the mentioned period (card number, place of issue, week of the year, basket spending, number of visits). It is important to mention that the data refer to a household and not to a single person. In this research the buyer is considered as any member of the same household that uses the loyalty card. To analyze the collected data, many different statistical methods will be used. Data processing will involve the processing of two databases created based on real data from the retail chain; specifically, a database with information on the use of loyalty card and a database created and based on buyer information.

Descriptive statistics will be used for all analyzed variables. Analysis of information regarding the use

of loyalty cards refers to loyalty program members that redeem coupons at till (the redeemers) and loyalty program members that do not redeem coupons at till (the non-redeemers). The research data includes total spending recorded for a loyalty card, basket spending at each visit, week of the year, information whether the buyer redeemed the coupon at till, and number of purchases per week. To process data regarding weekly spending for one loyalty card, univariate and multivariate methods will be used, considering total spending and spending by redeeming coupons at till on a weekly basis. Behavioral variables of redeemers and non-redeemers will be compared using the Student's t-test if the homogeneity of variance assumption has been met or using the Mann-Whitney U test if the assumption has not been met. A correlation will be made between the total number of visits and basket spending both for redeemers and non-redeemers. The correlation between redeemers and basket spending at each visit, regardless of whether the coupon at till was redeemed or not, will also be tested. For all analyzed variables (number of visits, total spending and average spending) descriptive statistics have been used.

Differences in analyzed variables have been tested by means of the nonparametric Mann-Whitney U test. The significance level for all statistical tests was set at 5%. All statistical tests and diagrams have been created using STATISTICA software.

#### 4. Results and discussion

Table 1 presents a comparison of non-redeemers (loyalty program members that do not have a single redemption purchase in the researched period) with redeemers. Although 43% of consumers in the sample redeem coupons at till, an analysis of their behavior shows that they spent more in the period under investigation than non-redeemers. Furthermore, the results show that non-redeemers visit the stores less often, spend less and purchase a fewer number of products in total (Hypothesis 1 confirmed). Standard deviation (Table 1) for total spend per week for redeemers is HRK 343.54 (the number of visits in the period reviewed is 780), while the standard deviation for non-redeemers is HRK 257.47 (the number of visits is 24,117).

Table 1 Comparison of redeemers and non-redeemers

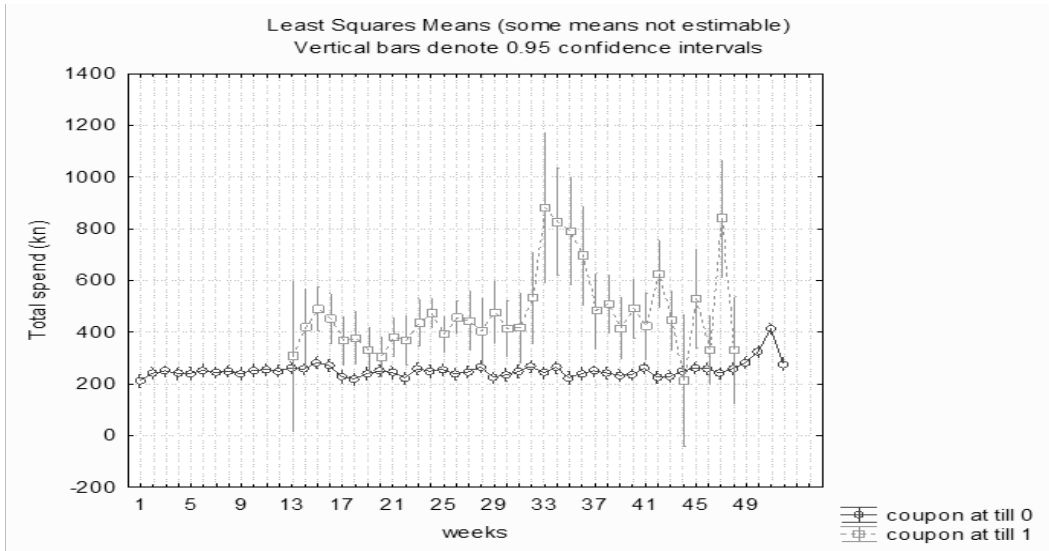
	Redeemers (n= 324)	Non-redeemers (n=426)	Mann-Whitney U test
<b>Number of visits per week</b>			
Mean	4.16	2.67	Z=-20.01
Standard deviation	2.39	1.96	p<0.001
<b>Total spend (HRK) per week</b>			
Mean	436.78	253	Z=-7.59
Standard deviation	343.54	257.47	p<0.001
<b>Average spending per visit (HRK)</b>			
Mean	122.56	110.29	Z=-20.22
Standard deviation	122.55	128.86	p<0.001

Source: Author's own calculation

Spending patterns during 2014 displayed in Figure 1 show that redeemers spent more during the year especially in the period from week 33 to week 37 (August). The database does not contain data pertaining to week 1-12 because the rewards program was launched in April. The retail chain did not dis-

tribute the coupons at till for the period between weeks 49-52. Confidence intervals on the mean for redeemers are very wide because the number of visits (customer\*week) is lower than for non-redeemers (Figure 1).

**Figure 1 Total spending (HRK) for redeemers and non-redeemers per week**

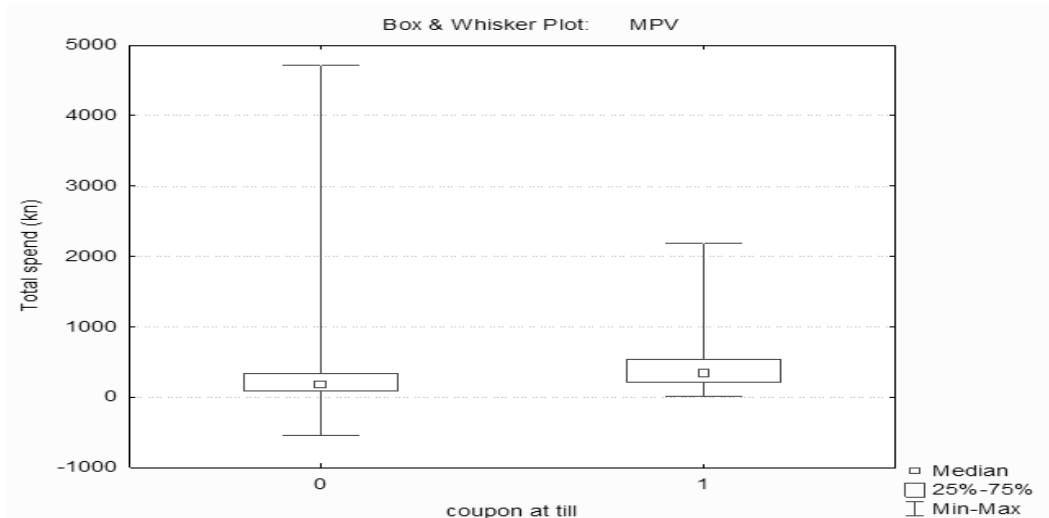


Source: Author's own calculation

The results of the Mann-Whitney test indicate that the average total spending in a year is statistically higher for redeemers ( $436.78 \pm 343.54$ ) in comparison with non-redeemers ( $253 \pm 247.47$ ). Redeemer's spending in the year under investigation was on

average 72.6% higher than that of non-redeemers (Figure 2). The database included negative values because there were cancelled receipts for some loyalty cards in the sample.

**Figure 2 Box-Whisker plot of total spending (HRK) for redeemers and non-redeemers**

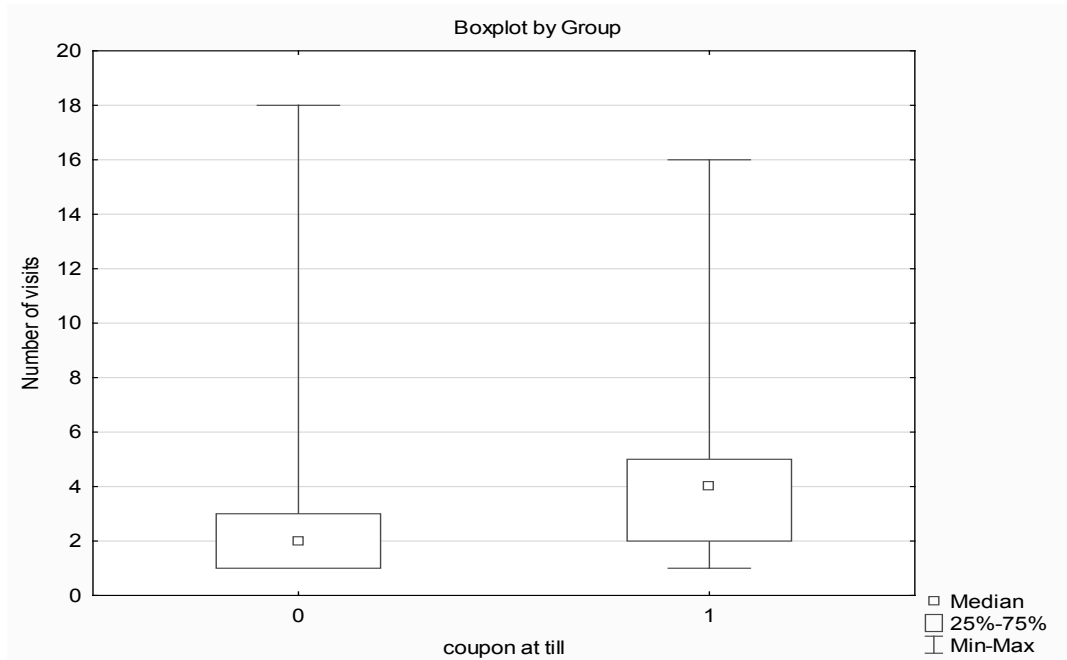


Source: Author's own calculation

H2 predicts that buyers that redeem coupons at till are more frequent buyers than those that do not redeem coupons at till. As shown in Table 1, the number of visits is statistically higher for redeemers ( $4.16 \pm 2.39$ ) than for non-redeemers ( $2.67 \pm 1.96$ ). Figure 3 displays the number of visits in a week for redeemers and non-redeemers. As presented, the median number of visits for redeemers is 4 and the median number of visits for non-redeemers is 2. This indicates that the frequency of visits by redeemers compared to non-redeemers was 50%

higher. Redeemers visited the stores more often (4 times in a week) than non-redeemers, thus indicating that earning a coupon at till increased purchasing frequency which supports Hypothesis 2. This shows that the component “reward frequency” in this case suggests a higher customer involvement through the rewarded behavior effect. There is also a “points pressure” effect as customers increase their purchasing frequency and amount per visit in order to earn a reward.

Figure 3 Box-Whisker plot for number of visits for redeemers and non-redeemers in a week



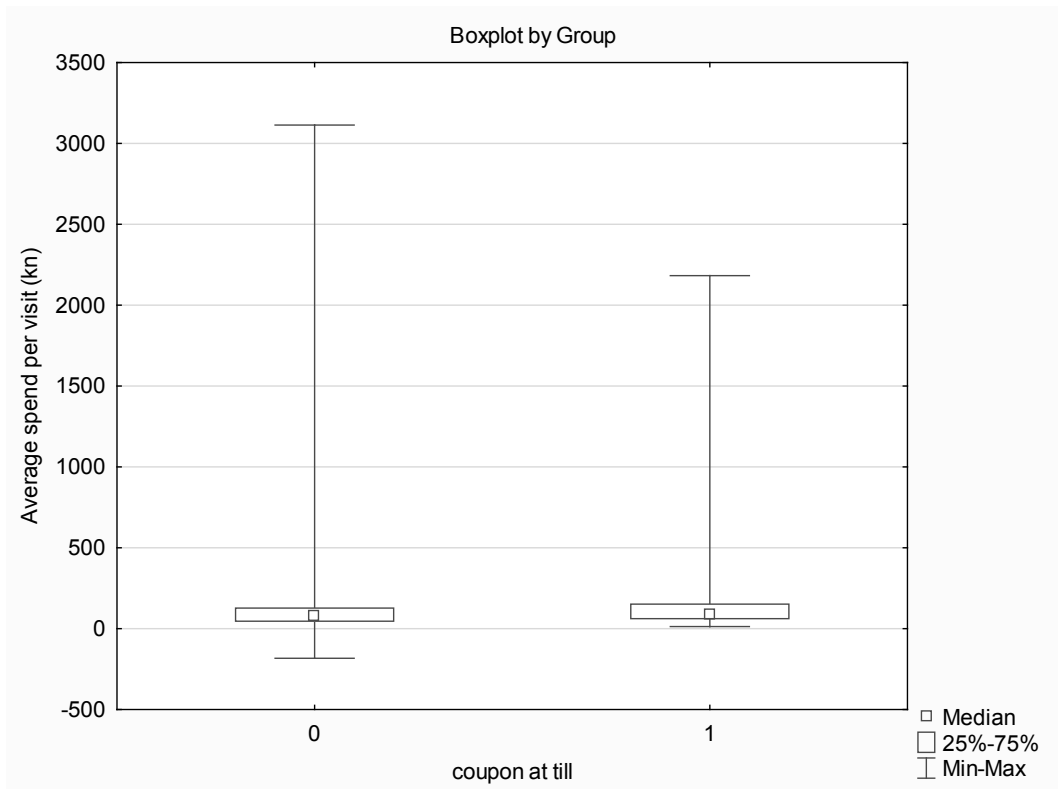
Source: Author's own calculation

H3 predicts that buyers who do redeem coupons at till have higher average spending per visit than buyers who do not. Analyzing average spending per visit (Table 1), there is a statistically significant difference between redeemers ( $122.56 \pm 122.55$ ) and

non-redeemers ( $110.29 \pm 128.86$ ) thus confirming Hypothesis 3. Figure 4 indicates that both distributions of average spending are asymmetric with the biggest difference due to the 25% of buyers that spend the most.



Figure 4 Box-Whisker plot for average spending per visit (HRK) for redeemers and non-redeemers



Source: Author's own calculation

## 5. Conclusion

Although loyalty programs have been around for three decades, their effectiveness is still widely debated. The main goal of a reward program is to increase customer loyalty, which can be categorized into behavioral and attitudinal loyalty (Dorotic, 2012). This paper investigates to what extent monetary rewards in a loyalty program influence customer loyalty behavior. The focus of the research is to examine the impact of coupons at till, as a monetary reward in loyalty programs, on consumer behavior over a one-year period. Secondary data obtained from a retail chain in Croatia was used in the study, which provided realistic information about consumer behavior. The behavioral measurements within the loyalty program that were analyzed include total spending, purchasing frequency and average spending per visit.

The results suggest that coupons at till, as a monetary reward, increase the total spending of redeemers in comparison with non-redeemers during the year. This is consistent with the findings of some studies that have shown that loyalty program members and non-members display significantly different purchase behavior (Meyer-Waarden, 2008). Furthermore, members of loyalty programs tend to accelerate toward rewards in terms of timing, quantity and persistence of effort (Kivetz et al., 2006).

Consistent with previous research (Kopalle et al., 2012; Meyer-Waarden, 2008), this study has confirmed that buyers that do redeem coupons at till are more frequent buyers than those that do not. The pressure to earn points probably encourages customers to increase their purchase frequency or volume to obtain the reward (Kivetz et al., 2006).

Furthermore, the results have indicated that the average spending per visit for the buyers using coupons at till is higher than of non-redeemers, thus showing that redemption of rewards is a significant component of this repeat behavior (Smith, Sparks, 2009).

This research shows that there is a difference in the purchase behavior of the loyalty program members who do and those who do not redeem coupons at till. These results may help practitioners understand how customers respond to monetary rewards. Furthermore, the study reveals how consumers perceive coupons at till as monetary rewards and how they modify their behavior in terms of store visits and spending. Although there are conflicting theoretical findings regarding monetary rewards (Melnyk, Bijmolt, 2015), this research has shown that monetary rewards are an effective tool for increasing customer loyalty.

The research findings could be useful for retailers as coupons at till could be considered an effective reward for loyal buyers that are committed to the program, especially nowadays when database technology allows customizing coupons based on the customer's purchase history. Further research could investigate different design features, face value or redemption opportunities of coupons at till, thus extending the knowledge of this type of rewards program. The effectiveness of the use of coupons at till depends on the customer who has earned it. It would be interesting to know whether a different coupon at till distribution method (for example via mobile phones) would increase their usage. Moreover, it would be useful to monitor customer loyalty over a longer period so that adjustments can be made to improve program efficiency. Finally, it would be appropriate to include attitudinal research to capture all aspects of loyalty in a more effective manner.

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*Zrinka Filipović*

## **RAZLIKE U KUPOVNOM PONAŠANJU IZMEĐU POTROŠAČA KOJI KORISTE I KOJI NE KORISTE KUPONE NA RAČUNU U PROGRAMIMA VJERNOSTI U MALOPRODAJI**

### **SAŽETAK**

Unatoč popularnosti programa vjernosti još uvijek postoje kontradiktorni podatci o utjecaju programa vjernosti na ponašanje potrošača. Cilj je ovog rada istražiti utjecaj „kupona na računu” kao oblika novčanih nagrada za vjernost potrošača i to u smislu njihova ponašanja u maloprodaji. Vjernost potrošača koja se ogleda kroz njihovo ponašanje je vrlo važna za svako poduzeće jer ona pokazuje tendenciju potrošača da kupuju na redovnoj osnovi. Istraživanje je provedeno na uzorku od 750 kartica vjernosti dobivenih od maloprodajnog lanca. Rezultati su pokazali da su kuponi na računu, kao oblik novčane nagrade, utjecali na smanjivanje vremenskog razmaka između kupovina, kao i na volumen kupovine i prosječnu potrošnju.

**Ključne riječi:** programi vjernosti, novčane nagrade, vjernost potrošača u smislu njihovog ponašanja, kuponi na računu

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# THE PERFORMING ARTS EXPERIENCE: REFLECTIONS ABOUT THE OPERA ATTENDEES

## ABSTRACT

Experiential marketing helps make a memorable experience for the consumer. Consumer characteristics enable them to perceive the offered stimuli differently. This study investigates the differences in the evaluation of artscape – the application of servicescape in the performing arts – according to opera attendees' experience with the cultural organization. Literature framework fails to confirm differences between experienced and inexperienced visitors. However, the level of commitment with the artistic organization contributes to building a deeper relationship. On the basis of 867 Spanish opera attendees' responses, a one-way ANOVA technique has been used to analyze the proposed hypotheses, adopting a holistic perspective of the artscape, which includes not only its tangible, physical dimensions but also the social ones. Significantly different evaluations of the artscape show that the attendees' experience is important as the basis for adequate segmentation. The greater the extent of the contractual relationship and contact with the opera house, the better the evaluation of the physical and social artscape. This paper helps to fill a research gap in the area of servicescape applications in the nonprofit performing arts. In addition, it provides deeper knowledge about the servicescape experience.

**Keywords:** Artscape, non-profit opera, experiential marketing, frequency, subscription program

## 1. Introduction

Opera, as a performing art, is considered a non-profit cultural service because opera houses are not capable of generating enough income from their activity. It is always necessary to provide additional economic resources – public or private – working on the premise of not obtaining economic benefits. Opera organizations are more focused on social objectives, like reaching new audiences or developing artistic projects. Performing arts need to consider

consumers' attitudes in order to survive in a financially reduced environment. One major strategic challenge for cultural organizations is to balance all the economic issues and constraints against the importance of achieving artistic and cultural missions (Sullivan Mort et al., 2003). In this context, the servicescape acquires greater significance and becomes a key element (Carù, Cova, 2005).

Performing arts, as a hedonic service, are characterized by two consumption metaphors: experience and

integration (Holt, 1995). The performing arts as an experiential service are described as one with low customization (Ng, Dagger, 2007). Hence, artistic organizations should invest considerable time in the customer relationship. Experiential marketing helps make a unique, memorable experience for the consumer, establishing a connection with the organization or brand (Schembri, 2006; Tynan, McKechnie, 2009). The development of a customer experience is formed by three factors (Palmer, 2010; Sheth et al., 1999): the characteristics, context and situational variables of stimuli. The stimuli's characteristics enable attendees to perceive a stimulus differently depending on the stimulus' sensory characteristics and information content. In perceiving stimuli with a given set of characteristics, it is considered that attendees will be influenced by the context of the stimulus. In the situational variables via which the information is received, the attendees' perceptions are mostly influenced by individual characteristics, including their experience with the service. The level of commitment also contributes to a deeper relationship with the artistic organization (Garbarino, Johnson, 1999; Johnson, Garbarino, 2001).

Servicescape is defined as the environment or setting where the consumer experience is created in the service encounter (Harris, Ezeh, 2008; Hooper et al., 2013). Lovelock et al. (2008) identify that the servicescape is strategically useful in three ways: first, as a creator of the message that the organization wants to convey; second, as the attention source of the customers targeted; and third, as an originator of impressions for enhancing the service experience in the right direction. Experience and meaning generation based on the connectedness felt among consumers are more likely in collective hedonic consumption situations (Drengner et al., 2012). Current research defends a holistic perspective of the analysis of the servicescape, including physical and social elements jointly (Mari, Poggese, 2013).

The importance of the servicescape in hedonic services has been considered in several studies, particularly in collective hedonic services and as an antecedent of post-consumption evaluations. A servicescape of perceived high quality generates greater satisfaction (Wakefield, Blodgett, 2016) and loyalty (Harris, Ezeh, 2008; Lee et al., 2008). In this context, there is a major probability of repeating the consumer experience (Wakefield, Blodgett, 2016) and developing repatronage intentions (Kottasz, 2006; Ryu, Jang, 2007). Furthermore, a positive evaluation of the servicescape generates a positive recommendation for the service (Uhrich, Benkenstein, 2012).

In addition, the impact of visitors' characteristics on post-consumption behavior in the performing arts has been investigated. Regular subscribers are more satisfied than occasional subscribers or individual ticket buyers (Garbarino, Johnson, 2001). In contrast, Boerner et al. (2011) fail to confirm the expected differences between experienced and inexperienced visitors in their statements on visitor satisfaction. Furthermore, differences in gender, age and marital status occur (Boerner, Jobst, 2013; Song, Cheung, 2010; Voss, Cova, 2006). As regards the servicescape, personal characteristics can moderate its importance (Harris, Ezeh, 2008) and explain the differences in the reception of the servicescape as a stimulus in consumers (Palmer, 2010). In this sense, long-lasting involvement contributes positively to improving the evaluations of the servicescape (Hightower et al., 2002).

Based on the previous discussion, the main contribution of this paper is to detect how opera attendees' post-consumption evaluations about the servicescape differ depending on different attendees' characteristics. Our first objective is to describe the evaluations of the servicescape in the performing arts – known as artscape – adopting a holistic definition of the servicescape (Mari, Poggese, 2013), which has been underresearched in the non-profit literature. Next, it is to provide a better description of these evaluations according to opera-goers' experience derived from their immersion (i.e. level of contractual relationship and visit frequency) in the artistic organization. Our research covers the gap in analyzing differences in the evaluation of the servicescape in the performing arts, following the characteristics of experiential marketing. Our hypotheses were tested using an ANOVA analysis in a sample of 867 Spanish opera-goers. In order to achieve the proposed objectives, this paper is organized as follows: The first section explains the theoretical framework of the servicescape in an experiential marketing context. We then establish the hypotheses of the evaluation of the servicescape in the performing arts, or artscape. The methodology section that follows describes the information-gathering process and the scales used. Next, we present and discuss the results. Finally, the conclusions and limitations of our research, together with managerial implications, are presented.

## **2. Experiential marketing in the performing arts: the role of the servicescape**

According to Pine & Gilmore (1999), experiences depend on the degree of consumer participation –



active or passive – and the degree of the consumer relationship with the experience's environment, i.e. immersion or absorption. In the performing arts, we are noticing the need to improve the attendees' experience in terms of active participation and immersion (Carù, Cova, 2005). In his description of experiences Schmitt (1999) highlights the relationship between individuals in social environments in order to strengthen the relationship with organizations. According to Holt (1995), the interaction between attendees is vital to the consumption experience. Its implementation requires cooperation from the organization's staff, generating a dynamic, fluid exchange of information between customers and organizations. Three main stakeholders participate in the performing arts: artists, organizations and attendees (White et al., 2009). Together with the organization, the artists and sometimes the attendees coproduce the artistic service (Boorsma, 2006). For artistic organizations, the performing arts are a means of coproduction with the attendees, who take part in their communication (Chaney, 2012). The consumers' active participation influences the service's coproduction (Eglier, Langeard, 1987). According to Conway & Leighton (2012), in the performing arts, the degree of attendees' participation depends on the product and the communication; in this sense, the most integrative focus connects with the service-dominant logic via the co-creation between the attendees and the organization (Vargo, Lusch, 2004).

According to the experience literature, the servicescape is one of the most remarkable elements of the experience (Carù, Cova, 2005; Kwortnik, 2008; Nguyen et al., 2012; Pareigis et al., 2012). In the performing arts, it is fundamental to consider joint consumption as integrating experiences where the value is inherent in the interactions (Holt, 1995). The environment where the service takes place plays a role in modifying this experience (Carù, Cova, 2005; Kwortnik, 2008). In museums, Kesner (2006) concludes that a suitable servicescape is fundamental to an organization's success. Thus, the servicescape acquires greater significance and is a key element in cultural services, including performing arts services.

### 2.1 *The differences in the evaluation of the servicescape in performing arts: hypotheses*

Servicescape is identified as the environment or scenario where a consumer experience takes place during the service encounter in order to get a particular, desirable consumer behavior (Ezeh, Harris, 2007; Harris, Ezeh, 2008). Present models analyzing

the servicescape are limited and almost exclusively focus on its tangible physical elements (Tombs, McColl-Kennedy, 2003). Some researchers have realized that not only physical elements are important in the servicescape (Lin, Liang, 2011; Uhrich, Benkenstein, 2012). Social elements in the service encounter are sufficiently significant *per se* to also warrant consideration as part of the servicescape (Bitner, 2000; Hoffman, Turley, 2002; Turley, Milliman, 2000). Recent research, without ignoring the preceding literature, believes in the coexistence of social and physical dimensions in the servicescape (Harris, Ezeh, 2008; Uhrich, Benkenstein, 2012). Current research defends the need to study social elements (Moore et al., 2005), particularly in the performing arts (Nguyen et al., 2012). Tangibles and intangibles are essential in the creation of experience in services, and particularly in the performing arts. Except for museums (Kottasz, 2006) seen as venues for visual arts, the servicescape in the performing arts has not been properly analyzed, although there have been exceptions (Jobst, Boerner, 2011; Nguyen et al., 2012). In the case of the performing arts, Nguyen et al. (2012) have demonstrated the importance of the social servicescape. In line with proposals from other authors in other service contexts like sportscape (Wakefield, Blodgett, 2016), healthscape (Hutton, Richardson, 1995), dinescape (Ryu, Jang, 2007), shipscape (Kwortnik, 2008) and festivalscape (Lee et al., 2008), we propose that the concept of servicescape in the performing arts be named *artscape* (Tubillejas Andrés et al., 2015). According to the theoretical framework, and based on a holistic perspective, from our point of view (Tubillejas Andrés et al., 2015), artscape is made up of physical and social dimensions. Academic research considers that a physical servicescape is composed of interior and exterior elements (Grayson, McNeill, 2009; Hoffman, Turley, 2002; Turley, Milliman, 2000) related to the ambience, design, layout and functionality of the servicescape (Bitner, 1992; Hightower et al., 2002). The social servicescape is determined by both consumers and employees (Bitner, 1992), as well as by the interactions produced among them (Rosenbaum, Massiah, 2011): employees' characteristics, attendees' characteristics, interactions between employees and attendees, and interactions between attendees.

Taking into account the relevance of the servicescape in the consumer's post-consumption behavior (e.g. perceived value, satisfaction or loyalty), it is worth studying the evaluation of the servicescape. Individual characteristics (personal, demographic or psychographic) are likely to result in differences

in attendees' evaluations (Boerner et al., 2011) and explain the differences in the reception of the stimuli (Palmer, 2010). Long-lasting involvement improves the evaluations of the servicescapes (Hightower et al., 2002). The level of visit frequency also affects the subject of attendees' criticisms. Frequent attendees are also more likely to emphasize artistic elements whereas occasional attendees are more likely to emphasize personal reactions and the service quality, including intangibles and atmospherics (Boerner et al., 2011).

Consequently, taking into account the experience with the artistic organization, which varies according to the degree of consumer participation (Carù, Cova, 2005), it is very important to study the evaluation of servicescape according to the attendees' experience.

Traditionally, in the literature on performing arts, this participation has often been measured by criteria of behavior – intense, occasional or isolated attendees (Belk, Andreasen, 1980; Hodgson, 1992; Peterson, 1980); attitude and implication – enthusiastic, interested or not interested (Strang, Gutman, 1980; Walsher, 1992); or contractual relationship with the organization – subscribers or non-subscribers (Garbarino, Johnson, 1999; Johnson, Garbarino, 2001). More recently, segmentation continues to be a topic of interest for researchers, focusing on frequency criteria (Kolhede, Gomez-Arias, 2016, 2017).

On the basis of relational marketing, Johnson & Garbarino (Johnson, Garbarino, 2001) show that there are differences in attitudes between subscribers and non-subscribers. Although different types of attendees are identified by artistic organizations carrying out subscription programs, the literature on marketing demonstrates that it is more expensive to attract new attendees to buy a single ticket than to offer price discounts or seating priorities to the subscribers committed to the artistic organization. The subscribers represent the organization's high quality customer base. In the case of artscaapes, it is essential to know the differences in subscribers' evaluations, especially compared to the attendees who are non-subscribers. Accordingly, our first hypothesis is:

H1: The evaluations of the artscape differ depending on the level of the performing arts attendees' contractual relationship with the artistic organization.

Visit frequency is a segmentation criterion for describing performing arts attendees now and before (Kolhede, Gomez-Arias, 2016, 2017). Attendance frequency has been found to influence visitors'

perception (Jobst, Boerner, 2011). There are differences between occasional and frequent attendees' expectations and the perception of a performance (Boerner et al., 2011). In this sense, the attendees' visit frequency generates experienced and less experienced visitors. Thus, experienced attendees will probably be more demanding and selective (Boerner et al., 2011). Experienced attendees are assumed to develop higher expectations than less experienced ones (Boorsma, Maanen, 2003). Moreover, due to their knowledge of the artistic organization, they usually place more importance on individual and specific elements (Eversmann, 2004). In this case, occasional attendees evaluate isolated elements more lowly (Boerner et al., 2011). Moreover, less experienced attendees will probably be more susceptible to being influenced in their evaluations by social interaction processes (Boorsma, Maanen, 2003; Crozier, 1996; Eversmann, 2004). Considering this, our next hypothesis is:

H2: The evaluations of the artscape differ depending on the performing arts attendees' visit frequency.

### 3. Research methodology and results

#### 3.1 Sampling procedure

A sample of 867 opera-goers at the opera house known as Palau de les Arts "Reina Sofia" in Valencia, Spain, was used. The information was gathered from an online survey using a structured questionnaire, taking into account the existing literature. The questionnaire had been pretested by academic experts, cultural managers and a group of opera attendees to ensure content validity of the items to be included. The response rate was 27.20%. An email presentation, including the survey link, was sent to the Palau's subscribers and non-subscribers according to the census provided by the Palau's managers. The sample was made up of men (58.90%) and women (41.10%) mainly from Valencia, Spain (75.96%). The majority of performing arts attendees were over the age of 40 (95.70%) and were university graduates or postgraduates (91.22%). 61.43% respondents in the sample have musical knowledge. The principal job categories of the sample were salaried worker (46.92%), freelancer (24.97%) and retired person/pensioner (25.80%). Monthly family net incomes fall between €2,001 and €6,000 (66.35%); which is above average according to the INE (Spanish statistics institute) database (INE, 2014). It seems that opera-goers in the sample are quite educated and socially well positioned. Subscribers make up 79.24% and non-subscribers

20.76% of the sample. Almost 95% of the sample visit the opera house 4 times or more per year for performances.

All scales have been measured using a 0-10 point Likert scale from strongly disagree (0) to strongly agree (10).

### 3.2 Measurement instruments

Exterior and interior elements were measured by applying a sixteen-item scale, adapted from Hightower et al. (2002). Employees' and attendees' characteristics were each also measured by a three-item scale, adapted from Hightower et al. (2002). Similarly, employees' and attendees' interactions were measured by a three-item scale from Brady and

Cronin (2001) and Nguyen et al. (2012). Attendees' interactions were measured by a four-item scale from Moore et al. (2005).

### 3.3 Results

First, we examined the descriptive results of the different variables of the artscape; see Table 1. The social artscape (7.63) is evaluated slightly better than the physical artscape (7.52). In the physical artscape, the exterior and interior are similarly evaluated at 7.50 and 7.55 respectively. In the social artscape, employees' characteristics are the best evaluated (8.37), followed by the employee-attendee interactions (7.94), attendees' characteristics (7.22) and attendees' interactions (6.98).

Table 1 Descriptive results of the artscape

ARSTCAPE				Mean	SD	CV
SOCIAL ARTSCAPE	EMPLOYEES' CHARACTERISTICS	ENTSCEMP1	There are enough employees at _____ to assist customers.	7.70	2.00	25.99%
		ENTSCEMP2	The employees of _____ are neat and well dressed.	8.59	1.40	16.38%
		ENTSCEMP3	Employees of _____ are polite when dealing with attendees. *	8.82	1.30	14.79%
		<b>TOTAL</b>		<b>8.37</b>	<b>1.32</b>	<b>15.85%</b>
	ATTENDEES' CHARACTERISTICS	ENTSCESP1	_____ customers are neat and well dressed.	7.38	1.83	24.82%
		ENTSCESP2	It seems that the attendees of _____ have had musical education or training. *	6.87	1.68	24.55%
		ENTSCESP3	_____ customers are friendly.	7.41	1.81	24.50%
		<b>TOTAL</b>		<b>7.22</b>	<b>1.48</b>	<b>20.57%</b>
	EMPLOYEES – ATTENDEES INTERACTIONS	ENTSIEMP1	I'd say that the quality of my interaction with the _____ employees is high.	7.83	1.80	22.98%
		ENTSIEMP2	Overall, I would say that the quality of my interaction with the _____ employees is excellent.	8.04	1.65	20.58%
		<b>TOTAL</b>		<b>7.94</b>	<b>1.64</b>	<b>20.77%</b>
	ATTENDEES' INTERACTIONS	ENTSIESP1	I have developed friendships with other customers I met at _____.	6.76	1.93	28.55%
		ENTSIESP2	I enjoy spending time with other customers at _____.	7.01	2.08	29.80%
		ENTSIESP3	The other customers at the _____ make my time there more enjoyable.	6.41	2.04	31.81%
		ENTSIESP4	There is a good chance I will run into one of my friends at _____.	7.72	1.92	24.92%
		<b>TOTAL</b>		<b>6.98</b>	<b>1.59</b>	<b>22.88%</b>
<b>TOTAL SOCIAL ARTSCAPE</b>				<b>7.63</b>	<b>1.16</b>	<b>15.33%</b>

\* Added to the original scale.

Valid cases: 867 except for ENTFE3 that are 275.

SD: Standard deviation - CV: coefficient of variation

Source: Authors

A One-Way ANOVA was used to test the proposed hypotheses; see Table 2. For H1, the results validate a significant difference between the means of the two identified groups—subscribers and non-

subscribers—in the evaluation of the employee-attendee interaction and the interior. Thus, we accept H1 partially. Subscribers show better evaluation in terms of their interaction with employees

than non-subscribers, and they feel better about the interior of the opera house. For H2, the results validate a significant difference between the means of the three identified groups – visit frequency of less than 3 times, between 4 and 6 times and more

than three times – in the evaluation of attendees' interactions, employee-attendee interaction and the interior. Thus, we accept H2 partially. The more frequently attendees go to the opera, the better the evaluations found in these dimensions.

Table 2 ANOVA results for artscape

Scale (0-10)	HYPOTHESIS 1		HYPOTHESIS 2		
	Subscribers n = 687 Mean	NonSubscribers n = 180 Mean	Visit frequency: ≤ 3 times n = 45 Mean	Visit frequency: 4 – 6 times n = 447 Mean	Visit frequency: > 6 times n = 375 Mean
EXTERIOR	7.55	7.33	7.20	7.45	7.60
INTERIOR	7.61 *	7.35 *	7.09 **	7.50 **	7.69 **
EMPLOYEES' CHARACTERISTICS	8.37	8.37	7.93	8.37	8.43
ATTENDEES' CHARACTERISTICS	7.20	7.32	6.81	7.31	7.17
EMPLOYEE-ATTENDEE INTERACTIONS	8.01**	7.68**	7.43 **	7.86 **	8.10 **
ATTENDEES' INTERACTIONS	6.98	6.98	6.48 ***	6.86 ***	7.19 ***

In italics, heteroscedastic variables: Test Brown-Forsythe and Test Welch applied in this case instead of ANOVA

\* Significant at 0.1 / \*\* Significant at 0.05 / \*\*\* Significant at 0.01

Source: Authors

In order to detect differences among the three groups of the 'visit frequency' variable in the significant dimensions detected, we made a post-hoc test for pairwise comparisons; see Table 3. For homoscedastic dimensions – employee-attendee interaction – we applied a Hochberg GT2 test due to the different sizes of the groups. For heteroscedastic dimensions – interior and attendees' interactions – we applied a Games-Howell test that is more appropriate (Hair et al., 1999). For the interior and employee-attendee interaction dimension, the post-hoc test revealed dif-

ferences and we can observe two different groups in the evaluations. Attendees who visit the opera house three times per year or fewer have lower evaluations of these dimensions than attendees who visit the opera house more often. For the attendees' interactions dimension, the post-hoc test revealed differences and we can observe two different groups in the evaluations. Attendees who visit the opera house six times per year or fewer have lower evaluations of this dimension than attendees who visit the opera house more frequently.

Table 3 Post-hoc tests results

Mean differences (Horchberg GT2 post-hoc test)		INTERIOR	Employee – Attendee interactions	ATTENDEES' INTERACTIONS
Visit frequency: ≤ 3 times	4 – 6 times	<i>-0.40</i>	-0.43	<i>-0.37</i>
	> 6 times	<i>-0.60 *</i>	<i>-0.66 *</i>	<i>-.071 *</i>
Visit frequency: 4 – 6 times	≤ 3 times	<i>.040</i>	0.43	<i>0.37</i>
	> 6 times	<i>-0.19</i>	-0.23	<i>-0.33 ***</i>
Visit frequency: > 6 times	≤ 3 times	<i>0.60 *</i>	<i>0.66 *</i>	<i>0.71 *</i>
	4 – 6 times s	<i>0.19</i>	0.23	<i>0.33 ***</i>

In italics, heteroscedastic variables: Games-Howell post-hoc test applied in this case.

\* Significant at 0.1 / \*\* Significant at 0.05 / \*\*\* Significant at 0.01

Source: Authors

#### 4. Conclusions

Experiential marketing contributes to traditional marketing due to the consideration of the attendees as emotional individuals who value the intensity of the experience more than the service itself (Conway, Leighton, 2012). Our paper provides a literature review of the content of the servicescape in the area of performing arts, applied in the non-profit opera sector. Considering the previous debate and having detected that there are differences in the evaluation of the artscape depending on the contractual relationship and the attendees' frequency of visits, some theoretical and managerial implications arise.

On the basis of a wide literature review, a servicescape is defined as the environment or scenario where consumer experience and service encounters take place in order to get a particular, desirable consumer behavior, and it is composed of physical and social dimensions (Ezeh, Harris, 2007; Harris, Ezeh, 2008). We have provided a long list of items within each dimension on the basis of a previously validated scale. Our results show that the social artscape is valued similarly to the physical one by opera attendees, with a slightly higher score. Moreover, the results provide differences in servicescape evaluation according to the attendees' personal characteristics that were analyzed. In the physical artscape, the interior is better evaluated when attendees are subscribers and go to the opera frequently. They appreciate superior features like comfortability, temperature, design, acoustics, signs, technology and so on. In the social dimension of artscape, employee-attendee interactions are better evaluated when the attendees are subscribers and visit frequently. Moreover, attendees' interactions are even better evaluated when attendees visit often during the season. At first, attendees consider their relationship with the organization. Later, however, when they are more experienced in their visits, they prefer to enjoy their experience with other attendees. Still, we have not found differences in the evaluation of the physical artscape (i.e. exterior) or social artscape (i.e. employees' and attendees' characteristics).

Several managerial implications arise from this research. First, cultural managers can measure how opera-goers evaluate the physical as well as the social artscape according to their service experience. The servicescape analysis from a holistic perspective (Mari, Poggesi, 2013) in the non-profit sector has not been deep enough. Considering the physical

servicescape alone as part of the service experience gives a poor, inadequate view. During customers' experience in hedonic services, social elements play an important role and should be managed in addition to the cultural product itself. In the performing arts, attendees evaluate the whole experience, taking into account the behavior of other attendees as well as of the organization's staff. In this sense, we suggest that cultural managers encourage their employees to show how eager they are to connect with the attendees, before and after the performance, as well as during the breaks. It is advisable to connect better with the attendees, educating them better in the opera and developing a sense of belonging by creating opera evenings, newsletters, artistic visits and by taking advantage of the social networks.

Next, the degree of contractual relationship with the opera house and the frequency of the attendees' visits determine the evaluations of the artscape and enable segmentation of the attendees. On first contact, creating nice exterior artscape gives an attractive stimulus for attendees to enjoy an artistic experience. However, as they increasingly experience opera performances, they pay more attention to the interior elements and social artscape. We suggest that cultural managers should emphasize the benefits of building comfortable, pleasant physical artscape because the attendees focus more on such details, as they know the opera house better. We also recommend taking care of the behavior of the artistic organization's employees. We have detected that the employee-attendee interaction is better evaluated when opera-goers are more involved with the artistic organization. They appreciate the employees' attention.

Likewise, considering that a high frequency of visits to the artistic organization improves evaluations, we recommend taking advantage of the social networks. Furthermore, creating a network in order to connect with like-minded people allows them to present themselves as real members of the community and connoisseurs of the focal object: e.g. performing arts, opera, music, etc. Offering a platform that strengthens community cohesion can truly improve the social artscape. A beautiful artscape can be a strategic element, which promotes and benefits the artistic service.

Customer experience is crucial in influencing the customers' willingness to repeat the experience (Conway, Leighton, 2012). It has been shown that there are positive differences in the evaluation of

the artscape as the attendees' knowledge of the artistic organization grows. Consequently, it would be advisable to segment the attendees according to their experiential characteristics. This would contribute to the education of the attendees in their experience of the artscape and enjoyment of the artistic performance. Edutainment, as a combination of education and entertainment, is the future, especially for creating new young audiences who are less interested in the classical conception of the service. Attractive artscares, mixed with new technologies, can play an influential role in this new setting and help to motivate performing arts consumption and involvement.

This paper has certain limitations that future research should seek to overcome and it posits new lines for research. The study's scope is limited to one organization, although collecting data from a single institution is not unusual in studies of this

kind (e.g. Boerner et al., 2011; Hightower et al., 2002; Jobst, Boerner, 2011; Nguyen et al., 2012; Palmer, Koenig-Lewis, 2010; Urich, Benkenstein, 2012). Furthermore, other patterns may be derived according to opera attendees' segmentation analysis. It is necessary to apply experienced attendees' characteristics to the analysis of the differences in the consequences of artscape in post-use behavior. Additionally, as proposed by Parasuraman & Grewal (2000) and Padgett & Mulvey (2007), consumers can interact not only with the firm, employees and other consumers, but also with technology in their service encounters, giving rise to a better customer experience. In this sense, technologies known as e-servicescapes in this field (Harris, Goode, 2010; Mari, Poggesi, 2013; Tran et al., 2012) should be explicitly considered in further research. Finally, longitudinal analysis could complement this research.

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## **ISKUSTVO SCENSKE UMJETNOSTI: PROMIŠLJANJA O OPERNOJ PUBLICI**

### **SAŽETAK**

Iskustveni marketing pomaže u stvaranju upečatljivog iskustva za potrošače. Zbog svojih različitih karakteristika potrošači različito doživljavaju ono što im se pruža. U ovom istraživanju analizira se iskustvo posjetitelja opernih predstava u kulturnoj organizaciji kako bi se razmotrile razlike u ocjenjivanju umjetničkog okruženja (eng. *artscape*), odnosno modela „okruženje za pružanje usluga” (eng. *servicescape*) u scenskoj umjetnosti. U dostupnoj literaturi nema pokazatelja da se iskusni i neiskusni posjetitelji razlikuju u svojim ocjenama. Međutim, vjernost umjetničkoj kući doprinosi izgradnji dubljeg odnosa. Na temelju odgovora 867 španjolskih posjetitelja opere, analizirane su predložene hipoteze jednosmjernom analizom varijance (ANOVA), uz sveobuhvatan pogled na umjetničko okruženje koje obuhvaća i fizičku i društvenu dimenziju. Značajne razlike u ocjenama umjetničkog okruženja pokazuju da je iskustvo posjetitelja važno kao temelj za odgovarajuću segmentaciju. Što su duži ugovorni odnos i vrijeme od kada posjetitelji dolaze u opernu kuću, to oni bolje ocjenjuju fizičku i društvenu dimenziju umjetničkoga okruženja. Ovaj je rad doprinosi slabo istraženom području primjene modela „okruženje za pružanje usluga” u neprofitnoj scenskoj umjetnosti. Ujedno pruža uvid u iskustva potrošača koja se odnose na okruženje za pružanje usluga.

**Gljučne riječi:** umjetničko okruženje, neprofitna opera, iskustveni marketing, učestalost, program pretplate

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# INFLUENCE OF TRAINING PROGRAMME DESIGN ON EMPLOYEE EDUCATION

## ABSTRACT

The design of training programmes involves the process of planning the content and methods of training and assessing the learners' prior knowledge. Andragogy principles play an important role in the design of employee training. They refer to adult learning strategies that involve using adequate content, relevant examples and technical terms in the design and delivery of training, as well as incorporating learners' previous knowledge and experience. They can be used as the basis for the selection of the appropriate content and training methods. This paper seeks to investigate whether the inclusion of andragogy principles in the design of employee training affects the training outcomes, in particular their motivation for training and the transfer of training as one of the main goals of employee training.

Quantitative research was conducted using the statistical methods of correlation coefficient and regression. A correlation coefficient of 0.485 was found between andragogy principles and motivation for training, which indicates a small but statistically significant correlation ( $p < 0.01$ ). The results of regression analysis show that andragogy principles explain 25.7% of the variance. For each unit of change in andragogy principles, motivation increases by 0.424 ( $B = 0.424$ ) of the unit ( $p < 0.01$ ).

A correlation coefficient of 0.5889 was found between andragogy principles and the transfer of training, which means that the increase of andragogy principles also increases the transfer of knowledge to work tasks. The regression analysis results show that the application of andragogy principles explains 34% of the variance in training transfer. For each unit of change in the application of andragogy principles, motivation increases by 0.306 ( $B = 0.306$ ) of the unit ( $p < 0.01$ ).

**Keywords:** Training programme design, employee education, andragogy principles

## 1. Introduction

Human resource development is a process that consists of planning and delivery of employee training. Thus, the development of an employee depends on the adequate design and implementation of training programmes. The first step in creating an effective training programme is identifying job roles and job tasks. The next step is analysing knowledge and skills employees possess for their current and future jobs. Finally, the third step involves creating an adequate training programme.

Training design involves the selection of the adequate content and training methods and assessing prior knowledge of participants. All of these elements are important for creating an effective training programme. In addition to basic concepts, andragogy and pedagogy principles play an important role in training design; however, organizations do not use them sufficiently in developing their training programmes.

This research focuses on the influence of andragogy elements on two main objectives of an organization embarking on training design, i.e. motivation and transfer of training to job tasks. We believe that the application of andragogy elements in employee training has an effect on both of these areas and that the importance of andragogy in this particular context should not be disregarded.

## 2. Training design

Training design involves identifying the training goals, choosing the appropriate activities and combining them to develop an efficient training programme. Training design includes an assessment of learner prior knowledge, identification of training methods and content (Mathis, Jackson, 2008). Designing starts with two fundamental questions: how to motivate trainees to learn and which specific methods to use (Palmer, 2001). In other words, it is very important to increase the motivation of trainees and consider it in the design of the training programme. The second question refers to training methods – they too need to be identified during the training design process. Training methods need to be adapted to trainees, their abilities and interests, as well as the training content.

As shown by Noe (2010), human resources training programme design contains the scope, goal, target audience and timeframe for the delivery of training.

The next phase consists of choosing the implementation modes, i.e. the content, methods, delivery time, challenges and opportunities, and the equipment. A training plan designed in this way can be compared to a curriculum where content is selected first.

The selected content is structured through training design, whereby the scope, depth and intensity of the programme are determined (Cindrić et al., 2016). Poljak (1991) notes that the content can be arranged successively, where we first focus on one area of study, and then move onto another, or simultaneously, where several study areas are taught at the same time. The content is categorized according to the staggered approach, moving from the familiar towards the new, and from the simple to the complex. It can be organised in concentric circles or in an upward spiral. Previous experience is taken into account and new knowledge draws upon prior knowledge. The concentric plan allows for frequent repetition of the content (Cindrić et al., 2016), which should not be neglected. According to Armstrong and Taylor (2014), learning is often stepped because the learners cannot continually acquire new knowledge and need a pause to consolidate what they have already learnt. The learning process slows down as the topics become more abstract. It is therefore essential to introduce reinforcement periods. "The curricula must be open to include new content and psychological-pedagogical as well as didactic-methodical developments" (Cindrić et al., 2016: 139).

Based on the well-organized training content, appropriate methods are selected. The methods must be tailored to the content and purpose of training. No single method is appropriate for all situations. Methods must be modified and adapted to the target group, content and training goal. Most methods used in human resource development are adopted from the field of adult education. Other methods used for employee training include, among others, mentoring and team building.

Noe (2010) categorises methods into presentation, hands-on training and group building methods. Presentation methods include lectures and audio-visual techniques. Lectures include standard lectures, team teaching, guest lecturers, panels and trainee presentations. Hands-on methods are on-the-job training, self-directed learning, mentoring, simulations, case studies, business games, role-play and behavioural modelling. Methods of group

building are adventure learning, team training and action learning. In addition, there are methods that use technology, such as computer-based training (CBT) or computer-based learning (CBL), online learning, blended learning, simulations, intelligent tutoring systems and distance learning.

Methods are selected based on the desired training goal. Bourner (1997) outlines 10 most common methods for attaining each of the six major learning aims. For the dissemination of new knowledge there are lectures, textbooks, exercises that require students to find new knowledge, developing skills in using library and other resources, open learning materials, and directed private study. The capability to use ideas and information can be developed through case studies, projects, demonstrations, group working, simulations, problem solving, discussion, etc. Methods for developing the student's ability to test ideas and evidence are seminars, supervision, presentations, feedback, critical assessment, self-assessment, etc. For developing the student's ability to generate ideas he suggests research projects, workshops on techniques of creative problem solving, group working, action learning, mind mapping, etc. To facilitate students' personal development teachers can use action learning, experiential learning, learning logs, role-playing, structured experiences in groups, etc. Finally, the capacity of students to plan and manage own learning can be developed through projects, reflective logs and diaries, independent study, action learning, portfolio development, etc.

It is also important to apply the principles of andragogy in designing the training programme for adult learners. Knowles outlines the andragogy in practice model that characterises adult learners and provides the principles that can help design a training programme.

According to this model, there are three dimensions of andragogy in practice: goals and purposes of learning, individual and situational differences, and adult learning principles. The goals for adult learning are individual, institutional and societal growth. These goals also influence the process of learning and teaching. For example, if the programme is aimed at achieving societal growth, emphasis may be placed on individual learner; if it is aimed at achieving institutional goals, such as work-related performance improvement, emphasis may be placed on the workplace, etc. Individual and situational differences are divided into three categories:

subject matter differences, situational differences and individual differences. Different subject matter may require different learning methods. Similarly, depending on the complexity of the subject matter, the learner may need more or less help and guidance. Situational differences can refer to adapting the learning strategies to the size of the group, the distance from the training site, etc. They can also refer to a wide range of social and cultural factors. Individual differences also include a number of differences, such as cognitive abilities, learning styles, personality, i.e. personality traits, and previous experience. It is necessary to carry out an analysis of all of these differences and make adaptations to the programmes according to the principles of andragogy (Knowles et al., 2005).

### 3. Andragogy principles

Two approaches to the principles of adult education are presented in the paper. The first is described from the perspective of Croatian authors on the use of pedagogical and didactic principles in adult education. The second is described from the perspective of Malcolm Knowles' concept of andragogy. In addition to these principles, there are a number of factors, principles and characteristics of adult learners, teaching, and learning that should be considered when planning adult education.

The principles of andragogy in adult education outlined by Andrižević et al. (1985) are as follows:

1. Voluntary versus mandatory participation - Motivation enhances learning. It is often challenging to motivate adult learners to participate in the learning process, as they may not understand the purpose of training, thinking that they have already completed their education. The HR department and training providers should bear in mind that some employees were required to participate in training, and devise strategies for increasing their motivation for participation.
2. Concrete versus abstract - This principle is based on learning through concrete examples rather than abstract concepts and generalisation. It is important to consider the learners' prior experience and knowledge. Adult education cannot be based on memorising abstract information. It should provide

concrete and relevant examples about the subject matter or the world around us and build upon the learners' prior knowledge.

3. Active participation and development - Knowledge cannot be handed over. To acquire knowledge and skills and develop, learners have to actively participate in the learning process. They have to be involved in all teaching activities: intellectual, expressive and sensory. Passive participation is unlikely to yield the desired outcomes; thus, it is recommended to use interactive training methods and active learner participation.
4. Systematic and sequential approach - Every task has to be done following a particular order or system, from the simple to the complex, from concrete to abstract. It is important to start with what trainees already know, what is familiar to them, what is easier for them, and build upon that so as to facilitate the acquisition of new knowledge by drawing on prior knowledge and experiences.
5. Appropriateness and learning effort - A learning experience has to be appropriate for the learners. The learning tasks they are asked to perform should require a certain amount of effort, but should not be so difficult as to cause them to start questioning their abilities or leave the programme.
6. Historicity and actuality - Teaching starts with the past because it is important for understanding the sequences, but it does not stay in the past.

Malcolm Knowles, who is considered the father of andragogy, identified six principles of adult learning and used them in his andragogy model.

1. Need to know - Adult learners need to know why they need to learn something before the learning process can start. The benefits they will gain from learning and the negative consequences of not learning something should be clearly stated and explained. Thus, the first task of the trainer is to help the learners understand "the need to know". This is related to the principle of voluntary participation and mandatory participation. Learning needs to be voluntary.

2. The learners' self-concept - Adult learners have a self-concept of being responsible for their own decisions and their own lives. They also have a need to be seen and treated by others as being capable of self-direction. They resist situations in which something is imposed on them. This principle is linked to the "need to know" principle - when they understand why they need to learn something, they will be motivated to do it. They want to learn rather than be taught. According to this principle, passive learning is not an adequate learning method for adult learners.
3. Learners' prior experiences - Prior experience can be positive or negative. Negative experience can come from previous education. It is up to the trainer to change that perception. Prior experience can be tapped into using different training methods, such as debates, simulations or problem solving. Respecting and building on the learners' prior experiences can boost their motivation.
4. Readiness to learn - As already mentioned, adult learners learn better if they know why they need to learn something. The trainer has to keep this in mind when designing a training programme. The training needs to include real-life examples that are relevant to the learners so that they can associate them with their own situations and needs.
5. Orientation to learning - Adult learning has to be task-centred and interdisciplinary. It has to focus on knowledge and skills that they need to perform their tasks. Learning tasks have to be related to real-life situations they can find themselves in, or work-related situations they are familiar with.
6. Motivation to learn - Some adult learners are motivated by external motivators such as better jobs, higher salaries or promotions in the company; however, internal motivation is a much more powerful motivator. Adults are motivated for personal development, but negative self-concept as a student and other negative experiences can prevent them from pursuing this goal.

The present paper looks at several andragogy elements from these two sets of principles. The first el-

ement is clearly explaining the purpose of learning the content to facilitate learning and transfer. This includes the application of the above principles of 'concrete versus abstract', 'systematic and sequential' and 'appropriateness'.

The second important element of andragogy is motivation. In the context of employee training, the participants need to know why they need to learn something and the benefits they will gain from learning. The trainer should explain the relevance of the content to their tasks. This element is linked to the principles 'motivation to learn', 'learning orientation', and 'readiness to learn'. It is also related to the principles 'need to know' and the principle of 'voluntary and mandatory participation'. In the context of employee training, the trainer should use familiar examples and experiences the participants can relate to. This is connected to the principle 'concrete versus abstract'. The trainer should apply the principle of 'active participation and development' by drawing on learners' knowledge, and rely on the principle of 'systematic and sequential' learning by explaining content using familiar situations. This relates to the principles 'appropriateness', 'orientation to learning', and 'willingness to learn'. In addition to giving relevant and familiar examples, it is also necessary to use familiar technical terms.

'Motivation to learn' and 'willingness to learn' are particularly useful principles in the context of employee training. It is therefore essential that trainers allow the participants to share their prior knowledge and experiences and build on that through training. Motivation is one of the main contributing factors in the success of adult training and learning.

#### 4. Motivation

Motivation is a major factor in the process of adult learning and training. Knowles et al. (2005) emphasize that motivation is as one of the principles of adult education and state that while some adults are motivated by external motivators such as awards, higher salaries or better jobs, the most potent motivators are internal.

Beier and Kanfer (2009) propose a three-stage model of training which comprises motivation to participate in training, motivation during learning and training, and motivation for knowledge and skills transfer. Motivation for training begins before the first training session takes place. In this stage, motivation is influenced by learner characteristics

and environmental influences or organizational characteristics. Motivation is influenced by the perception of the value of training, i.e. how it will contribute to the attainment of the learner's personal goals. These are the questions that need to be answered by the trainer.

The second stage of motivation refers to motivation during the training process. In this stage, motivation is influenced by the design of training as much as by the trainer. In this stage, motivation is influenced the most by the application of andragogy principles in the design and delivery of training. The ARCS model outlines four requirements that have to be met to maintain learner motivation. According to Keller (1987), the first requirement is to obtain and sustain learner attention and direct it to the content of training. This is achieved by creating an interactive training design and selecting appropriate content and training methods. The second requirement is relevance. If trainees consider the training relevant and understand its purpose, their motivation to engage in training will increase. Explaining to the trainees why they need training and how it will benefit them should be part of the training design. This is where andragogy principles can be used to increase learner motivation. The third requirement is confidence. This relates to the principle of andragogy according to which the participant's previous knowledge and experience should be taken into account and positively valued. The fourth requirement is satisfaction. It is achieved by rewarding the participants.

The third stage of motivation in the training process is motivation for the transfer of knowledge to the job. Motivation is one of the main factors in training transfer. Without it, the transfer will either not occur or will not be effective. The transfer can be horizontal, from one context to another at the same level, or vertical, i.e. from lower to higher organisational levels. As with motivation to participate in training, motivation for transfer is also influenced by confidence and organizational climate (Beier, Kanfer, 2009).

#### 5. Transfer

Training transfer refers to the application of knowledge outside the training context. Training design accounts for 46% of reported best practices for influencing knowledge transfer (Saks, Burke, 2014). Considering the possibility of transfer increases the likeli-

hood of transfer. Transfer is increased when training involves multiple examples and encourages trainees to think about the potential for transfer, i.e. how they would use the gained knowledge in their work environment and apply it to their job. Transfer is improved when examples are used in the training to show the relevance of a skill. The amount of practice is directly related to the amount of transfer. Training should combine abstract instruction and concrete examples, i.e. abstract content should be explained using examples. Training should focus on both the whole task and its components (Tennant, 1999).

The factors that influence the transfer of training include the content validity, self-efficacy, transfer design, the employee's reaction to training, training transfer motivation, (Bhatti, Kaur, 2010), learner characteristics, training design and delivery activities, the work environment, trainers, supervisors and time periods (Burke, Hutchins, 2008). These factors are categorized into individual, contextual, situational, and design factors. The design of the training programme is important for its success as it contains the goals, training methods, training venue and equipment (Bhatti, Kaur, 2010). Interventions for increasing training transfer are best carried out in the work context, in the design and delivery phases (Burke, Hutchins, 2008).

Various individual and organisational factors that influence training transfer have been investigated. Many activities have been identified that influence training transfer at the organizational level. They can be undertaken before, during or after the training. Before the training, the trainee has to have the supervisor's support for participating in the training. The trainees have to be involved in the design and delivery of the training process. During training adult learning principles should be used and the training design needs to be adapted to the needs of trainees in terms of possible changes to the content or the entire training programme so as to facilitate the transfer of training. Post-training activities include organizational transfer climate, organizational support, and supervisory support (Saks, Belcourt, 2006). The trainee is the main inflow of the training system. Thus, to understand the transfer of training, it is necessary to understand the factors influencing the trainee. They include the content of training, trainer characteristics, trainee characteristics, training methods and programme design. The methods used in the training and the interaction of the participants with the trainer cre-

ate a learning environment that contributes to the successful training transfer (Nikandrou et al., 2009).

## 6. Research methodology

The organization of training begins with developing a training programme, i.e. training design. Training design has a significant impact on training. This paper posits that andragogy principles are as important as adequate content and training methods and should be used in the training design as they increase trainee motivation and training transfer.

The main goal of the research is to investigate the impact of training design that includes andragogy principles on the training goals. In the training design phase, the principles of both andragogy and didactics should be considered. One of the most important andragogy principles is that training should be adapted to adult learners and that their previous knowledge and experience should be recognised. This andragogy principle was chosen as the first variable. The research measures the influence of andragogy principles on motivation, which is recognized as one of the major contributors to training effectiveness and achievement of training goals, in particular in the context of adult learning. Therefore, the first hypothesis proposes the following:

H1: Employee motivation increases significantly when the principles of andragogy are applied to training design.

The transfer of training to the workplace is the main goal of training. This is why it was chosen as the second variable in this research. Thus, the second hypothesis proposes the following:

H2: The transfer of training is facilitated when the principles of andragogy are applied to training design.

A survey was carried out among 300 participants of employee training using an e-questionnaire. Three domains that relate to three variables were examined in this study. The independent variable 'application of the main andragogy principles to training design' is used in both hypotheses and is measured on a scale of 1-5 using 6 statements. The statements are based on andragogy principles. They are as follows:

1. I understand the content presented by the trainer.
2. The trainer relates the content to my job responsibilities.



3. The trainer uses familiar examples.
4. The trainer uses technical terms I am already familiar with.
5. The trainer gives us the opportunity to share our experiences and the problems we face at the workplace.
6. The trainer uses familiar situations first and then moves onto new situations.

The second variable, used as a dependent variable in the first hypothesis, is motivation. The items used to measure it are adopted from research into employee motivation done by Huang and Yao (2015). They are as follows:

1. The content covered in training is important to me.
2. I have talked about what I've learned in training outside the training context.
3. I like what I've learned in training.
4. If I encounter an obstacle in learning, I won't give up.
5. Even when the materials are boring, I still try to learn from them.
6. I think I'm motivated for learning.

The third part of the questionnaire and the third variable, used as the dependent variable in the second hypothesis, refers to the transfer of training. It is measured using three statements about the transfer of knowledge to the workplace.

1. I believe that things I've learned during this training will be applicable in future training.
2. I believe that I can put what I've learned in this training into practice.
3. I am trying to relate what I've learned in this training to my work tasks.

## 7. Research results

Hypothesis H1 was tested using Spearman's rank correlation coefficient, a nonparametric statistical method, to establish the association between the application of andragogy principles and motivation for learning. The correlation coefficient measures the relationship between two variables, while Spearman's Rho is used in situations where the

exact difference between two ranks is unknown, as is the case when Likert scale is used. The correlation coefficient will indicate whether there is an association between the use of andragogy principles in training design and motivation for training and learning. The correlation coefficient can range from -1 to 1, where 1 indicates perfect positive relationship. The coefficient of correlation in this case is 0.485, which indicates a small but statistically significant correlation ( $p=0$ ). This indicates that there is a positive correlation between andragogy principles and motivation, i.e. increased use of andragogy principles increases motivation for training.

Regression analysis tells us more about the extent to which an independent variable, in this case the use of andragogy principles, influences motivation. This analysis is often used in combination with correlation analysis because it can explain the correlation coefficient with more precision. The regression analysis suggests that andragogy principles explain 25.7% of the variance in motivation. For each unit of change in the use of andragogy principles, motivation increases by 0.424 ( $B=0.424$ ,  $p=0$ ). If we interpret the results in general, this means that for each unit of change in the use of andragogy principles, motivation will increase by almost a half of the unit value. Consideration of the participants' prior knowledge and experience in the design of training explains only one quarter of motivation, as can be seen from the calculation for the variable.

A large number of factors influence motivation. Some of them have already been discussed in the theoretical section of the paper. If the trainees have no interest in training or if the training is mandatory, their motivation for participation will decrease. In contrast, if the trainees are made aware of training goals and understand that training has been tailored to their needs, their motivation increases. Andragogy is aimed at helping adults learn and thereby can help increase their motivation. The results of analyses indicate that motivation significantly increases when the principles of andragogy are used in training design. Thus, Hypothesis H1 proposing that employee motivation increases significantly when the principles of andragogy are applied to training design has been confirmed.

Hypothesis H2 was tested using the same statistical method, i.e. Spearman's Rho. Here, the correlation coefficient was used to identify the association between andragogy principles and transfer of knowledge acquired through training to their job.

The correlation coefficient was found to be 0.5589, which means that as the use of andragogy principles increases, the transfer of knowledge to work tasks also increases. According to regression analysis, the use of andragogy elements explains 34% of the variance in training transfer. For each unit of increase in andragogy elements, training transfer increases by 0.306 ( $B=0.306$ ,  $p=0$ ). If we interpret the results in general, for each unit of change in the use of andragogy principles, the motivation will increase by one third of the unit value. This also means that, in general, 34% of the transfer of knowledge to work tasks can be explained by the application of andragogy principles to training design. Taking into account all the other factors mentioned above that may have an impact on training transfer, this result can be considered very high. The calculations indicate that hypothesis H2 proposing that the transfer of training is facilitated when the principles of andragogy are applied to training design has been confirmed.

Andragogy principles, which involve appropriate content, use of examples from practice, and focus on the content relevant to the job, should be used as the guidelines for the design of training as they facilitate the transfer of training. These principles contribute to training transfer because the participants are aware of the applications of learning to work tasks. A large number of factors can influence the transfer of training and trainee motivation. Explaining how and to which work tasks knowledge gained can be transferred before the training begins will increase both transfer and motivation. In conclusion, the two proposed hypotheses and the results of analyses show that andragogy principles should not be neglected as they can have a positive influence on the attainment of training objectives.

## 8. Conclusion

Adult education is a specific segment of educational sciences. Andragogy is premised on assumptions about adult learners that underlie the main andragogy principles. In the Anglophone literature, the principles of andragogy were outlined by Malcolm Knowles. According to these principles, the trainers should attract and sustain the attention of participants, motivate them, provide clearly structured and systemised learning experience, encourage participant engagement, and take into account their prior experience.

These principles should be considered in the very planning phase, i.e. the design of training. Thus, in addition to being involved in deciding on the appropriate content and training methods, the satisfaction of the participants with the training should be assessed so as to make sure that their needs have been met and to maintain their motivation in order not to hinder the transfer of training.

This paper explores the influence of andragogy principles on motivation, as one of the main contributors to the success of training activities, and on training transfer, as perhaps the most important objective of employee training.

The Spearman's correlation coefficient indicates a positive correlation between the use of andragogy principles in training design and motivation (0.485), as well as between the use of these principles and training transfer (0.558). The regression analysis shows that andragogy principles explain 25% of the variance in motivation and 34% of the variance in training transfer. The data suggest that andragogy principles should be considered in the planning and implementation of employee training programmes as this contributes to their effectiveness.

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## **UTJECAJ DIZAJNA TRENINGA NA EDUKACIJU ZAPOSLENIKA**

### **SAŽETAK**

Dizajn treninga se sastoji od planiranja sadržaja i metoda treninga te određivanja predznanja polaznika. Andragoške postavke označene kao aktivnosti za primjenu adekvatnih i jasnih primjera i stručnih izraza kod organizacije i izvođenja treninga te uklapanja prijašnjih znanja i iskustava polaznika poseban su segment u dizajniranju treninga. Na njima se može bazirati pravilan odabir i sadržaja i metoda poučavanja. Ovim se radom želi istražiti utječe li dizajn treninga kroz primjenu i postavljanje andragoških postavki na edukaciju zaposlenika posebno na motivaciju za trening i prijenos znanja u radne zadatke kao jedan od glavnih ciljeva edukacije zaposlenika.

Kvantitativno istraživanje je provedeno uz pomoć statističkih metoda koeficijenta korelacije i regresije. Koeficijent korelacije za usporedbu andragoških postavki i motivacije za trening iznosi 0,485 što označava manju ali statistički značajnu korelaciju ( $p < 0,01$ ). Rezultati regresije pokazuju kako andragoške postavke objašnjavaju 25,7% varijance. Na svaku jedinicu promjene andragoških postavki motivacija se povećava za 0,424 ( $B=0,424$ ) jedinice ( $p < 0,01$ ).

Koeficijent korelacije andragoških postavki i transfera treninga iznosi 0,5589, što znači da se povećanjem andragoških postavki povećava i prijenos znanja u radne zadatke. Prema izračunu regresije poštivanjem andragoških postavki objašnjava se 34% varijance transfera treninga. Na svaku jedinicu promjene andragoških postavki motivacija se povećava za 0,306 ( $B=0,306$ ) jedinice ( $p < 0,01$ ).

**Ključne riječi:** dizajn treninga, edukacija zaposlenika, andragoške postavke

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**Ključne riječi:** dizajn treninga, obrazovanje zaposlenika, principi andragogije

## 1. Uvod

Razvoj ljudskih resursa odnosi se na planiranje i provođenje edukacija zaposlenika. Kao takav plan razvoja ovisi i o načinima dizajna treninga, postavljanja i provođenja adekvatnog planiranja obavljanja. Takvo planiranje započinje pravilnim određenjem radnog mjesta i radnih zadataka, zatim

provođenjem analiza znanja koje zaposlenik posjeduje za to, ili sljedeće radno mjesto i na kraju do kreiranja adekvatnog programa.

Dizajn treninga sastoji se od odabira adekvatnih sadržaja i metoda i pred testa polaznika koji je bitan kako bi se odredio pravilan način izvedbe treninga. Osim osnovnog koncepta kod dizajna treninga ulo-

gu imaju i pedagoške i andragoške postavke koje se često u praksi, kod organizacije treninga zaposlenika ne iskorištavaju u potpunosti.

Ovo istraživanje stoga mjeri utjecaj andragoških postavki na dva glavna cilja organizacije i dizajna treninga zaposlenika, Motivaciju za trening i transfer znanja naučenih na treningu u radne zadatke. Istraživanje je pokazalo kako primjena andragoških postavki u treningu ima značajan utjecaj na oba cilja, te stoga ne bi bilo poželjno zanemarivati ovo područje. Primjenom metode regresije rezultati pokazuju kako andragoške postavke objašnjavaju 25% varijance motivacije za trening i 34% varijance transfera znanja iz treninga u radne zadatke.

## 2. Dizajn treninga

Dizajniranje treninga započinje određivanjem ciljeva i primjerenih aktivnosti i njihovim kombiniranjem za stvaranje treninga. Dizajn treninga se sastoji od pred-testa polaznika, odabira metoda treninga i odabira sadržaja (Mathis i Jackson, 2008.). Dizajn treninga počinje s dva specifična pitanja, kako pridobiti učenike za proces učenja i koje specifične metode koristiti (Palmer, 2001.). Kako bi pokušali na drugačiji način protumačiti ova dva pitanja, možemo reći kako je za dizajn treninga jako bitno povećati motivaciju polaznika treninga i na nju se fokusirati već u pripremi plana treninga. Drugo pitanje odnosi se na metode koje također moraju biti određene već u procesu planiranja i prilagođene polaznicima i njihovim mogućnostima i interesima kao i određenom sadržaju treninga.

Dokument dizajna iz područja ljudskih resursa kako nam ga prikazuje Noe (2010.) sadrži opseg, cilj, publiku i vrijeme izvođenja. Zatim načine izvođenja koji uključuju sadržaj, metode, vrijeme treninga, probleme i mogućnosti. Planiraju se i resursi potrebni za odrađivanje treninga. Tako postavljen dokument dizajna možemo uspoređivati i s planiranjem nastave iz područja didaktike. U tom se segmentu prvo određuju sadržaji.

Odabrani sadržaji se programiranjem, stvaranjem dizajna treninga sređuju i strukturiraju. Sadržaji se dimenzioniraju i određuje se dubina i intenzitet programa (Cindrić i dr., 2016.). Prema Poljaku (1991.) sadržaji se mogu raspoređivati sukcesivno, gdje prvo proučavamo jedno područje, a onda prelazimo na drugo ili pak simultano, gdje se istodobno poučava više područja. Razvrstavaju se prema pravilima postupnosti, od bližeg ka daljem i od jednostavnijeg prema složenom. Slažu se kao koncentrični krugovi ili u spiralno uzlaznom raspore-

du. Prema spiralno uzlaznom rasporedu uvažava se prethodno iskustvo i svako novo znanje se temelji na prethodnom. Koncentrični raspored omogućava više ponavljanja (Cindrić i dr., 2016.). Takvo ponavljanje ne može se zanemariti. Prema Armstrongu i Tayloru (2014.), učenje je često stepeničasto. To se događa jer polaznici treninga često ne mogu jednako brzo usvajati sve više i više sadržaja i moraju pauzirati i konsolidirati svoje znanje. Stoga je bitno uvoditi dijelove ponavljanja u trening. "Programi moraju biti višestruko otvoreni prema novim sadržajima te psihološko pedagoškim i didaktičko metodičkim dosezima" (Cindrić i dr., 2016: 139).

Na temelju dobro organiziranog sadržaja treninga biraju se odgovarajuće metode. Metode moraju biti prilagođene sadržaju i cilju treninga. Ne postoji jedna određena najbolja metoda. Metode se mora mijenjati i prilagođavati svakoj skupini i svakom sadržaju i cilju treninga. u području ljudskih resursa većina nastavnih metoda koje se primjenjuju odnosi se na metode preuzete iz obrazovanja odraslih, no na njih se mogu nadodati i radne metode učenja poput mentorstva ili team building metoda.

Noe (2010.) metode dijeli na prezentacijske, radne i metode stvaranja tima. U prezentacijske metode ubraja predavanja i audiovizualne tehnike, s time kako su varijacije predavanja, standardna predavanja, timsko poučavanje, gosti predavači, paneli i studentske prezentacije. Radne metode su trening na poslu, samostalno učenje, vježbeništvo, simulacije, studij slučaja, poslovne igre, igranje uloga i modeliranje ponašanja. Metode stvaranja grupe su učenje putem avanture, timski trening i akcijsko učenje. Osim njih navodi metode učenja s korištenjem tehnologije kao što su CBT ili učenje temeljeno na računalu, on-line učenje, mješovito učenje, simulacije, inteligentni tutorski sustavi i učenje na daljinu.

Metode se odabiru i prema željenom cilju treninga. Ovisno koji se cilj želi postići koristi se njemu odgovarajuća metoda. Bourner (1997.) izdvaja 10 najkorištenijih metoda za šest glavnih ciljeva učenja. Za širenje novih znanja koriste se: predavanja, novi udžbenici, popisi literature, skripte, gosti predavači, vježbe koje zahtijevaju pronalaženje novih znanja, razvijanje vještina u korištenju resursa, usmjereno samostalno učenje, otvoreni materijali i korištenje interneta. Za cilj razvijanja sposobnosti korištenja ideja i informacija, koriste se sljedeće metode: studij slučaja, vježbe, radno iskustvo, projekti, demonstracije, radne skupine, simulacije, rješavanje problema, diskusija i debata, pisanje eseja. Za cilj razvoja sposobnosti za testiranje ideja i dokaza

koriste se sljedeće metode: seminari, supervizija, prezentacije, eseji, povratne informacije, pregled literature, ispiti, kritička ocjenjivanja, ocjenjivanje kolega i samoocjenjivanja. Za cilj razvoja vještina generiranja ideja se koriste sljedeće metode: istraživački projekti, kreativne radionice, radne skupine, akcijsko učenje, naknadno promišljanje, brainstorming, mentalno mapiranje, kreativna vizualizacija, relaksacija i rješavanje problema. Za cilj vlastitog razvoja koriste se sljedeće metode: povratna informacija, akcijsko učenje, ugovori, igranje uloga, iskustveno učenje, dnevnički učenja, strukturiranje iskustava u grupi, refleksijski dokumenti, samoprocjena i profiliranje. Za cilj održavanja samostalnog učenja koriste se: ugovori, projekti, akcijsko učenje, radionice, mentori, refleksijsko učenje, samostalno učenje, disertacije, praksa, portfolio.

U planiranje treninga i stvaranje plana rada s odraslim učenicima isto tako je značajno uključiti principe andragogije i njezine osnovne postavke. U tu svrhu Knowles izdvaja model andragogije u praksi i značajke na koje se poštivanje andragoških pravila odnosi, a može pomoći kod planiranja treninga.

Prema modelu tri su dimenzije andragogije u praksi: ciljevi i svrha učenja, individualne i situacijske razlike i Knowlesovi principi andragogije. Ciljevi za učenje odraslih su individualni, institucionalni i socijalni rast. Takvi ciljevi utječu i na proces učenja i poučavanja. Tako na primjer, ako se radi o socijalnim ciljevima programa pažnja se obraća na razvoj čovjeka, ako se radi o institucionalnim ciljevima, kao na primjer poboljšanje radnog procesa, pažnja se stavlja na kontekst radnog zadatka itd. Individualne i situacijske razlike su podijeljene na tri kategorije: razlike prema nastavnom sadržaju, situacijske razlike i individualne razlike. Različiti nastavni sadržaji mogu zahtijevati i različite metode u treningu, ili pak složenost nastavnih sadržaja može utjecati na potrebu za većom ili manjom pomoći i vodstvom. Situacijske razlike mogu se odnositi na prilagođenost veličini grupe, udaljenosti od mjesta trenera i sl. Također se mogu odnositi i na cijeli niz socijalno ili kulturno uvjetovanih faktora. Individualne razlike se također odnose na cijeli niz razlika počevši od kognitivnih sposobnosti polaznika, stila učenja, osobnosti i osobnih karakteristika do prethodnog iskustva. Potrebno je provesti analizu svih tih karakteristika i napraviti prilagodbe programa prema principima andragogije (Knowles i dr., 2005.).

### 3. Principi andragogije

Principe andragogije ili principe obrazovanja odraslih, ovisno o perspektivi andragogije pronalazimo u dva oblika. Prvi oblik su pedagoško didaktički principi koji se izdvajaju u andragogiji, a drugi su principi Malcolma Knowlesa, oca andragogije engleskog govornog područja. Osim njih postoji cijeli niz faktora, načela i specifičnosti odraslog učenika i poučavanja i učenja odraslih koje treba uzeti u obzir kod planiranja obrazovanja odraslih.

Principe andragogije u kontekstu predstavljanja obrazovanja odraslih prenose Andrićević i dr. (1985.):

1. Princip dobrovoljnosti i prinude - Uz bolju motivaciju dolazi do boljih rezultata. Odrasle učenike često je teško uključiti u proces obrazovanja. Ovaj princip ima svoj značaj u treningu i organizaciji treninga u kompaniji. Zaposlenici mogu imati dojam da su svoje obrazovanje završili. Odjel za ljudske resurse kao ni trener ne smije zanemariti polaznike treninga kojima je kompanije naredila prisutnost.
2. Princip zornosti i apstraktnosti - Ovaj se princip bazira na usvajanju činjenica i njihovoj generalizaciji. U učenju odraslih bitno je poučavati činjenice i bazirati ga na zornim sredstvima, a ne apstrakcijom ili generalizacijom. Pri tome se mora uzeti u obzir i iskustvo u sklopu kojeg su naučene neke činjenice iz kojih je potrebno sistematizirati znanja. Ukratko obrazovanje odraslih ne može se temeljiti na nejasnim podacima koja se moraju pamtit jer neće biti djelotvorno. Kod obrazovanja odraslih preporučuje se učenje putem jasno definiranih i objašnjenih činjenica o temi učenja ili svijetu oko nas. U to učenje je potrebno uklopiti i prijašnja iskustva i znanja i na njima graditi nove spoznaje.
3. Princip aktivnosti i razvoja - Učenicima se znanja ne mogu predati ili predavati ili prenijeti, kako bi došlo do razvoja, usvajanja znanja i sposobnosti mora postojati aktivno sudjelovanje učenika. Pri tome se misli na sve aktivnosti, intelektualne, izražajne i osjetilne. Pasivnost u obrazovanju odraslih opet neće postići željene rezultate, ovdje se preporučuju interaktivne metode i sudjelovanje polaznika u treningu.

4. Princip sistematičnosti i postupnosti - Svaki zadatak odvija se nekim redom, po nekom sustavu, od bližeg prema daljem, od jednostavnijeg prema složenom, od lakšeg prema težem, od konkretnog prema apstraktnom. U obrazovanju odraslih potrebno je krenuti od lakših, ili polazniku bližih sadržaja prema kompliciranijima, generalnim ili apstraktnim. Ovdje se opet bavimo sustavom organizacije učenja koji se temelji na početnim znanjima i iskustvima polaznika treninga koji se onda nadograđuju.
5. Princip primjerenosti i napora - Svako učenje i poučavanje mora biti primjereno polazniku. Andragoški nastavnik treba složiti edukativne zadatke tako da se za zadatke traži određeni napor, ali ne toliko da ih dovede u sumnju vlastitih mogućnosti i odustanje od programa.
6. Princip historičnosti i suvremenosti - U nastavi se polazi od prošlosti jer je ona važna za koncept toka, ali se na njoj ne zadržava.

Malcolm Knowles smatra se ocem andragogije u engleskom govornom području i u svojim je radovima odredio šest pretpostavki na kojima je temeljio svoj andragoški model. Tih 6 pretpostavki smatra se principima njegovog andragoškog modela.

1. *Need to know* - potreba za znanjem- U obrazovanju odraslih značajno je da odrasli moraju znati zašto nešto uče prije nego to nešto počnu učiti. Oni moraju imati jasne benefite koje će dobiti ako uče i koje su negativne posljedice ako ne uče. Prema tome prvi zadatak trenera je objasniti odraslim učenicima zašto pristupaju nastavi.
2. Pojam o sebi - Odrasli razvijaju pojam o sebi kao osobi koja zna što je njima potrebno i odgovorni su za svoj život. Isto tako očekuju od drugih da ih smatraju odgovornima za svoje odluke. Odrasli učenici ne vole kad se nađu u situaciji u kojoj im netko nešto nameće. Ovaj je koncept povezan s principom dobrovoljnosti i prinude, kao i kod njega ideja je dobiti dobrovoljnog učenika. Ovaj koncept je također povezan s prošlom pretpostavkom, ukoliko se odraslima objasni zašto nešto uče oni će biti više motivirani. Oni trebaju učiti, a ne biti poučeni. Prema ovom principu pasivne metode rada ne

moгу se adekvatno upotrijebiti u obrazovanju odraslih.

3. Iskustvo - U ovom principu iskustvo predstavlja nekoliko različitih ideja koje se trebaju uzeti u obzir kod obrazovanja odraslih. Prema iskustvu skupina odraslih bit će heterogenija od mladih polaznika tečaja. Oni dolaze iz različitih pozadina bilo edukacijskih bilo socijalnih, imaju drugačije stilove učenja, drugačiju motivaciju, potrebe, interese i ciljeve. To se iskustvo može upotrijebiti u učenju koristeći metode i tehnike kojima se može naglasiti to iskustvo. Od grupnih rasprava, simulacijskih vježbi, rješavanja problema i slično. Iskustvo može imati i negativne efekte u stavovima s kojima učenici dolaze.
4. Spremnost na učenje - Odrasli postaju spremni na učenje kako bi bili spremni nositi se sa svakodnevnim situacijama. Važna stavka ovog principa je vrijeme. U trenutku kad im je potrebno, na primjer za prijelaz iz jednog odjela u drugi, odrasli su spremni za učenje novih zadataka.
5. Orijentacija na učenje - Orijentacija na učenje ili na nova znanja kod odraslih usmjerena je interdisciplinarno na sva područja koja su im potrebna za obavljanje nekog zadatka. Orijentacija treninga treba prema tom principu biti na zadatak koji je potrebno obaviti, a ne na određenu znanstvenu granu, što često nalazimo u pedagogiji i školskom kurikulumu.
6. Motivacija za učenje - Odrasli su podložni nekim vanjskim motivacijama kao što su bolji položaj u kompaniji, veće plaće i slično, no puno bolji motivator kod odraslih je unutrašnja motivacija. Svi odrasli su motivirani razvojem sebe, ali često blokiraju takvu motivaciju lošim samopouzdanjem, prošlim školskim neuspjesima i sličnim (Knowles i dr., 2005.).

Sagledamo li oba sustavna koncepta principa andragogije možemo iz njih izdvojiti osnovne andragoške postavke koje je potrebno pratiti u radu. Prva takva postavka je jasnoća poučavanja ili prenošenja sadržaja u treningu. Trener jasno i nedvosmisleno mora prenijeti planirani sadržaj kako bi se on isto tako nedvosmisleno mogao naučiti i kasnije primijeniti u praksi. Ova kategorija uključuje principe



zornosti i apstraktnosti te sistematičnosti i postupnosti.

Motivacija je drugi vrlo značajan segment, u kontekstu kojeg polaznici treninga moraju znati zašto uče i čemu njima služi trening. Iz tog razloga trener treba objašnjavati gradivo usmjereno prema radnim zadacima polaznika treninga. Ova se postavka može vezati uz motivaciju, orijentaciju i spremnost na učenje, također se veže uz potrebu za znanjem, te princip dobrovoljnosti i prinude. U tom kontekstu trener treba koristiti i od prije polaznicima poznate primjere, što vežemo na razumijevanje, tj. zornost i apstraktnost, zatim princip aktivnosti i razvoja, kroz nadogradnju znanja, sistematičnosti i postupnosti gdje se polazi od poznatih situacija, a u istom kontekstu i primjerenosti sadržaja. Osim toga obuhvaća orijentaciju i spremnost na učenje. Uz poznate primjere potrebno je nadovezati i poznate stručne izraze i situacije.

Posebno uz motivaciju i spremnost na učenje možemo vezati aktivnosti samih polaznika treninga. Stoga je bitno omogućiti polaznicima treninga predstaviti se, i predstaviti svoja vlastita znanja i iskustva na koja oni žele nadovezati nova znanja koja će usvojiti treningom. Motivacija zapravo i predstavlja jedan od glavnih faktora za uspjeh treninga i obrazovanja odraslih.

#### 4. Motivacija

Motivacija je jedan od glavnih faktora koji se ističe u procesu obrazovanja odraslih i u procesu obrazovanja zaposlenika. Knowles ističe motivaciju kao jedan od principa obrazovanja odraslih, te navodi kako je unutarnja motivacija bolja, no kako se većinom radi o vanjskoj motivaciji poput nagrade, povećanja plaće ili boljeg radnog mjesta (Knowles i dr., 2005.).

Trening i motivaciju na tri stupnja dijele Beier i Kanfer (2009.) i to na motivaciju za sudjelovanje u treningu, motivaciju za učenje kroz trening i motivaciju za transfer znanja. Motivacija za trening započinje prije nego što trening započne. U ovoj fazi na motivaciju utječu karakteristike polaznika i utjecaji okoline ili organizacijske karakteristike. Na motivaciju utječe poimanje vrijednosti treninga. Koliko zapravo polaznicima taj trening donosi, koji su njihovi osobni ciljevi. To su pitanja na koja odgovore mora jednim dijelom donijeti i trener.

Druga faza motivacije se odnosi na motivaciju koja se stvara u sklopu samog izvođenja treninga. Na ovu motivaciju organizacija i dizajn treninga mogu utjecati jednako koliko i trener. Ovo je i dio motivacije na koji najveći utjecaj mogu imati andragoške po-

stavke i njihova primjena u planiranju i izvođenju treninga. ARCS model predlaže 4 vodilje za održavanje motivacije polaznika. Prema Kelleru (1987), to su pozornost ili održavanje pažnje polaznika na sadržaj treninga. Ovo se postiže interaktivnosti, dobrim odabirom sadržaja i dobrim odabirom metoda. Druga vodilja je relevantnost sadržaja. Ukoliko polaznici neki trening smatraju potrebnim i relevantnim, ako on ima svrhu bit će za njega više motivirani. Objasniti polaznicima zbog čega im je potreban trening i dati im njihove konkretne primjere može biti dio andragogije primjenjiv na motivaciju kod treninga. Treća kategorija je samouvjerenost. U ovom se slučaju iz andragoških postavki može primijeniti uzimanje u obzir i pozitivno vrednovanje njihovih prethodnih znanja i iskustava. Četvrta kategorija je zadovoljstvo, ono se postiže podupiranjem polaznika treninga, nekim dodatnim nagradama i slično.

Treći nivo motivacije se odnosi na motivaciju za transfer treninga. Motivacija se zapravo može smatrati jednim od glavnih faktora kod transfera znanja. Ukoliko izostane motivacija za prijenos, on se ili neće dogoditi ili se neće adekvatno odraditi. Kod motivacije za transfer treninga mora se uzeti u obzir da transfer treninga može biti horizontalan, koji prelazi iz jednog konteksta u drugi na istoj razini, ili vertikalni, koji prelazi s nižeg organizacijskog nivoa na viši. Na motivaciju za transfer također kao i na motivaciju za trening utječu samo efikasnost ili samopouzdanje i organizacijska klima (Beier i Kanfer, 2009.).

#### 5. Transfer

Transfer treninga se odnosi na primjenu znanja izvan konteksta samog treninga. Dizajn treninga ima utjecaj od 46% na prijenos znanja (Saks i Burke, 2014.). Praćenje mogućnosti prijenosa povećava njegovu vjerojatnost. Transfer se povećava kad trening uključuje više primjera i potiče polaznike da razmišljaju o potencijalima za prijenos. Transfer se poboljšava kada se uči i poučava na primjerima koji pokazuju relevantnost neke vještine. Količina prakse je direktno vezana za količinu transfera. Nastava ili trening trebaju biti kombinacija apstraktnog i konkretnog primjera, ali na način da se podučavano apstraktno objasni i poveže s primjerima. Nastava se mora također fokusirati na cjelokupni zadatak i onda na njegove pojedine dijelove (Tennant, 1999.).

Faktori koji utječu na prijenos treninga između ostalih su: vrijednost sadržaja treninga, samoefikasnost, dizajn transfera, reakcije zaposlenika na trening, motivacija na trening (Bhatti i Kaur, 2010.),

karakteristike učenika, aktivnosti dizajna i izvedbe treninga, radno okruženje, treneri, supervizori i vremenski period (Burke i Hutchins, 2008.). Ti su faktori kategorizirani kao individualni faktori, situacijski faktori, faktori konteksta i faktori dizajna. Planiranje programa treninga je značajno za njegov uspjeh, u njemu su značajni ciljevi, metode kao i mjesto i korištena sredstva (Bhatti i Kaur, 2010.). Intervencije za transfer treninga su najbolje kada se rade u kontekstu posla u fazi dizajna i izvedbe (Burke i Hutchins, 2008.).

Utjecaj treninga na transfer se istražuje i na individualnom i na nivou organizacije. Identificirane su mnoge aktivnosti koje utječu na transfer treninga na organizacijskom nivou, a mogu se raditi prije, za vrijeme i nakon treninga. Prije treninga potrebna je podrška nadređenih za trening, sudjelovanje polaznika u procesu treninga, i priprema za trening. Za vrijeme treninga moraju se koristiti principi učenja, trening se isto tako mora prilagođavati polaznicima kroz promjene sadržaja ili programa općenito kako bi se prilagodio boljem prijenosu znanja. Aktivnosti nakon treninga su organizacija klime za prijenos znanja, organizacijska podrška i podrška supervizora (Saks i Belcourt, 2006.). Individualno gledano polaznik treninga je glavni input treninga. Da bi se moglo govoriti o prijenosu znanja potrebno je izdvojiti faktore koji utječu na polaznik. Oni uključuju sadržaj treninga, karakteristike trenera i drugih polaznika, metode i dizajn programa. Metode korištene u treningu, a kroz njih i interakcija polaznika s trenerom, međusobno kreiraju okruženje učenja koje ima ulogu u uspjehu prijenosa znanja (Nikandrou i dr., 2009.).

## 6. Metodologija istraživanja

Početak svake organizacije treninga je upravo programiranje ili dizajn treninga. Dizajn treninga mora imati nekakav utjecaj na sami trening stoga ovim istraživanjem nastojimo pokazati utjecaj andragoških postavki koje se moraju uz adekvatan sadržaj i metode također uvrstiti u dizajn. Istraživanjem se utvrđuje utjecaj andragoških postavki na motivaciju za trening i na transfer znanja u radne zadatke.

Glavni cilj istraživanja je objasniti utjecaj dizajna treninga na rezultate ili ciljeve treninga. Kod planiranja treninga pažnja se posvećuje i andragoškim i didaktičkim postavkama koje trening mora zadovoljiti. Jedna od najznačajnijih andragoških postavki je prilagođavanje treninga odraslom učeniku i prizna-

vanje njegovih znanja. Time se kreira prva varijabla istraživanja koja se odnosi na andragoške postavke. Utjecaj andragoških postavki u ovom istraživanju mjeri se u odnosu na motivaciju, koja se prepoznaje kao jedan od najvećih faktora uspjeha treninga i postizanja odgovarajućih ciljeve, pogotovo kod obrazovanja odraslih. Stoga prva hipoteza ovog istraživanja glasi:

H1: Zaposlenici su značajno više motivirani ako se u treningu primjenjuju andragoške postavke.

Sljedeći utjecaj koji se kod mora zadovoljiti kroz dizajn treninga je zadovoljavanje njegovog konačnog cilja. Taj cilj je prijenos naučenih znanja u radne zadatke za koje su ta znanja potrebna. Stoga u ovom istraživanju navodimo još jednu hipotezu.

H2: Zaposlenici lakše prenose znanja u radne zadatke ako se u treningu primjenjuju andragoške postavke.

Uzorak istraživanja odnosi se na 300 sudionika istraživanja, i odnosi se na procjenu zaposlenika koji su prolazili neki od treninga usmjeren na njihovo radno mjesto i odgovarajuće radne zadatke. Istraživanje se radi pomoću upitnika u obliku e-anquete. Za istraživanje izdvojeno je tri područja koja odgovaraju trima određenim varijablama. Nezavisna varijabla za obje hipoteze označava se kao primjena glavnih andragoških postavki i mjeri se kroz 6 tvrdnji, označenih prema Likertovoj skali od 1 do 5. Tvrdnje su izdvojene iz teorijske obrade andragoških postavki a definirane su kako slijedi:

1. Jasno mi je gradivo koje trener objašnjava.
2. Trener se trudi objašnjavati gradivo prema mojim radnim zadacima.
3. Trener koristi primjere situacija koje su mi od prije poznate.
4. Trener koristi meni poznate stručne izraze.
5. Trener nam daje priliku predstaviti naša iskustva s primjerima s kojima se susrećemo.
6. Trener polazi od poznatih situacija i kreće prema nepoznatima.

Druga varijabla istraživanja koristi se kao zavisna varijabla prve hipoteze, a odnosi se na motivaciju. Tvrdnje koje se koriste prilagođene su iz istraživanja motivacije zaposlenika za trening koju su proveli Huang i Jao (2015.), a definirane su kako slijedi:

1. Važno mi je gradivo koje sam učio na treningu.
2. Razgovarao sam o onome što sam učio na treningu i izvan treninga.
3. Sviđa mi se što sam učio na treningu.
4. Kada naiđem na prepreku u učenju, neću odustati.
5. Čak i kad su materijali dosadni i dalje se trudim naučiti ih.
6. Smatram kako sam motiviran za učenje.

Treći dio upitnika i treća potrebna varijabla koristi se kao zavisna varijabla u drugoj hipotezi i označava se kao transfer treninga te se ispituje s tri jasno određene tvrdnje o prijenosu znanja u radne zadatke.

1. Smatram kako ću naučeno na treningu moći koristiti za druge treninge.
2. Smatram kako ću naučeno na treningu moći lako primijeniti u praksi.
3. Pokušavam povezati naučeno na treningu sa svojim radnim zadacima.

## 7. Rezultati istraživanja

Hipoteza H1 kao usporedba poštivanja andragoških postavki i motivacije za učenje radila se pomoću neparametrijske statistike, točnije Spearmanovog koeficijenta ranga rho. Koeficijent korelacije otkriva nam povezanost između dvije varijable, a Spearmanov rho se koristi u situacijama u kojima je točna razlika između dva ranga nepoznata kao što je kod mjerenja Likertovom skalom. Koeficijentom korelacije ćemo tako dobiti povezanost između poštivanja andragoških postavki i motivacije za trening i učenje. Koeficijent korelacije može ići od -1 do 1, gdje 1 označava potpunu povezanost. Koeficijent korelacije iznosi 0,485 što označava manju ali statistički značajnu korelaciju prema  $p=0$ . Ovaj odgovor znači kako su varijable andragoških postavki i motivacija za trening pozitivno povezane te da se povećanjem vrijednosti korištenja andragoških postavki povećava i motivacija za trening.

Izračun regresije koji nam govori više o tome koliko nezavisna varijabla, korištenje andragoških postavki, utječe na njihovu motivaciju. Regresija se u statistici često veže na izračun koeficijenta korelacije jer ga može pobliže objasniti. Prema izračunu regresije poštivanjem andragoških postavki objaš-

njava se 25,7% varijance. Na svaku jedinicu promjene andragoških postavki motivacija se povećava za 0,424 ( $B=0,424$ ) jedinice, a prema  $p=0$ . Pokušamo li rezultate tumačiti općenito za svaku vrijednosnu jedinicu promjene korištenja andragoških postavki od strane trenera, motivacija će se povećavati za skoro pola takve vrijednosne jedinice. Motivacija se također tek četvrtinom može objasniti s trenerovim priznavanjem prethodnih znanja i iskustava polaznika i prilagodbom treninga, što je vidljivo iz postavljenih tvrdnji u izračunu varijable.

Na motivaciju utječe jako puno faktora, od kojih su neki objašnjeni u teorijskom dijelu, dok neki nisu poznati. Polaznik koji je u potpunosti nezainteresiran za trening na primjer, ili koji ga je prisiljen polaziti, neće biti više ili manje za njega motiviran ukoliko se trening prilagođava njegovim potrebama, jer ga on smatra nepotrebnim. Ovo je samo jedan od primjera gdje se može vidjeti kako rad trenera, bez obzira pokušava li priznati iskustva polaznika ili pak učiniti trening interaktivnim ili ga prilagođavati, neće imati nikakav utjecaj na motivaciju. S druge strane ukoliko osoba smatra kako je trening poželjan i ukoliko se treningom rješava neki određeni problem polaznika, takav polaznik će biti više motiviran za trening ukoliko vidi da se prihvaćaju njegove ideje, primjeri i ako trener obraća pažnju na njegov dosadašnji stupanj znanja i njemu prilagođava i sadržaj treninga i primjere koje koristi. Ove se promjene dakle odnose na volju i način rada trenera. Trener je onaj koji u izvedbi treninga odlučuje koliko će primjera i zadataka biti prikazano iz pozicije sudionika.

Iz prethodnih izračuna povezanosti i korištenja andragoških postavki možemo zaključiti kako su varijable povezane te da rad trenera kroz promjene u sadržaju i izvedbi treninga, utječe na motivaciju za trening i učenje. Pedagogija i andragogija imaju veliki broj sličnosti i razlika. Glavna razlika koja se izdvaja je upravo rad s djecom ili rad s odraslim osobama. Glavna pak razlika između djece i odraslih osoba je motivacija. Odrasli često s drugačijim postavkama idu na trening nego što djeca idu u školu. Treneri u poslovnim treninzima su stručnjaci u prodaji, menadžmentu, tehnologiji ili stručnom radu potrebnom za kompaniju. Treneri time imaju stručna znanja ali ne i pedagoške i andragoške postavke. Kako su i sami prošli kroz školski sustav i imali cijeli niz nastavnika kroz obrazovanje, treneri se mogu oslanjati na svoja iskustva i pratiti rad pedagoga u školi. Kako bi se zadovoljila motivacija odraslog učenika jedan od glavnih motivacijskih faktora koji mora biti uključen u njihov način rada kod izvođenja treninga je poštivanje prethodnog

znanja i iskustva polaznika treninga. U primjeni bilo koje metode, kako bi trener pokazao da poštuje iskustvo koje su polaznici treninga stekli, on mora svoje polaznike upoznati i pri tome dobiti uvid u njihova dosadašnja znanja o temi treninga i konkretne radne zadatke za koje će se novo znanje primjenjivati. Nakon tog dijela upoznavanja trener je odgovoran kroz svoj rad pri izvođenju treninga uključiti primjere koji su dali polaznici grupe s kojom radi, uključiti zadatke koji su njima potrebni i objasniti na koji način polaznici novo znanje mogu primijeniti u svojim radnim zadacima. Time se preko rada trenera povećava motivacija. Ona se prema zaključcima mjerenja povećava za skoro pola jedinice mjerenja što možemo smatrati značajnim povećanjem. Hipotezu H1: Zaposlenici su značajno više motivirani ako se u treningu primjenjuju andragoške postavke, možemo smatrati potvrđenom.

Na hipotezu H2 primjenjuju se isti statistički postupci izračuna Spearmanovog koeficijenta  $\rho$ . U ovom slučaju koeficijentom korelacije istražujemo povezanost korištenja andragoških postavki s prijenosom ili transferom znanja u radne zadatke. Koeficijent korelacije iznosi 0,5589, što znači da se povećanjem andragoških postavki povećava i prijenos znanja u radne zadatke. Prema izračunu regresije poštivanjem andragoških postavki objašnjava se 34% varijance. Na svaku jedinicu promjene andragoških postavki motivacija se povećava za 0,306 ( $B=0,306$ ) jedinice, a prema  $p=0$ . Pokušamo li rezultate tumačiti općenito za svaku vrijednosnu jedinicu promjene korištenja andragoških postavki od strane trenera, motivacija će se povećavati za trećinu takve vrijednosne jedinice. To također znači općenito da se 34% transfera znanja u radne zadatke može objasniti primjenom andragoških postavki u treningu. S obzirom na sve ostale navedene faktore koji mogu imati utjecaj na transfer znanja ovo možemo smatrati vrlo visokim rezultatom. Prema ovim izračunima hipotezu H2: Zaposlenici lakše prenose znanja u radne zadatke ako se u treningu primjenjuju andragoške postavke možemo smatrati potvrđenom.

Andragoške postavke, definirane putem jasnoće sadržaja, primjene primjera iz prakse i usmjeravanja sadržaja prema radnim zadacima mogu služiti i kao podloga za dizajn transfera treninga i u svakom slučaju pomažu u njegovoj uspostavi. One imaju značajnu ulogu za transfer jer već u svojim postavkama omogućuju percepciju primjene znanja na nove

radne zadatke. Na transfer kao i na motivaciju može utjecati veliki broj različitih faktora, ali ukoliko je već na samom treningu poznato na koje će se radne zadatke i na koji način znanje prenositi, transfer se mora povećavati kao i motivacija za učenje. Općenito ove dvije hipoteze i njihovi rezultati pokazuju kako andragoške postavke i njihova primjena u treninzima i edukaciji zaposlenika nije zanemariva, te kako može pozitivno utjecati na tijek i ciljeve treninga.

## 8. Zaključak

Rad s odraslim učenicima poseban je segment obrazovnih znanosti. Andragogija se bazira na sličnim ali sebi svojstvenim postavkama koje su uokvirene u glavne andragoške principe. U literaturi engleskog govornog područja za posebnu podjelu principa andragogije odgovoran je Malcolm Knowles. Principi andragogije od trenera očekuju pridobivanje polaznika i motiviranje, jasnoću predavanja i sistematičnost, aktivnost i uključivanje polaznika te priznavanje njihovog dosadašnjeg iskustva.

Već kod planiranja ili dizajniranja treninga uz određivanje adekvatnog sadržaja i izbora metoda, u dizajn treninga potrebno je uključiti i glavne andragoške postavke i time provjeriti zadovoljava li ih planirani trening kako se ne bi smanjivao uspjeh treninga i motivacija odraslih učenika za pohađanje treninga.

U ovom radu istraživao se utjecaj andragoških postavki na motivaciju kao jedan od glavnih elemenata uspjeha edukacija zaposlenika i transfer znanja u radne zadatke kao, možda i najznačajniji razlog organizacije treninga ili edukacije zaposlenika.

Spearmanovim koeficijentom korelacije potvrđena je pozitivna korelacija između poštivanja andragoških postavki i motivacije (0,485) te andragoških postavki i transfera znanja (0,558). Izračunom regresije nadalje se pokazuje kako andragoške postavke objašnjavaju 25% varijance motivacije i 34% varijance transfera. Ti podaci upućuju kako andragoške postavke moraju imati svoje mjesto u planiranju i izvedbi treninga ili edukacija zaposlenika i kako mogu pomoću u stvaranju uspješnog i kvalitetnog treninga.

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## **INFLUENCE OF TRAINING PROGRAMME DESIGN ON EMPLOYEE EDUCATION**

### **ABSTRACT**

The design of training programmes involves the process of planning the content and methods of training and assessing the learners' prior knowledge. Andragogy principles play an important role in the design of employee training. They refer to adult learning strategies that involve using adequate content, relevant examples and technical terms in the design and delivery of training, as well as incorporating learners' previous knowledge and experience. They can be used as the basis for the selection of the appropriate content and training methods. This paper seeks to investigate whether the inclusion of andragogy principles in the design of employee training affects the training outcomes, in particular their motivation for training and the transfer of training as one of the main goals of employee training.

Quantitative research was conducted using the statistical methods of correlation coefficient and regression. A correlation coefficient of 0.485 was found between andragogy principles and motivation for training, which indicates a small but statistically significant correlation ( $p < 0.01$ ). The results of regression analysis show that andragogy principles explain 25.7% of the variance. For each unit of change in andragogy principles, motivation increases by 0.424 ( $B = 0.424$ ) of the unit ( $p < 0.01$ ).

A correlation coefficient of 0.5889 was found between andragogy principles and the transfer of training, which means that the increase of andragogy principles also increases the transfer of knowledge to work tasks. The regression analysis results show that the application of andragogy principles explains 34% of the variance in training transfer. For each unit of change in the application of andragogy principles, motivation increases by 0.306 ( $B = 0.306$ ) of the unit ( $p < 0.01$ ).

**Keywords:** Training programme design, employee education, andragogy principles

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# THE IMPACT OF WORKING CAPITAL MANAGEMENT ON THE PROFITABILITY OF CROATIAN MANUFACTURING SMEs

## ABSTRACT

Working capital management is important because of its impact on the owner's wealth, shown as the economic value of the enterprise, which is the result of interdependence of profitability and risk. Enterprises that invest more in working capital can expect lower levels of business risk, but unfavorable influences on profitability levels, and vice versa. Considering the importance of efficient working capital management, the main objective of this paper is to examine the relationship between working capital management and the profitability of Croatian small and medium-sized manufacturing enterprises (SMEs) and to provide empirical evidence on the effects of working capital management on the level of profitability of such enterprises. The panel analysis was used to examine the impact of accounts receivable, inventories, accounts payable, company size, sales growth, GDP growth and inflation rate on the profitability of Croatian manufacturing SMEs over a six-year period (2010-2015). The model confirmed the impact of inventories, accounts payable, and sales growth on the firm's profitability level, while the effect of accounts receivable and company size on the company's profitability was not confirmed, partially confirming the underlying working hypothesis. The control variables GDP and inflation were not statistically significant. It was found that manufacturing companies can increase their profitability by avoiding late payments to suppliers and by increasing inventory turnover, i.e., by holding inventory for as little time as possible. Moreover, businesses can increase their profitability by boosting sales growth.

**Keywords:** Working capital management, net working capital, company's profitability, return on assets, Croatian manufacturing companies

## 1. Introduction

Due to its direct impact on the owner's wealth, working capital management is for many enterprises one of the most important components of their finance and investment management. Working capital management is concerned with how businesses use and manage their working capital. The working capital management method, on the

one hand, has an impact on the liquidity and security of the company and, on the other hand, on the profitability and risk of the company (Shin, Soenen, 1998). An enterprise may implement a conservative or aggressive working capital management strategy. A conservative working capital management strategy favors business security, while an aggressive working capital management strategy puts profitability before security (Orsag, 2003). Companies

that maintain a high level of liquidity, that is, invest large funds in working capital, can, consequently, expect lower profitability, which reduces the value of the company, but also reduces the risk. Conversely, companies that have a low level of liquidity, that is, invest less in working capital can expect higher profitability, on the one hand, and a higher risk of realizing it, on the other. Profitability and liquidity are important goals for every business and abandoning one goal for the benefit of another can create serious problems. In contrast, efficient working capital management implies a balance between profitability and liquidity.

Efficient working capital management is of great importance to companies whose major part of the assets consists of current assets and which are mainly financed from short-term sources. The paper examines the influence of key working capital management factors at the enterprise level on the profitability of manufacturing SMEs, whose assets consist mostly of current assets and which are mostly financed from short-term sources.

Even though SMEs are the drivers of economic growth in a country, most researchers have focused their analysis on large enterprises. This can be attributed to the increased availability of financial statements that have been made public thus facilitating the access to information required for such an analysis. Moreover, there is a greater concern and interest of the state in large enterprises because their business instability could lead to greater financial implications, unemployment and arrears on the state level.

The main goal of this paper is to examine the relationship between working capital management and the profitability of Croatian SMEs and to provide empirical evidence on the effects of working capital management on their profitability. To reach the main goal, the following specific objectives are defined: develop a model for analyzing the impact of working capital management on the profitability of Croatian manufacturing SMEs; analyze and evaluate the key factors of working capital management that affect the level of profitability in Croatian manufacturing SMEs; analyze the impact of accounts receivable on companies' profitability level; analyze the impact of inventory on companies' profitability level; analyze the impact of accounts payable on companies' profitability level; analyze the impact of company size on companies' profitability level; analyze the impact of corporate sales growth on com-

panies' profitability level; analyze the impact of inflation on companies' profitability level; and analyze the impact of GDP on companies' profitability level. In line with the above, the main working hypothesis was set: **Accounts receivable, inventories, accounts payable, company size and sales growth at the company level affect the profitability of Croatian manufacturing SMEs.** Panel data analysis was carried out to test the proposed hypothesis.

## 2. Literature review

Various studies have analyzed the relationship between working capital management and the profitability of companies of different sizes in different markets and from different sectors. Most studies found a negative correlation, concluding that increasing the level of working capital investment results in a lower profitability of the company. However, there are studies that have produced conflicting findings, as well as studies that have not found any evidence of the effect of working capital levels on the level of profitability of a business. The results obtained are influenced by market development, macroeconomic conditions, industry, size of enterprises and other factors at the enterprise and non-enterprise levels.

Since the 1980s, the impact of working capital levels on corporate profitability has been empirically examined. Smith (1980) points to the importance of working capital management because of its effects on the profitability and risk of the enterprise, and thus its value. However, most of the research on working capital management originates from the most developed countries characterized by highly developed financial markets. Croatian companies operate in a bank-centric financial system where the capital markets are less developed and thus companies have fewer alternatives for funding from external sources, so they are mostly financed through bank loans and are dependent on short-term financing in general (Garcia-Teruel, Martinez-Solano, 2007), especially on trade credit. Therefore, the country in which the company operates is an extremely important factor that should be considered when drawing conclusions about the working capital management.

Working capital management is under-explored in transition and post-transition countries. Most of the research has been conducted in the US, UK, Western European countries and other developed



countries, while much less research has been undertaken in developing countries. In the context of developing countries, research into this topic is mainly focused on India, Malaysia and other Asian countries. Of the transition countries, research is present mainly for the Baltic countries.

Regardless of whether a company is operating in a developed or a developing country, common factors of working capital management that affect its level of profitability have been identified as follows: *accounts receivable* (according to Deelof, 2003; Garcia-Teruel, Martinez-Solano, 2007; Rahe-man, Nasr, 2007; Sen, Oruc, 2009; Gill et al., 2010; Mathuva, 2010; Rahe-man et al., 2010; Sharma, Kumar 2011; Baveld, 2012; Akoto et al., 2013; Gul et al., 2013; Makori, Jagongo, 2013; Tauringana, Af-rifa, 2013; Wesley et al., 2013; Almazari, 2014; En-qvist et al., 2014; Nigatu, 2015; Seyoum et al., 2016 and others), *inventories* (according to Deelof, 2003; Garcia-Teruel, Martinez-Solano, 2007 and others), *accounts payable* (according to Deelof, 2003; Garcia-Teruel, Martinez-Solano, 2007 and others), *company size* (according to Deelof, 2003; Rahe-man, Nasr, 2007 and others), *sales growth* (according to Deelof, 2003; Garcia-Teruel, Martinez-Solano, 2007 and others) and *sector* (according to Deelof, 2003; Filbeck, Krueger, 2005; Garcia-Teruel, Martinez-Solano, 2007; Banos-Caballero et al., 2010 and others).

Most of the previous studies focused their analysis on large enterprises, while small enterprises were overlooked - unjustifiably so given their large role in a country's economic development. The biggest problem is collecting data, since in most cases SMEs are not required to make their financial statements public. Research to date, considering only the aspect of enterprise size, shows that there is no universal procedure for successful working capital management, since different direction and intensity of relationships are found between different factors of working capital management at the company level and the level of profitability of the company.

### 3. Methodology

For the purpose of testing the hypothesis, a panel analysis of data was used to examine the impact of accounts receivable, inventories, accounts payable, company size, sales growth, GDP growth and inflation rate on the profitability of manufacturing SMEs.<sup>1</sup> The focus of this paper is on SMEs in the

manufacturing sector, which is the most important sector by the workforce number, accounting for 23.69% of total employed persons. In addition to wholesale and retail trade, it is the most important sector in terms of the added value (21.43%). According to the National Classification of Activities, the analyzed companies are classified in section C – Manufacturing, Manufacture of food products and beverages.

#### 3.1 Sample

The subject of the research are Croatian manufacturing SMEs, whose assets consist mostly of current assets and which are mostly financed from short-term sources. For the purpose of this paper, an appropriate panel analysis was conducted on a sample of 67 SMEs for the period between 2011 and 2015.<sup>2</sup> Secondary data were used, collected from the financial statements of each enterprise. The data were collected from the web pages of FINA (Croatian Financial Agency), from the Register of Annual Financial Reports and from the Commercial Court's Register, except the data on GDP growth and inflation rate, which were collected from the web page of the Croatian Bureau of Statistics. The sample was selected based on the availability of data, so only enterprises with all the above data available were included in the analysis, for the whole observation period. The analysis is based on accounting data available on an annual basis only. In principle, data for periods shorter than one year can be obtained only from the company, so such analysis was not performed. The data were analyzed in the STATA 14 software package.

Since the sample was selected based on FINA's database, the definition of SMEs from the Accounting Act<sup>3</sup> (NN 120/16, Art. 5) was used. The Act defines small and medium-sized enterprises as all enterprises that do not exceed the thresholds in the following two of the three conditions: total assets HRK 150,000,000.00, income of HRK 300,000,000.00 and average number of workers during the business year – 250.

#### 3.2 Data and variables

After reviewing a broad range of sources and scientific studies, the most relevant variables were selected to measure the impact of working capital on the level of profitability of SMEs. In the corresponding panel model, the dependent variable is profitability, and the independent variables are

accounts receivable, inventories and accounts payable, while the control variables are company size, sales growth, inflation and GDP. Table 1 describes

the dependent, independent, and control variables used in the model.

**Table 1 Variables with full term, abbreviation and explanation**

Variable	Abbreviation	Explanation
Return on assets	ROA	ratio of earnings before interest and taxes to the average total assets, expressed in decimal
Days of collecting receivables	DCR	ratio of number of days in a year and receivables turnover
Days of inventory on hand	DIS	ratio of number of days in a year and inventories turnover
Days of payment to suppliers	DPS	ratio of number of days and payables turnover
Size of the enterprise	SIZ	logarithm of sales
Sales growth	SGR	percentage change in sales compared to the previous year, expressed in decimal
Inflation rate	INF	percentage of inflation in the current year compared to the previous year, expressed in decimal
GDP growth	GDP	percentage of GDP growth in the current year compared to the previous year, expressed in decimal

Source: Author

To measure the dependent variable of profitability, *return on assets* (ROA) is used (according to Garcia-Teruel, Martinez-Solano, 2007; Sen, Oruc, 2009; Sharma, Kumar, 2011; Baveld, 2012; Gul et al., 2013; Makori, Jagongo, 2013; Tauringana, Afrifa, 2013; Enqvist et al., 2014; Nigatu, 2015; Seyoum et al., 2016 and others). To measure the independent variable of *accounts receivable*, ratio of days of collecting receivables is used (according to Deelof, 2003; Garcia-Teruel, Martinez-Solano, 2007; Raheman, Nasr, 2007; Sen, Oruc, 2009; Gill et al., 2010; Mathuva, 2010; Raheman et al., 2010; Sharma, Kumar 2011; Baveld, 2012; Akoto et al., 2013; Gul et al., 2013; Makori, Jagongo, 2013; Tauringana, Afrifa, 2013; Wesley et al., 2013; Almazari, 2014; Enqvist et al., 2014; Nigatu, 2015; Seyoum et al., 2016 and others). To measure the independent variable of *inventories*, the ratio of inventories turnover is used (according to Deelof, 2003; Garcia-Teruel, Martinez-Solano, 2007; Raheman, Nasr, 2007 and others). To measure the independent variable of *accounts payable*, the variable days of payment to suppliers is used (according to Deelof, 2003; Garcia-Teruel, Martinez-Solano, 2007; Raheman, Nasr, 2007 and others). For the control variable of *company size*, the measure of sales logarithm is used (according to Deelof, 2003; Raheman, Nasr, 2007 and others). For the control variable of *sales growth*, the measure is

a percentage change in sales compared to the previous year (according to Deelof, 2003; Garcia-Teruel, Martinez-Solano, 2007 and others). For the variable of *inflation* (according to Nigatu, 2015), the inflation rate in a current year compared to the previous year is used, expressed in decimal. Fourth control variable is *GDP* (according to Garcia-Teruel, Martinez-Solano, 2007; Mathuva, 2010 and others). GDP growth is measured as a percentage of GDP growth in a current year, compared to the previous year, and expressed in decimal.

#### 4. Results

A descriptive statistical analysis of the data was conducted first. For all the variables, the arithmetic mean, standard deviation, minimum and maximum values, and the number of observations of each variable are listed. Three basic panel models were then set up, namely the pooled model, the fixed effects model and the random effects model.

##### 4.1 Descriptive statistics

The research included 67 companies from the manufacturing sector over a period of 5 years. The data is balanced, so a total of 335 observations are included. Table 2 (in Appendix) shows the arithmetic means, the associated standard deviations, the min-

imum and maximum values of all variables in the model, as well as the total number of observations, the number of units observed, and the number of periods. Values are displayed for the entire data set (overall), between the observed units (between) and at the level of one observed unit (within).

The average value of the dependent variable *ROA* is 0.0874 with a standard deviation of 0.1872 at the whole set level, 0.1334 between the observed units and 0.1321 within the observed unit. The result indicates approximately equal variations in *ROA* between the observed enterprises and within the enterprise. The average value of the variable *Days of collecting receivables* is 66.90 days, with a standard deviation of 41.93 days and a range of 0.33 days to 211.97 days. The standard deviation is greater between enterprises ( $\sigma = 39.34$ ) than within ( $\sigma = 15.15$ ). The variable *Days of inventories stocked* had an average value of 97.82 days, with an average deviation from the average of 146.36 days and a range of 2.30 days to 930.97 days. Higher standard deviation was observed between enterprises ( $\sigma = 140.139$ ) than within enterprises ( $\sigma = 44.9248$ ). The average value of the variable *Days of payment to suppliers* is 69.00 days with a standard deviation of 51.97 days and a range of 4.20 days to 305.78 days. The standard deviation is greater between enterprises ( $\sigma = 45.66$ ) than within enterprises ( $\sigma = 25.32$ ). The average value of the *Size of the company* was 7.75 with a standard deviation of 0.32 and a range of 6.38 to 8.46. A greater average deviation from the average value was observed between enterprises (0.31) than within enterprises (0.08). The average annual *Sales growth* in the manufacturing sector is 0.0766, or 7.66%, with a large standard deviation of 0.2168, i.e. 21.68%. Such a large variation is common in the Croatian market. Higher standard deviation of *sales growth* is recorded within the enterprise (0.1856) than between enterprises (0.1127).

#### 4.2 Correlation analysis

To determine the connection between the *ROA* and the variables *days of collecting receivables*, *days of inventories stocked* and *days of payment to suppliers*, the Spearman correlation coefficient was calculated. The results are shown in Table 3 (in Appendix).

From the table it can be determined that all variables have a weak or negative connection to the *ROA*, which means that the enterprises with smaller value of *days of collecting receivables* ( $r = -0.128$ ,

$p < 0.05$ ), *days of inventories stocked* ( $r = -0.219$ ,  $p < 0.01$ ) and *days of payment to suppliers* ( $r = -0.257$ ,  $p < 0.01$ ) have a slightly higher value of *ROA*.

#### 4.3 Panel analysis

Three models were set up for the manufacturing sector data: a pooled model, a fixed effects model and a random effects model. The results are shown in Table 4 (in Appendix). After the analysis, the most appropriate model was selected. The F test value ( $p < 0.01$ ) justified the use of the fixed effects model rather than the pooled model. According to the results of the LM test ( $p < 0.01$ ), the use of a random effects model rather than the pooled model is justified. According to the Hausman test ( $p > 0.05$ ), a random effects model was found to be the most appropriate. This result is expected due to the large variation among the observed data. The result of the Wooldridge test ( $p > 0.05$ ) indicates that the null hypothesis, suggesting that there is no autocorrelation of relation errors, cannot be rejected.

Variables *days of inventories stocked* ( $p < 0.05$ ), *days of payment to suppliers* ( $p < 0.05$ ) and *sales growth* ( $p < 0.01$ ) proved to be statistically significant. *Days of inventories stocked* have a negative effect on the dependent variable *ROA*, which means that a larger days-of-inventory-on-hand value decreases the company's profitability. *Days of payment to suppliers* have a negative effect on the dependent variable *ROA*, which means that a longer delay in payment of accounts payable reduces the profitability of the company. In control variables, *sales growth* has a positive effect on the dependent variable *ROA*. The higher the *sales growth*, the higher the company's profitability.

The correlation between the variables in the model was examined and the results are shown in Table 5 (in Appendix). Table 5 shows the correlation coefficients and the associated significance levels. All correlation coefficients are in the range of -0.6 to 0.6, which means that the assumption of a multicollinearity problem can be rejected.

## 5. Discussion

The results partially confirm the following basic working hypothesis:

**H: Accounts receivable, inventories, accounts payable, company size and sales growth at the**

### **company level affect the profitability of Croatian manufacturing SMEs.**

The model confirmed the impact of *inventories*, *accounts payable* and *sales growth* on the level of profitability of manufacturing SMEs, while the impact of *accounts receivable* and *size of enterprises* on the level of profitability of manufacturing SMEs was not confirmed. The control variables *GDP* and *inflation* were not statistically significant.

The model confirmed the negative impact of the variable *days of inventories stocked* on the profitability of manufacturing SMEs. The results show that a decrease in days of inventory on hand leads to an increase in the profitability of the company, and conversely, a higher value of days of inventory on hand will reduce the profitability of the company. This can be explained by an increase in the total cost of inventories (storage, handling, insurance and others) and a decline in the market value of inventories due to their obsolescence. The creation of surplus inventories and the assumption of higher total inventory costs can be particularly justified in the manufacturing sector, since this reduces the risks of potential interruptions in the production process, risks of price changes and opportunity costs. Otherwise, a shortage of raw materials and supplies can lead to interruptions in the production process, which can result in high fixed costs per unit of product. Discontinuation of production and inability to deliver finished products will result in the loss of business, i.e. customer churn and consequently the loss of future sales. The results are in line with the results obtained by other researchers (Deelof, 2003; Garcia-Teruel, Martinez-Solano, 2007; Raheman, Nasr, 2007; Sen, Oruc, 2009; Raheman et al., 2010; Sharma, Kumar, 2011; Gul et al., 2013; Almazari, 2014; Enqvist et al., 2014; Nigatu, 2015; Seyoum et al., 2016 and others).

The model confirmed the negative impact of the variable *days of payment to suppliers* on the profitability of manufacturing SMEs. The results show that a decrease in accounts payable leads to an increase in the profitability of the company, and conversely, a longer delay in payment of accounts payable will reduce the profitability of the company. The negative correlation between the two variables indicates that, first, companies did not take advantage of early payment discounts, and secondly, they incurred high costs in the form of high penalties for late payment or default interest. The enterprises are most likely forced to postpone their payments

because they are in financial difficulties, so they do not invest the money from deferred payments to improve sales, but to settle their debts, or close one debt by incurring new debt. Given that these are SMEs, it is not uncommon for a creditor to be dependent on the debtor. Although most researchers expected a positive relationship in their studies, as in this paper, most found a negative correlation between the obligations towards suppliers and corporate profitability (Deelof, 2003; Raheman, Nasr, 2007; Sen, Oruc, 2009; Sharma, Kumar, 2011; Tauringana, Afrifa, 2013; Almazari, 2014; Enqvist et al., 2014; Seyoum et al., 2016 and others).

The model confirmed the positive impact of the variable *sales growth* on the profitability of manufacturing SMEs. The results show that an increase in the growth of a company's sales leads to an increase in the company's profitability. The results are consistent with the results obtained by most researchers who found a positive relationship (Garcia-Teruel, Martinez-Solano, 2007; Raheman et al., 2010; Gul et al., 2013; Makori, Jagongo, 2013 and others).

The effect of the variable *days of collecting receivables* on the level of profitability of manufacturing SMEs was not statistically significant. The results are in line with those of other researchers who also expected a negative correlation between accounts receivable and company profitability but failed to find significance in the stated correlation (Sen, Oruc 2009; Raheman et al., 2010; Makori, Jagongo, 2013; Enqvist et al., 2014; Seyoum et al., 2016 and others). It was expected that the longer days of collection of receivables would reduce the profitability of the company. On the one hand, one can assume the negative impact of late payments on the level of profitability of the company, because money is tied up in receivables and is not used to create new opportunities and profits, and there are high costs of maintaining receivables. On the other hand, one can assume the cancellation of this negative impact by increased sales due to better credit conditions, raising prices (especially in post-transition countries), not using cash discounts from customers, charging regular and default interest due to late payment. Many researchers in their studies have found a negative correlation between accounts receivable and company profitability.

The effect of variable *size of the company* on the profitability of manufacturing SMEs did not prove to be statistically significant. The results are in line

with those obtained by Gill et al. (2010) and Wesley et al. (2013), who did not find a significant correlation between profitability and size of the company, whereas many others have found a positive correlation between these two variables.

The impact of the control variable *inflation* on the profitability of manufacturing SMEs was not statistically significant. The inflation rate in the observed period ranged from -0.50 to 3.40%, i.e., not large enough to affect the level of profitability of the company. Furthermore, the impact of the control variable *GDP* on the level of profitability of manufacturing SMEs was not statistically significant.

## 6. Conclusion

Panel analysis was used to examine the impact of accounts receivable, inventories, accounts payable, company size, sales growth, GDP growth and inflation rate on the profitability of Croatian manufacturing SMEs.

The enterprises in the manufacturing sector can increase the profitability of their business by not delaying the payment of their obligations to suppliers in order to, on the one hand, avoid the additional costs of late payment and, on the other, to take advantage of the offered discount from suppliers. In addition, companies can increase their profitability by increasing inventory turnover, that is, by holding inventory in stock for as little time as possible to avoid the additional costs of storage and spoilage costs of perishable raw materials. In line with expectations, the growth of company sales will increase the profitability of the company.

The research conducted here has improved the understanding of working capital management. This area is still under-explored. The research conducted up until now mainly concerned large economies and public corporations. The focus of this paper is on SMEs in the context of a small post-transition economy. Thus, an analysis of working capital management in one of the most important sectors of the economy has made a noteworthy contribution to the scientific literature in this field.

The main scientific contribution of this paper lies in the research findings that have identified and systematized key factors of working capital management at the enterprise level, which significantly affect the profitability of manufacturing SMEs. The analyses have shown that inventories, accounts

payable and sales growth will have a significant impact on the profitability of manufacturing SMEs, while accounts receivable, company size, inflation and GDP will not have a significant impact on the profitability of such companies.

Scientific contribution is evident in the development of a model for analyzing the impact of working capital management on the profitability of manufacturing SMEs, in an environment characteristic of post-transition countries:

$$\widehat{ROA}_t = - \frac{0.00013}{(0.00006)} \cdot DVZ_t - \frac{0.00032}{(0.00016)} \cdot DPOD_t - \frac{0.09336}{(0.02707)} \cdot RPR_t$$

Although the model has been tested on Croatian manufacturing SMEs, it is also applicable to similar transition and post-transition countries, especially those in the region with a similar development path.

The research was conducted on Croatian companies; however, its findings may be transferrable to other countries in the region. The survey is transparent enough so that it can be applied, or generalized, to other transition and post-transition countries. The results can be of interest to all working capital management actors in post-transition countries.

The results of the research presented in this paper make a scientific contribution to the economic sciences in both theoretical and applied terms. The scientific results and findings of this research are of value to the management of SMEs operating in the Republic of Croatia, as well as in the countries of the region, as they will help them to better understand and improve working capital management. Furthermore, it is expected that the findings of this paper will raise awareness of existing issues relating to working capital management.

Limitations of this work arise from the data collection method. The data were taken from the financial statements of companies. However, for many companies only condensed financial statements were available, which do not contain all the data required for the analysis. Given that SMEs are not required to publicly disclose their financial statements, many of them were not included in the analysis.

The paper provides the basis for further research that could cover a larger number of sectors and examine the differences between SMEs and large enterprises in similar economies.

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## ENDNOTES

- 1 The methodology was used in the doctoral thesis Prša, D. (2019). Utjecaj upravljanja obrtnim kapitalom na profitabilnost malih i srednjih poduzeća u post-tranzicijskom gospodarstvu / Impact of working capital management on profitability of small and medium-sized enterprises in post-transition economies.
- 2 This research is part of the research in the doctoral thesis Prša, D. (2019). Utjecaj upravljanja obrtnim kapitalom na profitabilnost malih i srednjih poduzeća u post-tranzicijskom gospodarstvu / Impact of working capital management on profitability of small and medium-sized enterprises in post-transition economies.
- 3 Accounting Act, Official Gazette No. 78/15, 134/15, 120/16.

*Darija Prša*

# UTJECAJ UPRAVLJANJA OBRTNIM KAPITALOM NA PROFITABILNOST HRVATSKIH MALIH I SREDNJIH PRERAĐIVAČKIH PODUZEĆA

## SAŽETAK

Upravljanje obrtnim kapitalom važno je zbog njegova utjecaja na bogatstvo vlasnika, promatrano kao ekonomska vrijednost poduzeća koja je rezultat međuovisnosti profitabilnosti i rizika. Poduzeća koja ulažu velika sredstva u obrtni kapital mogu za posljedicu očekivati nižu razinu poslovnog rizika, ali i nepovoljniji utjecaj na visinu profitabilnosti, i obrnuto. Sukladno tomu, sa stajališta učinkovitog upravljanja obrtnim kapitalom, glavni je cilj ovoga rada ispitati odnos između upravljanja obrtnim kapitalom i profitabilnosti hrvatskih malih i srednjih prerađivačkih poduzeća te pružiti empirijske dokaze o učincima upravljanja obrtnim kapitalom na visinu profitabilnosti poduzeća. Panel analizom ispitao se utjecaj potraživanja od kupaca, zaliha, obveza prema dobavljačima, veličine poduzeća, rasta prodaje, rasta BDP-a i stope inflacije na profitabilnost hrvatskih malih i srednjih prerađivačkih poduzeća za šestogodišnje razdoblje (2010 - 2015). Model je potvrdio utjecaj zaliha, obveza prema dobavljačima i rasta prodaje na visinu profitabilnosti poduzeća dok se utjecaj potraživanja od kupaca i veličine poduzeća na visinu profitabilnosti poduzeća nije potvrdio čime je djelomično potvrđena temeljna radna hipoteza. Kontrolne varijable BDP-a i inflacija nisu se pokazale statistički značajnima. Poduzeća iz prerađivačkog sektora mogu utjecati na povećanje profitabilnosti svoga poduzeća tako da ne odugovlače s plaćanjem svojih obveza prema dobavljačima te većim obrtajem zaliha, odnosno da se zalihe što kraće vrijeme zadržavaju na skladištu. Također, poduzeća mogu povećati svoju profitabilnost povećanjem rasta prodaje.

**Ključne riječi:** upravljanje obrtnim kapitalom, neto operativni obrtni kapital, profitabilnost poduzeća, stopa prinosa imovine, hrvatska prerađivačka poduzeća

**APPENDIX**

**Table 2 Descriptive statistics**

Variable		Arithmetic mean	Standard deviation	Minimum value	Maximum value	Number of observations
ROA	Overall	0.08740	0.187155	-0.47677	2.19322	N = 335
	Between		0.13335	-0.21185	0.88261	n = 67
	Within		0.13213	-0.53076	1.73864	T = 5
DCR	Overall	66.90332	41.93054	0.32519	211.9695	N = 335
	Between		39.33519	0.58947	173.9544	n = 67
	Within		15.14737	6.04203	135.6181	T = 5
DIS	Overall	97.8164	146.3625	2.30316	930.9683	N = 335
	Between		140.139	3.03467	788.1379	n = 67
	Within		44.9248	-138.8425	455.8667	T = 5
DPS	Overall	68.99944	51.97049	4.19969	305.7783	N = 335
	Between		45.65897	11.74589	219.2422	n = 67
	Within		25.3211	-87.16476	241.7911	T = 5
SIZ	Overall	7.74656	0.31880	6.38129	8.46065	N = 335
	Between		0.31007	6.45096	8.36157	n = 67
	Within		0.08152	7.41495	8.14551	T = 5
SGR	Overall	0.0766337	0.21679	-0.44712	1.24237	N = 335
	Between		0.11269	-0.12398	0.47859	n = 67
	Within		0.18561	-0.51483	1.17122	T = 5
INF		0.01398	0.01504	-0.00500	0.03400	T = 5
GDP		0.00608	0.01085	-0.00720	0.02327	T = 5

Source: Author, according to STATA calculations

**Table 3 Spearman correlation coefficient**

			Y_ROA_index
Spearman's rho	X1_Days_Of_Collecting_Receivables	Correlation Coefficient	-0.128*
		Sig. (2-tailed)	0.019
		N	335
	X2_Days_Of_Inventories_Stocked	Correlation Coefficient	-0.219**
		Sig. (2-tailed)	0.000
		N	335
	X3_Days_Of_Payment_To_Suppliers	Correlation Coefficient	-0.257**
		Sig. (2-tailed)	0.000
		N	335

\* correlation is significant at the level 0.05 (p<0.05);

\*\* correlation is significant at the level 0.01 (p<0.01)

Source: Author, according to STATA calculations



**Table 4** Coefficients and associated standard errors in panel regression models

	Pooled	Fixed	Random
DCR	0.00018 (0.00031)	0.00070 (0.00044)	0.00029 (0.00029)
DIS	-0.00015** (0.00007)	-0.000035 (0.0000426)	-0.00013** (0.00006)
DPS	-0.00039* (0.00021)	-0.00030* (0.00015)	-0.00032** (0.00016)
SIZ	-0.09889 (0.06096)	-0.10088 (0.10111)	-0.02022 (0.58762)
SGR	0.11121** (0.04720)	0.10613*** (0.02448)	0.09336*** (0.02707)
INF	0.00190 (0.0055)	0.00141 (0.00524)	0.00209 (0.00552)
GDP	0.00286 (0.00864)	0.00295 (0.00924)	0.00292 (0.00910)
CONSTANT	0.18304 (0.44484)	0.83412 (0.76126)	0.24849 (0.43155)
R2	0.0516	0.0229	0.0167
$\rho(\text{rho})$		0.4614	0.3717
Ftest		0.0000	
LM test			0.0000
Hausman test			0.8587
Wald test			0.0000
Wooldridge test			0.3960
corr (u <sub>i</sub> , X <sub>b</sub> )		-0.2077	
Number of observations	335	335	1380
Number of units	67	67	67

\*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ , values in parentheses are corrected (clustered robust) standard errors

Source: Author, according to STATA calculations

**Table 5 Correlation matrix of pairs of independent variables**

	DCR	DIS	DPS	SIZ	SGR	INF	GDP
DNR	1.0000						
DIS	0.1827* (0.0008)	1.0000					
DPS	0.1757* (0.0012)	0.2399* (0.0000)	1.0000				
SIZ	-0.1345* (0.0137)	-0.1304* (0.0170)	-0.2549* (0.0000)	1.0000			
SGR	-0.2305* (0.0000)	-0.0936 (0.0870)	-0.1710* (0.0017)	0.1851* (0.0007)	1.0000		
INF	0.0165 (0.7632)	-0.0573 (0.2957)	0.0438 (0.4238)	-0.0553 (0.3126)	0.0508	1.0000	
GDP	-0.0256 (0.6405)	0.0198 (0.7179)	-0.0368 (0.5018)	0.0229 (0.6763)	0.0549 (0.3164)	-0.5851* (0.0000)	1.0000

\*  $p < 0.5$

Source: Author, according to STATA calculations

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# THE INFLUENCE OF INTEGRATED INFORMATION SYSTEMS ON THE IMPLEMENTATION OF ADVANCED MANAGERIAL ACCOUNTING TECHNIQUES

## ABSTRACT

The main purpose of this research is to investigate the influence of integrated information systems (IIS) on the use of advanced managerial accounting techniques (AMAT). To analyze this relationship, we employed structural equation modeling (SEM) on empirical data obtained from a sample of 105 Croatian companies. Empirical findings obtained through SEM confirmed a significant positive influence of one of the IIS features, IIS analytical capabilities, on the application of AMAT. Other theoretically interesting independent variables (IIS age, IIS implementation quality, company size, and business environment uncertainty) were also included in the SEM; however, the evaluated SEM failed to provide a good fit to the data, and the parameters were not significant. The findings of this study provide useful guidance for both IIS developers and users, as they indicate that the implementation of IIS with a higher level of analytical capabilities results in a higher level of AMAT use.

**Keywords:** Advanced managerial accounting techniques (AMAT), integrated information systems (IIS), structural equation modeling (SEM), Croatia

## 1. Introduction

In today's digital era, information technology has become an essential part of every business. Two or three decades ago, enterprise resource planning (ERP) applications were the focus of large companies. Today, small and medium-sized enterprises (SMEs) also use globally or locally developed ap-

plications to streamline business processes and improve performance. According to the recent research by Panorama Consulting (2018)<sup>1</sup>, 67% of ERP users reported that they were "very satisfied" or "satisfied" with ERP implementation. The research also revealed that 73% of companies went through "moderate" or "intense" organizational changes during ERP implementation. Such em-

pirical findings confirm theoretical expectations that ERP implementation is an important trigger for changes throughout an organization, including managerial accounting practices. Thus, over the last decade, “scientific literature has given more attention to ERP in the accounting context” (Sardo, Alves, 2018).

ERP applications integrate all business information in a centralized database that enables a company to manage and coordinate all of its information, resources and functions from that database (Gullkvist, 2013). Therefore, ERP applications represent a necessary tool for companies to survive in a very competitive business environment (Spathis, Constantinides, 2003) that requires more integrated, comprehensive and real-time operational information from all organizational units (Eker, Aytaç, 2016). Implementation of ERP applications, whether successful or not, will affect various divisions and individuals in organizations, especially managerial accounting and managerial accountants (Etemadi, Kazeminia, 2014). According to previous research, ERP applications are changing the managerial accounting by providing managers with easy and quick access to relevant and real-time business information required for decision-making (Kallunki et al., 2011; Appelbaum et al., 2017). Pervan and Dropulić (2019) reported that integrated information systems (IIS) application resulted in changes in managerial accountants’ skills and work in several areas (improved knowledge of business processes, improved IT skills, improved communication skills, and reduced time required for the collection of data). Therefore, “the role of the management accountant has shifted from capturing and recording transactions to analyzing business issues” (Sprakman et al., 2015). It is indisputable that the ability of the information systems to merge or substitute different tasks of accountants will consequently change the nature of their job (Fernandez et al., 2018).

Although there has been a growing interest in the subject, research that examines the effects of ERP applications on advanced managerial accounting techniques (AMAT) is still scarce (Booth et al., 2000; Granlund, Malmi, 2002; Scapens, Jazayeri, 2003; Granlund, 2007; Galani et al., 2010; Vakalofotis et al., 2011). Previously mentioned studies have identified only minimal effects of different ERP soft-

ware on managerial accounting techniques. Despite the limited use of AMAT, ERP applications could increase the users’ knowledge about these modern techniques, which can be a good starting point for their future adoption (Gullkvist, 2013). Today, when modern ERP solutions provide organizations with integrated, reliable and, in some cases, real-time data, one can hypothesize that companies will be motivated to adopt these advanced techniques so as to provide managers with higher information quality.

This study contributes to the body of knowledge since it represents one of the very rare studies that explore the influence of IIS use on the adoption of AMAT in Croatia and in South East European (SEE) countries in general. In comparison with early studies, the focus of current research is not exclusively on ERP as all analytical applications are included in IIS measurement. Namely, in business practice, companies often use specialized applications for different areas like budgeting, consolidation of financial statements, managerial reporting, costing, etc., in addition to ERP. Therefore, to capture the IIS variable more comprehensively and precisely, we followed the approach of Rom and Rohde (2006) and defined IIS as a combination of ERP and other specialized analytical applications, which are often called BoB (Best of Breed). To obtain a deeper insight into the IIS variable, we originally developed several IIS features (analytical capabilities, age and implementation quality) that may have a significant influence on the adoption of AMAT.

By using structural equation modeling (SEM), this study improves the research methodology in comparison with the previous literature. Although, SEM has many similarities with linear regression, it has some advantages and thus provides more reliable findings. SEM reveals relationships among hidden structures, which cannot be directly measured. In contrast to regression analysis, which assumes no measurement error, possible mistakes in the measurement of the observed variables are taken into account (Civelek, 2018). Empirical findings from this study confirm that IIS analytical capabilities positively affect the application of AMAT. The rest of this paper is divided into four sections. The following section, Section 2, gives an overview of the relevant early and recent literature. Section 3 provides

information on the statistical methodology used, the questionnaire and research variables. Empirical findings are reported in Section 4, and concluding remarks are presented in Section 5.

## 2. Literature review and theoretical model

Information technology facilitates the automation of business processes (Sangster et al., 2009) and involves improving information access and coordination across organizational units (Attaran, 2004) like production, sales and marketing, finance and accounting. This, in turn, creates a firmly integrated system with a continuous stream of information through the whole organization (Galani et al., 2010). Previous researchers have identified only minimal effects of different ERP software on the introduction of new AMAT (Booth et al., 2000; Granlund, Malmi, 2002; Scapens, Jazayeri, 2003; Granlund, 2007; Galani et al., 2010; Vakalofotis et al., 2011). In an early study, Granlund and Malmi (2002) examine the effects of integrated, enterprise-wide information systems on managerial accounting and managerial accountants' work on the sample of ten companies from Finland. The results of that study show that, in most of the cases, AMAT and several traditional techniques are supported by applications separate from ERP. Considering the effect of ERP on managerial accounting techniques, it was found that it did not influence companies' decisions to apply activity-based costing (ABC). Although ERP provides some of the information contained in the balanced scorecard (BSC), ERP applications were not found to have a significant impact on the deployment of the BSC because the BSC is maintained outside the ERP.

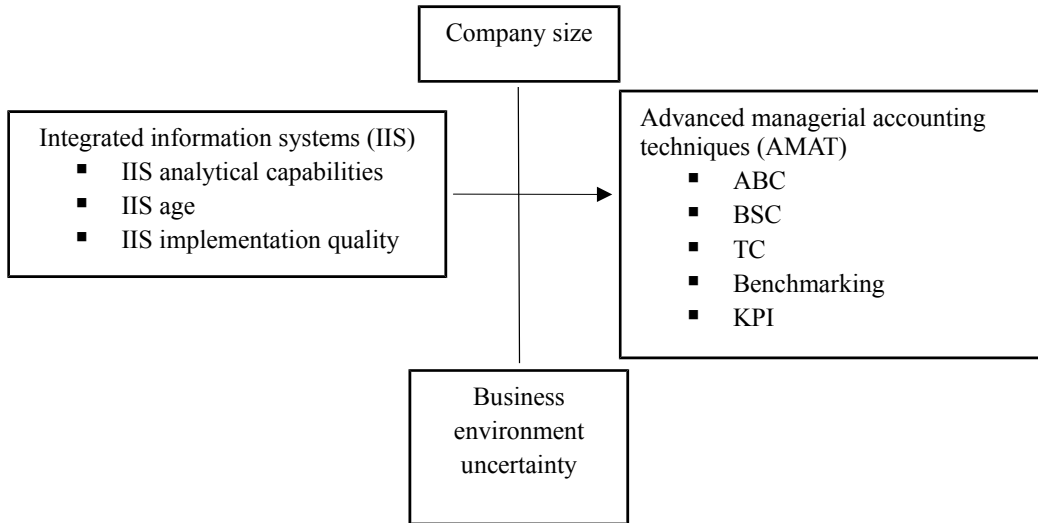
Booth et al. (2000) analyzed the influence of ERP applications on the implementation of new accounting practices, degree of information system integration and related benefits that Australian companies believe they have accomplished. The results indicate that ERP applications have little influence on the implementation of AMAT. In another study, Scapens and Jazayeri (2003) found that there have been no fundamental changes in the character of the managerial accounting information, and no new "sophisticated" managerial accounting techniques have been deployed after the implementation of the SAP system, as the most advanced ERP system, in the European branch of a large US multinational organization. Rom and Rohde (2006)

explored the link between IIS and managerial accounting practices and found that AMAT including the use of non-financial information is better supported by a strategic enterprise management system. Malinić and Todorović (2012) surveyed nine Serbian companies (which adopted SAP) and found that managerial accounting techniques did not significantly change under the influence of SAP. Nevertheless, SAP is a significant source of support to the new managerial accounting practices. Moreover, it is realistic to expect that in the future SAP will influence the introduction of new and support the changes in the current managerial accounting practices.

Although organizations may have other reasons for the application of ERP, Gullkvist (2013) indicated that, to some extent, the organizations implemented AMAT after the ERP implementation and that the most commonly adopted modern techniques were key performance indicators (KPIs). Also, the use of other modern practices such as Activity-Based Costing (ABC), Target Costing (TC) and the BSC appears to have increased, although to a smaller degree. Utilizing the ERP system, organizations can coordinate themselves with AMAT such as ABC and forecasting that have been strongly supported by the ERP system (Hosseinzadeh, Davari, 2018). Eker and Aytaç (2017) examine how AMAT such as ABC, BSC, TC and etc. become effective with the support of the ERP system and how this interaction influences organizational performance. They concluded that the high level of interaction between ERP and AMAT is associated with high financial and non-financial performance. According to Wajdi (2018), accounting techniques used after the implementation of ERP systems can affect the performance of organizations amounting to 68.5%.

This study provides an insight into how IIS implementation contributes to the introduction of AMAT. As mentioned earlier, the main aim of this study was to examine the effect of IIS on the application of AMAT. The age of IIS (IIS\_AGE), IIS analytical capabilities (ISS\_AC) and perceived quality of IIS implementation (ISS\_IQ) were the independent variables, and ABC, BSC, TC, benchmarking (BENCH) and KPIs were the dependent variables. Business environment uncertainty and company size were used as company characteristics. The model presented in Figure 1 includes all relations examined in this research.

Figure 1 Theoretical model



Source: Authors

Although the results of previous research are not entirely consistent, some researchers claim that a precondition for getting AMAT to work in organizations appears to be connecting them with information technology or, more precisely, with IIS. Based on extant theory and research evidence, we expect a positive relationship between IIS and AMAT.

### 3. Research methodology

The empirical data were collected in 2018 by means of a questionnaire sent to 500 randomly selected Croatian companies that use IIS. An e-mail with a link to the online questionnaire was sent to finance managers, business controllers, heads of accounting departments and equivalent job positions because they were expected to have sufficient information about the effect of IIS use on the application of AMAT. In all, 133 questionnaires were filled out, and the response rate was 26.6%. Among the 133 questionnaires filled out, 28 were incomplete. Consequently, only 105 questionnaires were used for modeling purposes. In comparison with previous empirical studies (Booth et al., 2000; Hyvonen,

2003; Sangster et al., 2009; Gullkvist, 2013), which were based on samples comprising between 30 and 99 companies, the sample size of 105 observations was respectable. Regarding the use of the structural equation model, some authors (Ding et al., 1995) suggested at least 100 observations. However, Bentler and Chou (1987) suggested that in the case of non-normally distributed data, there should be at least 10 observations per variable. Since our final structural equation model is based on 10 variables (8 observed and 2 latent), the requirement regarding the sample size according to the number of research variables was also satisfied.

The questionnaire included items that were required for measuring variables (Table 1) of our interest - adoption of AMAT (dependent variable) and five independent variables, IIS analytical capabilities, IIS age, IIS implementation quality, company size and business environment uncertainty. It is important to point out that the majority of variables (except IIS age and company size) used for modeling represent latent variables, which are measured by at least three observable variables as recommended by the literature (Civelek, 2018).

**Table 1** List of variables used in modeling

Variable	Measurement
Advanced managerial accounting techniques (AMAT)	Likert scale (1 to 5)
IIS analytical capabilities (IIS_AC)	Likert scale (1 to 5)
IIS age (IIS_AGE)	In years
IIS implementation quality (IIS_IC)	Likert scale (1 to 5)
Company size (SIZE)	Four groups according EU rules
Business environment uncertainty (BEU)	Likert scale (1 to 5)

Source: Authors

In the initial phase of modeling, comprehensive models, including all potentially interesting independent variables, were estimated. However, the fit of the estimated structural models was not at a satisfactory level (details on the criteria for the evaluation of structural model fit are given in Table 6), and the estimated parameters were not statistically significant. In addition to paper length restrictions this is why only the constructs that were included into the final model (AMAT and IIS\_AC) are described in detail. Questionnaire items that were used for measuring AMAT were selected based on variables that were used in similar studies (Booth et al., 2000; Malinić, Todorović, 2012; Gullkvist, 2013). Respondents were asked to evaluate how IIS implementation affected the adoption of the following five advanced techniques: ABC, BSC, TC, BENCH and KPIs. However, the measurement model for the AMAT construct confirmed that the construct with four items (BSC, TC, BENCH and KPI) has an acceptable fit to the data. The AMAT construct that included ABC did not provide an acceptable fit since the main fit indices were not at required levels (Root mean square error of approximation - RMSEA = 0.202; CMIN/DF = 5.379; Tucker-Lewis index - TLI = 0.899, etc.).

Before we evaluated the final SEM, it was necessary to test the reliability and convergent validity for the developed constructs. Internal reliability of the used measurement scale is often evaluated based on Cronbach's alpha, which should be greater than 0.7 (Civelek, 2018). Cronbach's alphas for the developed constructs in this research were 0.940 and 0.846 (Table 2), confirming the reliability of the measurement model. An additional indicator that should be considered is the composite reliability - CR from confirmatory factor analysis, which indicates the consistency of each developed construct. One can conclude that the composite reliability of the construct is adequate if the CR value is higher than 0.7. In the case of AMAT and IIS\_AC constructs, consistency was confirmed since the values were 0.958 and 0.896, respectively. Finally, average variance extracted - AVE represents the sum of variance related to the developed construct relative to the sum due to measurement error. The literature (Fornell and Larcker, 1981) suggests that AVE should be higher than 0.5, which was the case for both constructs, AMAT and IIS\_AC. The simultaneous analysis of the CR and AVE values indicated that convergent validity was established.

**Table 2** Indicators of reliability and convergent validity

Construct	Indicator	Cronbach's Alpha	CR	AVE
AMAT	KPI	0.940	0.958	0.849
	BENCH			
	TC			
	BSC			
IIS_AC*	IIS_DASHBO	0.846	0.896	0.684
	IIS_DMING			
	IIS_PR_REALT			
	IIS_FORCAST			

\*IIS\_AC represent the use of dashboards, datamining, real-time project reporting and forecasting

Source: Authors' calculation

Like regression analysis, structural models have several assumptions. The first assumption is that there is multivariate normality of the observed variables, which is often violated when ordinal and discrete scales are used (Civelek, 2018). Violation of normality assumptions leads to a high CMIN/DF value and a significant test outcome. Univariate normality can be evaluated based on skewness and kurtosis, both of which should be below 3.0. There was evidence of

univariate normality for the items used for AMAT and IIS\_AC constructs since all values were under 3.0 (Table 3). However, in the case of multivariate normality, there was a violation of normality assumption since the multivariate kurtosis value was higher than 5, i.e. the critical value was higher than 1.96. Evidence of non-normal distribution required the application of the bootstrapping technique when evaluating the structural model.

**Table 3 Evaluation of variables normality**

Variable	Min.	Max.	Skewness	C.R.	Kurtosis	C.R.
KPI	1	5	0.010	0.040	-1.337	-2.796
BENCH	1	5	0.289	1.209	-1.130	-2.363
TC	1	5	0.086	0.359	-1.121	-2.345
BSC	1	5	0.196	0.822	-1.250	-2.614
IIS_DASHBO	1	5	0.473	1.981	-1.068	-2.234
IIS_DMINING	1	5	0.380	1.591	-1.058	-2.214
IIS_PR_REALT	1	5	0.176	0.737	-1.177	-2.463
IIS_FORCAST	1	5	0.185	0.773	-1.278	-2.672
Multivariate					25.428	10.299

Source: Authors' calculation

Additionally, we had to test for potential outliers in the data distribution. IBM SPSS 23 Amos software supports outlier identification by using the Mahalanobis distance. All observations with a p1 value higher than 0.05 indicate outliers, which, in our sample, was the case for 10 of our observations (Table 4). At this point in our research, it was

necessary to decide what to do with the identified outliers. The fact that outliers exist is not in itself a justification for outlier elimination. Moreover, after removing the first cycle of outliers, additional checks may reveal a new set of outliers. Therefore, we decided to keep all 10 identified outliers, which represented 9.5% of the sample in our research.

**Table 4 Evaluation of Mahalanobis distance**

Observ. No.	Mahalanobis d-Squared	p1	p2
67	37.716	0.0001	0.0010
78	29.874	0.0001	0.0001
19	26.233	0.0010	0.0001
23	21.975	0.0050	0.0020
24	21.643	0.0060	0.0000
97	20.153	0.0100	0.0010
82	20.078	0.0100	0.0001
98	19.932	0.0110	0.0001
42	19.068	0.0150	0.0001
32	16.372	0.0370	0.0060
54	15.024	0.0590	0.0440

Source: Authors' calculation



An additional assumption of the structural model is that there is no correlation among independent variables in the structural equation model, i.e. multicollinearity is not an issue. To test for the presence of multicollinearity, we used variance inflation fac-

tors (VIF), which have a critical value of 5. Since all VIF values from the auxiliary regression model were below 5, there was no evidence of multicollinearity among the observed independent variables (Table 5).

**Table 5 Evaluation of multicollinearity for the observed independent variables**

Item	Tolerance	VIF
IIS_DASHBO	0.524	1.907
IIS_DMINING	0.553	1.810
IIS_PR_REALT	0.545	1.834
IIS_FORCAST	0.501	1.996

Source: Authors' calculation

#### 4. Research findings

Using the maximum likelihood estimation, supported by IBM SPSS Amos 23, we evaluated the SEM parameters. The evaluated structural equation model should have a good empirical data fit. Goodness of model fit can be evaluated with different indices. Relevant statistical literature (Schreiber et al., 2006; Schumacker, Lomax, 2010; Teo et al., 2013; Civelek, 2018) suggests the use of chi-square, CMIN/DF, goodness-of-fit index (GFI), TLI, comparative fit index (CFI), normed fit index (NFI), RMSEA, etc. In this model, the absolute measure of data fit of chi-square was 31.25 (p-value of 0.038). The ideal value for chi-square is zero, while the p-value should be insignificant (higher than 0.05). However, since chi-square is related to the size of research sample and many SEM-based studies reported a significant chi-square, Byrne (2016) sug-

gested that this indicator should be analyzed simultaneously with other model fit indices (Table 6). For example, if the chi-square value (31.25) is divided by the degrees of freedom (DF = 19), the calculated CMIN/DF value equals 1.645, which represents a good fit since the desired value is lower than 3 (Schreiber et al., 2006; Civelek, 2018).

The GFI represents the absolute measure of model fit, which indicates the degree of variance and covariance explained by the evaluated SEM. The GFI increases with the increase in sample size (Teo et al., 2013). The GFI for the model that was estimated in this research equaled 0.935, which indicates an acceptable fit. RMR (Root Mean Square Residual) represents overall badness-of-fit measure and calculated RMR value (0.047) was lower than critical value of 0.05 indicating a good data fit.

**Table 6 Model fit indices**

Fit indices	Calculated indices value*	Good fit value**	Acceptable fit value**
Chi square p-value	0.038	>0.05	-
CMIN/DF	1.645	<3.0	-
RMR	0.047	<0.05	<0.08
GFI	0.935	>0.95	>0.90
TLI	0.974	>0.95	>0.90
CFI	0.982	>0.95	>0.90
IFI	0.982	>0.95	>0.90
NFI	0.956	>0.95	>0.90
RMSEA	0.079	<0.05	<0.08

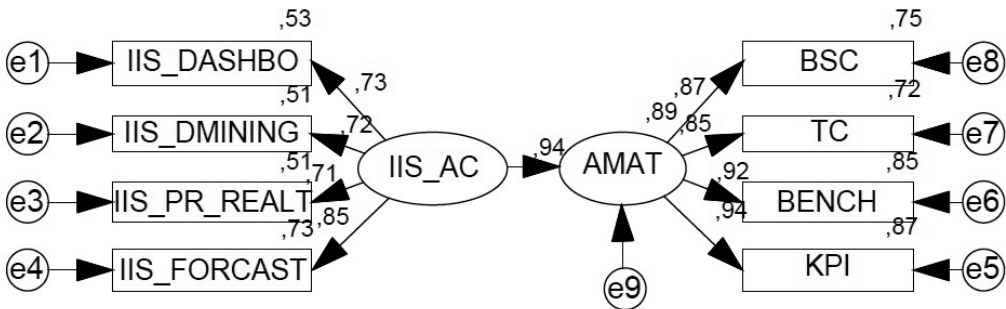
Source: \* Authors' calculation; \*\* compiled from Schreiber et al. (2006); Schumacker and Lomax (2010); Teo et al. (2013); Civelek (2018)

In contrast to GFI, other indices such as TLI, CFI and NFI are comparative fit indices, which compare alternative models and provide information on the degree of model fit. According to the TLI, which compares the research model with the null model, a good fit is obtained when the TLI value reaches the value of one. According to Schumacker and Lomax (2010), the lower threshold for the TLI starts at 0.90, and therefore, the estimated model TLI value of 0.974 represents a good fit. The CFI compares the research model with the independence model, and a value of 0.90 is considered acceptable fitting. Since the calculated value of CFI equaled 0.982, it represents a good fit, and similar findings of a good fit were obtained for incremental fit index (IFI) and NFI. Regarding the model fit, special attention should be given to RMSEA, which compares the mean differences of each expected degree of freedom that may occur in the population. A RMSEA value below 0.05 is regarded as a good fit, while a RMSEA value below 0.08 represents an acceptable fit, which was the case for the estimated model. In summary, based on the described results, goodness

of model fit can be regarded as acceptable or good for the vast majority of standard fit indices. Finally, it is of note that in unstandardized estimates the error variance in AMAT variable equals 0.12, which is a very low value. In standardized estimates, calculated  $R^2$  is very high since 89% of variance in the AMAT is explained by IIS\_AC.

As mentioned earlier, the main SEM assumption of multivariate normality was not met; therefore, our solution was to perform the bootstrapping technique. Bootstrapping results in creating sub-samples and evaluating the accuracy of predicted parameters by looking at the distribution of parameters computed from each sub-sample (Civelek, 2018). Formal testing of the evaluated structural model was done using the Bollen-Stine goodness-of-fit measure (Bollen and Stine, 1992), for which the p-value should be insignificant ( $>0.05$ ). Since the calculated p-value was 0.335, we can conclude that the evaluated SEM fits the data well, even in this sample with non-normally distributed data.

Figure 2 Structural model – standardized estimates



Source: Authors

The inspection of the parameter estimates revealed that all of them were consistent with theoretical expectations (Table 7). All items that formed AMAT and IIS\_AC constructs had a positive sign, while critical values, which operated as z-statistics, exceeded  $\pm 1.96$ , which indicated statistically significant parameters. To be more precise, all estimated parameters were significant at

the 1% level. In addition, the focus of this study, the expected influence of IIS main feature IIS\_AC on AMAT, was confirmed to be positive and significant. In other words, in line with theoretical expectations, empirical data for Croatian companies revealed that the IIS analytical capabilities were positively influencing the implementation of AMAT.

**Table 7 Evaluated model regression weights**

Parameter			Unstand. Estimate	S.E.	C.R.	P	Stand. Estimate
AMAT	<---	IIS_AC	0.896	0.088	10.133	***	0.945
IIS_FORCAST	<---	IIS_AC	1.000				0.854
IIS_PR_REALT	<---	IIS_AC	0.819	0.098	8.324	***	0.713
IIS_DMINING	<---	IIS_AC	0.800	0.096	8.369	***	0.716
IIS_DASHBO	<---	IIS_AC	0.833	0.097	8.586	***	0.729
BENCH	<---	AMAT	1.153	0.083	13.877	***	0.925
KPI	<---	AMAT	1.242	0.087	14.219	***	0.935
BSC	<---	AMAT	1.000				0.866
TC	<---	AMAT	1.003	0.088	11.726	***	0.851

\*\*\* Values lower than 0.001

Source: Authors' calculation

After the bootstrap technique was applied with 500 usable bootstrap samples, it was possible to evaluate the lower and upper bound for each estimated parameter. Since all lower and upper parameter bounds remained positive and the calculated p-values were less than 0.05, it can be stated that, despite non-normally distributed data, the estimated parameters showed a high level of stability. Regression weight, i.e. the parameter of IIS\_AC influence on AMAT, had an upper bound of 1.059 and a lower bound of 0.750 (Table 8).

**Table 8 Evaluated model regression weight intervals - bootstrap technique**

Parameter			Estimate	Lower	Upper	P
AMAT	<---	IIS_AC	0.896	0.750	1.059	0.003
IIS_FORCAST	<---	IIS_AC	1.000	1.000	1.000	...
IIS_PR_REALT	<---	IIS_AC	0.819	0.628	0.994	0.004
IIS_DMINING	<---	IIS_AC	0.800	0.621	0.979	0.003
IIS_DASHBO	<---	IIS_AC	0.833	0.592	1.057	0.006
BENCH	<---	AMAT	1.153	1.028	1.293	0.005
KPI	<---	AMAT	1.242	1.097	1.422	0.004
BSC	<---	AMAT	1.000	1.000	1.000	...
TC	<---	AMAT	1.030	0.863	1.206	0.005

Source: Authors' calculation

The empirical findings from our research conducted on a sample of Croatian companies conflict with findings from some early studies (Booth et al., 2000; Granlund, Malmi, 2002). However, the findings are consistent with the theoretical expectations and results of some recent research. The findings on the positive influence of IIS analytical capabilities on the application of AMAT are comparable with findings for Serbian companies (Malinić, Todorović, 2012) and Finnish companies (Gullkvist, 2013). Although, IIS\_AC is constructed differently in comparison with the above-mentioned recent studies, the basic logic is similar. If the implemented IIS

contains the appropriate analytical tools, one can expect a positive influence on AMAT. In contrast, if the implemented IIS is primarily transaction oriented (data collection, data processing, data storing, automated reporting, etc.) and there are no ERP or BoB analytical functionalities, there is no impetus for the adoption of AMAT. To be more precise, the AMAT construct in the surveyed Croatian companies included the use of four techniques: BSC, TC, BENCH and KPIs. The only technique that was excluded from the AMAT construct was ABC, since the measurement model that included ABC was a poor fit for the data.

## **5. Conclusion**

In the 21<sup>st</sup> century, business operations are brimming with large amounts of information that are created in the business environment and within companies. To provide managers with high-quality information during the last few decades, advanced management accounting techniques (AMAT) have emerged. During the same time span, many companies started to use integrated information systems (IIS) with the aim of improving business processes and performance. IIS should support managerial accounting tasks and enable the application of AMAT. However, in the literature, there is no clear evidence that IIS really facilitates the adoption of AMAT. In order to explore this relationship, we have collected data from 105 Croatian companies and applied SEM. After an assessment of different structural equation models, the final one included two constructs, AMAT and IIS\_AC, which the study focused on. In line with theoretical

expectations, the estimated parameters confirmed that IIS analytical capabilities (represented by use of dashboards, datamining, real-time project reporting and forecasting) positively influenced the use of AMAT. Such a conclusion represents useful guidance for both IIS developers and users because it indicates that special attention should be given to implementing a high level of the IIS analytical capabilities. In addition to the obtained results, we should also highlight some limitations of the research. Although the research sample was fairly large, an increase in the number of observations may improve SEM modeling and the design of a more comprehensive model which could include more variables, covariances among variables and path analysis. In addition, since there is a learning curve and more time may be needed for the more advanced use of IIS capabilities, future longitudinal research, including AMAT variables with time lag, may be beneficial.

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## ENDNOTES

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## **UTJECAJ INTEGRIRANIH INFORMACIJSKIH SUSTAVA NA IMPLEMENTACIJU SUVREMENIH TEHNIKA MENADŽERSKOG RAČUNOVODSTVA**

### **SAŽETAK**

Svrha je ovoga rada istražiti utjecaj integriranih informacijskih sustava (IIS) na implementaciju suvremenih tehnika menadžerskog računovodstva (AMAT). Da bi se analizirao navedeni odnos, primijenjeno je strukturalno modeliranje (SEM) na podacima prikupljenim od 105 kompanija iz Republike Hrvatske. Empirijski rezultati primjenom SEM-a potvrdili su pozitivan i značajan utjecaj jedne od karakteristika IIS-a, analitičke sposobnosti IIS-a na implementaciju AMAT-a. Ostale teorijski zanimljive nezavisne varijable (starost IIS-a, kvaliteta implementacije IIS-a, veličina kompanije i neizvjesnost poslovnog okruženja) također su bile uključene u SEM, međutim, procijenjeni SEM nije osigurao prihvatljivu razinu poklapanja s podacima. Rezultati ovoga istraživanja pružaju korisne smjernice i za dobavljače IIS-a i za njihove korisnike, te ukazuju da će implementacija IIS-a koji uključuje višu razinu analitičkih sposobnosti rezultirati višom razinom implementacije AMAT-a.

**Ključne riječi:** suvremene tehnike menadžerskog računovodstva (AMAT), integrirani informacijski sustavi (IIS), strukturalno modeliranje (SEM), Hrvatska





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# ANALYSIS OF DISTRIBUTIONAL AND PROMOTIONAL ACTIVITIES OF WINEMAKERS

## ABSTRACT

The objective of this paper is to determine how winemakers in Eastern Continental Croatia use marketing in their business. In addition, the paper aims to analyse the distribution of wine products and identify promotional activities that are considered most appropriate for the promotion of wine and further development of the wine sector. A survey was the method used to collect the data, and a survey questionnaire was used as the instrument. The survey was performed on a sample of  $n=30$  winemakers from five counties in Eastern Croatia (Osijek-Baranja, Vukovar-Srijem, Virovitica-Podravina, Požega-Slavonija, and Brod-Posavina). The surveyed winemakers use a combination of direct and indirect distribution channels to sell their wine. The majority of surveyed winemakers sell wine through channels such as the cellar door and wine festivals. These channels are particularly attractive to small and medium winemakers because they can increase their profits. However, to be competitive in the market, Croatian winemakers must adopt new distribution channels and means of communication, increase their marketing efforts and make a shift from sales-oriented to market-oriented strategy.

**Keywords:** Winemakers, marketing, distribution, promotion of wine, Eastern Croatia

## 1. Introduction

In the context of overall production of wine in Europe and worldwide, wine growing in Croatia is a minor part of the industry. Nevertheless, it is an important sector of the Croatian economy with a 2,500-year-long tradition. Furthermore, it is an im-

portant component of lifestyle, culture, and national pride (Meler, Horvat, 2018). Due to the country's diverse climate and geography, there are distinct wine-growing regions that provide conditions for the production of high-quality wines, and thus Croatia can rightfully be called a country of wine (Meler, Horvat, 2018). Winemaking is present in both

Continental and Adriatic Croatia, and each region has distinctive geographic, geological, agricultural, and economic characteristics (Čop et al., 2019). The total area under vines accounts for only 1.5% - 1.7% of the total utilised agricultural area. The areas under vines in the Continental and Adriatic Croatia are almost the same in size, while Eastern Continental Croatia has 60.0% more area under vines than Western Continental Croatia (Meler, Horvat, 2018). Croatian viticulture is characterised by relatively old vineyards, fragmentation of areas planted with vines, and a large number of grape varieties. The average vineyard surface area in Croatia is below 1 ha, 14% of winemakers have vineyard surface areas of up to 10 ha, and only 25 winemakers have vineyards with surface areas of more than 50 ha (Jelić Milković, 2019).

Wine is a very complex product characterised by several attributes that can vary over time and space (Rebelo et al., 2019). The wine market is becoming more and more competitive and it is a classic example of ongoing globalisation and expansion (Canavari et al., 2007; Rebelo et al., 2019). There is no one single wine market, but several wine markets with different critical factors; consumers have greater wine knowledge and access to new communication technologies and distribution channels; and there have been changes in the decision-making process (Rebelo et al., 2019). Marketing plays a significant role in the modern economy: it helps to bridge the gap between producers' and consumers' needs; it helps producers better understand consumers' requirements; and it allows producers to decide what, when, and how to produce for the market (Leko Šimić, 2002; Jelić Milković, 2019). The success of any product on the market is impossible without communication with the market (Brščić et al., 2010). According to these authors, promotion is the process of communication between economic operators and consumers for the purpose of informing the consumers about supply and creating positive attitudes about products and services to help persuade consumers to buy certain products. The consumer chooses a product based on available information; hence, economic operators are those who can provide the consumer with more information (Meler, Horvat, 2018).

The aim of this study was to determine how winemakers in Eastern Continental Croatia use marketing in their business, to analyse the distribution of wine products, and identify promotional activities

that are considered to be most appropriate for the promotion of wine and further development of the wine sector.

## 2. Materials and methods

A survey was conducted from May to September 2018 using a questionnaire to collect primary data. The complete questionnaire contains 88 open and closed questions divided into several groups. At the end of the questionnaire there are questions regarding socio-demographic characteristics of the surveyed winemakers. Because the research is quite extensive, only parts of it were used; these relate to the use of marketing in the winemakers' business, and the analysis of promotional activities and distribution channels they use. The target group of the research is winemakers (small, medium, and large) in Eastern Croatia, evenly distributed across five counties (Osijek-Baranja, Vukovar-Srijem, Virovitica-Podravina, Požega-Slavonia, and Brod-Posavina). A total of 188 winegrowers and winemakers were classified as the target population defined by the primary study. The questionnaire was sent to the winemakers' addresses. 30 winemakers who are registered in the Vineyard Register completed the questionnaire correctly, which puts the response rate at 15.96%. The Croatian wine industry is characterised by small and medium family farms. More than half (52.2%) of the surveyed winemakers have 1–10 ha of vineyards, 26.1% have 10–50 ha, and 17.4% have more than 100 ha of vineyards. When asked about the type of business, almost half of the surveyed winemakers (46.7%) reported that their business is a family farm, 26.7% are joint stock companies, 13.3% are sole proprietorships registered for agricultural activity, and 3.3% are cooperatives engaged in agricultural activity. Most winemakers own a vineyard (86.7%) and only 13.3% of them lease it. A single person performs the functions of owner, manager, wine technologist and oenologist at family farms. Most (90.0%) of the surveyed winemakers stated that they had an annual income of less than \$1.48 million and only 10.0% of them had an annual income of \$7.42–\$14.78 million. The majority (60.0%) of the surveyed winemakers reported that the utilisation capacity of their agricultural entities is 51–79%, 16.7% considered it to be 80–99%, 13.3% stated that the capacity utilisation is less than 50%, while 10.0% believed that the capacities of their business are 100% in use.

Statistical analysis was performed using the statistical software package SPSS Statistics V23. Descriptive statistics were used to describe the sample (percentages, frequencies, arithmetic mean, and standard deviation). The non-parametric chi-square test ( $\chi^2$ ) was used to determine whether there are differences between the observed frequencies and the expected frequencies of respondents with regard to the type of business and the year of the establishment of the business entity. From the parametric tests, Student's t-test (independent t-test) and one-way analyses of variance (one-way ANOVA) were used to determine the differences in individual characteristics among the respondents.

### 3. Results and discussion

#### 3.1 Marketing orientation of winemakers in Eastern Croatia

The respondents were asked questions relating to the existence of a marketing department and employees with a marketing degree in their businesses. The majority of respondents (83.3%) said that they do not have a marketing department in their businesses. That is not surprising because most of the winemakers are small and medium producers with 1 to 10 ha of vineyards. The majority of respondents (60.0%) also stated that they have a person in their business who is in charge of marketing, but this person has no formal education. The respondents were asked an open-ended question about the origin of the marketing knowledge of the person in charge of marketing. The majority of respondents

have acquired marketing knowledge through experience in their own businesses ( $n = 27$ ), followed by professional literature ( $n = 8$ ), participation at professional conferences ( $n = 7$ ), and formal education in marketing ( $n = 6$ ). The above results coincide with the results of the studies by Leko Šimić and Štimac (2013) and Jelić Milković (2019), who found that most marketing knowledge comes from experience rather than participation in industry conferences or from specialised reference books, and that the existing marketing know-how in the companies under study was inadequate.

According to the data presented in Table 1, the results of the chi-square test show that there is a statistically significant correlation between the years of operation ( $(\chi^2 (df = 3, N = 30) = 8,914, p < 0.05)$ ) and type of business ( $(\chi^2 (df = 4, N = 30) = 10,800, p < 0.05)$ ) with the existence of a marketing department.

Jelić Milković (2019) conducted a case study which encompassed four winemakers from Osijek-Baranja and Vukovar-Srijem counties, and determined that the non-existence of marketing departments and inadequate knowledge of marketing make winemaking exclusively sales-oriented. This orientation inhibits further development of production and competitiveness in domestic and foreign markets. Market planning is very important for winemakers, whether they are running a one-person boutique winery or a large multinational, because a marketing plan enables winemakers to make profit and satisfy consumers' needs (Spawton, 1990).

**Table 1** Distribution of responses to the question 'Is there a marketing department in your business according to years of operation and type of business

		N	Is there a marketing department in your business?		
			Yes	No	p
Years of operation	1–10	7	1.2	5.8	0.030*
	10–50	17	2.8	14.2	
	50–100	2	0.3	1.7	
	>100	4	0.7	3.3	
Type of business	Family farm	14	2.3	11.7	0.029*
	Sole proprietorship	4	0.7	3.3	
	Cooperative	1	0.2	0.8	
	Limited liability company	8	1.3	6.7	
	Joint stock company	3	0.5	2.5	

N = total number of respondents; p = chi-square test ( $\chi^2$ ), \*\* $p \leq 0.01$ ; \* $p \leq 0.05$

Source: Authors' calculations

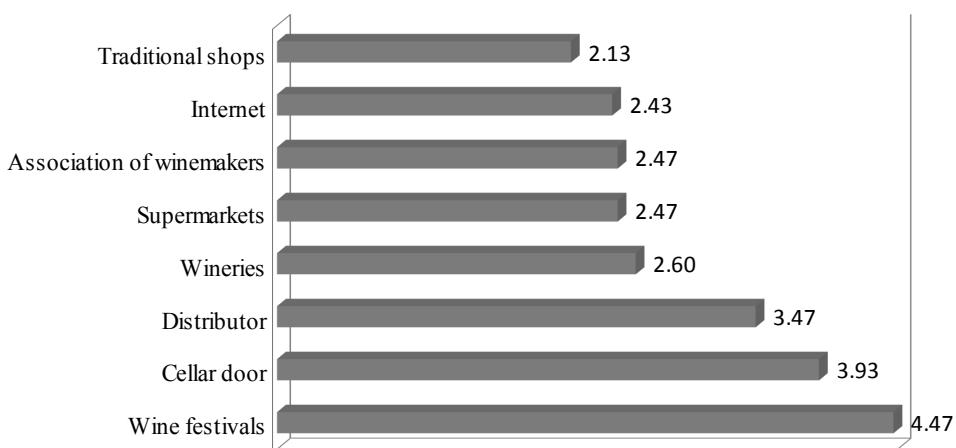
### 3.2 Distribution of wine

From Figure 1, which shows the average scores given by respondents to individual factors of distribution strategies applied by the surveyed economic operators, it can be concluded that the majority of winemakers sell their wine to consumers through direct channels of distribution. Measured on a 5-point Likert scale (1 –not important, 5 – very important), it is shown that 56.7% of the surveyed winemakers believe that sales at wine festivals are very important while 30.0% of them think that sales through the distributor are very important. Selling wine through traditional shops is very important to only 6.7% of winemakers and 50.0% of winemakers think that selling wine through wine shops is not important. According to Forbes and Kennedy (2016) and Hardesty and Leff (2010), direct marketing is particularly attractive to small and medium winemakers because they can earn higher profits and are able to sell volumes that would otherwise be too small for traditional retailers. In addition, many international wine brands compete for space on the shelves of large supermarkets, and smaller wine businesses are unable to compete with these brands (Forbes, Kennedy, 2016). According to the results of the study by Canavari et al. (2007), most winemakers use printed advertising material as a communication channel,

while they regard press and websites, such as the Croatian winemakers' website, to be of secondary importance. The results of a survey of winemakers in Italy shows that a significant number of producers are interested in implementing an e-commerce facility within their marketing organisation, and most of them are quite well-prepared to adopt it (Canavari et al., 2007). The Internet offers the small producer the opportunity to break away from the hegemony of the distributor, to build new entrepreneurial relationships and maintain ongoing relationships with customers in a low-cost way (Canavari et al., 2007; Dolan, Goodman, 2017; Meler, Horvat, 2018; Szolnoki et al., 2018). Like their Greek counterparts, Croatian winemakers have to adopt new ways of communication with their customers and distribution channels, because it is evident that the marketing environment is changing and customers now demand more interactive relationships with producers (Vlachvei et al., 2012).

In the order to check whether there are differences in individual responses with regard to economic operators' type of business, an independent t-test was used. The differences in arithmetic means of the scores given by winemakers to individual factors' importance for wine marketing were tested with regard to the years of operation and hectolitres of wine produced.

**Figure 1** The importance of individual factors of the distribution strategies applied by economic operators



Evaluation on a scale of 1 to 5, where 1 means not important, and 5 means very important.

Source: Authors' calculations

The respondents were asked to express their opinion on the variables presented in Table 2. The results of a t-test for independent samples show that there is a statistically significant difference when it comes to the variable cellar door sales as a channel of distribution ( $t = 2.328$ ,  $df = 28$ ,  $p < 0.05$ ) with regard to the type of ownership. In addition, wine sales in supermarkets are statistically significant ( $t = -2.600$ ,

$df = 28$ ,  $p < 0.05$ ) with regard to the type of ownership. Other variables did not prove statistically significant with respect to the type of ownership. As evident from Table 2, on average, a higher number of winemakers who lease their vineyards stated that they use indirect channels of distribution (distributors, supermarkets, wineries, and traditional shops) as opposed to winemakers who own the vineyards.

**Table 2** Testing for differences in the means of variables with regard to the type of ownership

Variable	Type of ownership					t-test	p
	Privately owned		Leased				
	M	SD	M	SD			
Wine festivals	4.59	0.582	4.00	1.414	0.752	0.504	
Cellar door	4.12	0.993	2.75	1.708	2.328	0.027*	
Distributor	3.35	1.573	4.25	0.957	-1.108	0.277	
Wineries	3.15	1.541	3.25	2.062	-0.112	0.912	
Supermarkets	2.19	1.524	4.25	0.957	-2.600	0.015*	
Association of winemakers	2.62	1.359	1.50	1.000	1.567	0.128	
Internet	2.50	1.476	2.00	1.414	0.633	0.532	
Traditional shops	1.96	1.280	3.25	1.258	-1.878	0.071	

M = mean; SD = standard deviation; \*\* $p \leq 0.01$ ; \* $p \leq 0.05$

Source: Authors' calculations

According to the data in Table 3, it is evident that there are statistically significant differences between the variables of cellar door sales and years of operation ( $F = 3.774$ ,  $df = 3$ ,  $p < 0.05$ ). Winemakers whose operations are more than 100 years old sell their wine through direct distribution channels ( $M = 4.75$ ,  $SD = 0.500$ ;  $M = 4.50$ ,  $SD = 0.577$ ). Using the least significant difference (LSD) post hoc test, a statistically significant difference was found within the groups of operators that were 50–100 years old and 10–50 years old,  $p = 0.008$  ( $p < 0.01$ ), as well as between economic operators that were 50–100 years old and those older than 100 years,  $p = 0.010$  ( $p < 0.01$ ), compared with the variable that winemakers mostly sell wine through wine cellars. A statistically significant difference is also observed between the winemakers who sell their

wine through supermarkets ( $F = 3.704$ ,  $df = 3$ ,  $p < 0.05$ ) and traditional shops ( $F = 3.504$ ,  $df = 3$ ,  $p < 0.05$ ) with regard to the years of operation. The LSD test was conducted to test for significant differences in answers with regard to the age of the economic operators. Significant differences were observed between the following groups: operators that were 10–50 years and those that were 50–100 years old,  $p = 0.24$  ( $p < 0.05$ ), and economic operators 10–50 years old and those older than 100 years,  $p = 0.15$  ( $p < 0.05$ ), compared with the variable that winemakers mostly sell wine through supermarkets. Significant differences were found within the same groups ( $p = 0.21$ ,  $p < 0.05$ ;  $p = 0.40$ ,  $p < 0.05$ ) compared with the variable that winemakers mostly sell wine through traditional shops, as was the case with supermarkets.

**Table 3** Testing for differences in the means of variables with regard to years of operation

Variable	Years of operation								F	p
	1–10		10–50		50–100		>100			
	M	SD	M	SD	M	SD	M	SD		
Wine festivals	4.14	1.069	4.53	0.624	4.50	0.707	4.75	0.500	0.679	0.573
Cellar door	3.43	1.512	4.24	0.831	2.00	1.414	4.50	0.577	3.774	0.023*
Distributor	3.86	1.464	3.24	1.602	3.50	0.707	3.75	1.893	0.306	0.821
Wineries	4.14	0.900	2.82	1.590	3.50	2.121	2.75	2.062	1.328	0.287
Supermarkets	2.29	1.496	1.94	1.298	4.50	0.707	4.00	2.000	3.704	0.024*
Association of winemakers	2.14	1.215	2.71	1.448	2.00	1.414	2.25	1.500	0.395	0.758
Internet	2.43	1.618	2.41	1.502	2.50	2.121	2.50	1.291	0.005	1.000
Traditional shops	1.71	0.756	1.82	1.185	4.00	1.414	3.25	1.708	3.504	0.029*

M = mean; SD = standard deviation; \*\* $p \leq 0.01$ ; \* $p \leq 0.05$

Source: Authors' calculations

Sun et al. (2014) examined factors influencing distribution channel choices by wineries and found that the share of wine sold through intermediary channels increases with winery size, years of operation, increased vertical and horizontal integration, and greater promotional intensity and levels of self-reported marketing challenges. According to Meler and Horvat (2018), vertical and horizontal networking of winemakers is very important if they want to achieve common marketing goals. In Croatia, just like in the Italian domestic market, distribution is dominated by large-scale retail channels, whereas small retailer and direct sales play a lesser part (Corsi et al., 2019). Rebelo et al. (2019) studied distribution channels for off-trade retailers (specialist retailers such as wine stores and supermarkets) and on-trade retailers (restaurants, hotels and bars). According to the authors, in Portugal, the market share of sale by volume of wine through off-trade channels increased between 2011 and 2016, but the value of sales through on-trade channels was greater. Rebelo et al. (2019) also state that the number of intermediaries between winemakers and consumers is an important driver of wine price. Di Vita et al. (2019) suggest that PDO-certified wines should be distributed through specialised distribution channels such as wine shops, wine bars, and restaurants, while PGI wine should be distributed through large-scale retail and e-commerce. Results of a study conducted in Italy show the importance of direct sales channels because this type of sales strategy shortens the intermediate steps between production and consumption, and has positive effects on consumers, producers, and overall rural communities (D'Amico et al., 2014). Many wine regions and producers promote their wine through

vineyard and cellar tours because, according to Sevil and Yüncü (2009), the importance of cellar door sales for winemakers is clear; the distribution costs are minimal (by bypassing wholesalers) and these sales are an economic essential for the cash flow of many small wineries. Vlachvei et al. (2012), who surveyed 33 Greek winemakers, came to the conclusion that Greek winemakers have to adopt new electronic forms of communication and distribution channels, which are valuable for brand recognition and brand loyalty and awareness; this mirrors the findings of the survey of winemakers in Croatia.

### 3.3 Promotional activities of winemakers

To determine what factors of wine promotion are most important to the surveyed winemakers, they were asked to evaluate promotional activities using a 5-point Likert scale (1 – not important, 5 – very important). Figure 2 shows the average scores given by winemakers to individual factors' importance for wine promotion. Winemakers gave the highest score to the quality of wine and price, and the lowest score to wine advertising. The case study by Jelić Milković (2019) shows that the Internet was used very rarely as a communication tool and that wine tastings and guided tours were the producers' key promotional tools. From Figure 2 it can be concluded that winemakers in East Croatia need to intensify their promotional and advertising activities. They should shift the focus to wine characteristics such as family tradition, product labels, geographical origin, wine brand, and to new distribution channels, such as wine festivals and wine tasting events.

For small wine producers, wine tourism can be a marketing activity and a good promotional tool, but it can bring some extra costs for larger wine producers (Sevil, Yüncü, 2009). There are several types of wine tourism: cellar door tasting and sales, vineyard and cellar tours, and wine festivals (Sevil, Yüncü, 2009). The wine festival as a promotional strategy has a positive and direct influence on consumer awareness of local wines and wineries, and their future intention to buy local wine products and visit wineries (Yuan, Jang, 2008; Bitsani, Kavoura, 2012). According to a study by Ivanova et al. (2014) on the winemakers in Bulgarian regions

– where most wine producers are small and medium enterprises similar to the situation in Croatia, and winemakers do not have the resources to enter foreign markets – the authors consider wine tourism to be a good sales tool for winemakers and wineries to sell their wine through direct marketing channels. For winemakers, wine festivals provide substantial public relations value, develop new markets by attracting a greater range of attendees, and may have long-term effects in terms of increasing the number of visitors by developing loyalty to individual wineries and the destination itself (Carlsen, Charters, 2006).

**Figure 2** *The significance of individual factors in wine promotion*



Evaluation on a scale of 1 to 5, where 1 means not important, and 5 means very important.

Source: Authors' calculations

The results of the t-test show that there is a statistically significant difference when it comes to the variable quality of wine being important for wine promotion ( $t = -3.024$ ,  $df = 28$ ,  $p < 0.01$ ) with regard to the type of ownership of economic operators (Table 4). Other variables did not prove statistically significant with respect to the type of ownership of economic operators. As shown in Table 4, a higher number of winemakers who lease vineyards ( $M = 4.50$ ) stated that price is very important for wine promotion in contrast to winemakers who own the winery ( $M = 3.92$ ). This is not surprising because wine production involves a relatively long and complex process that requires a large investment; winemakers who lease vineyards

incur higher production costs, so they expect to achieve higher prices for their wine. The effective combination of price and quality results in a suitable strategic position and higher income (Meler et al., 2012). Furthermore, Meler et al. (2012) stated that it is important to define the interrelation of wine quality and price as one of the crucial strategic issues within wine marketing; a successfully strategically defined and managed interrelation of wine quality and price can bring competitive advantage to the winemaker. According to the results of a study published by Mazzocchi et al. (2019), consumers are willing to pay a premium price for quality wine because quality is one of the major factors in consumer decision.

**Table 4 Testing for differences in the means of variables with regard to the type of ownership**

Variable	Type of ownership				t-test	p
	Privately owned		Leased			
	M	SD	M	SD		
Quality of the wine	4.45	0.761	5.00	0.000	-3.024	0.005**
Price	3.92	1.017	4.50	0.577	-1.097	0.282
Wine tasting	3.96	0.871	3.75	1.258	0.428	0.672
Wine brand	3.62	1.329	4.75	0.500	-1.668	0.106
Wine festivals	3.23	1.336	3.00	1.414	0.320	0.752
Geographical origin	3.27	1.251	3.25	1.0708	0.027	0.978
Product label	3.19	1.357	3.50	0.577	-0.442	0.662
Family tradition	3.23	1.478	3.25	1.708	-0.024	0.981
Advertising of wine	3.23	1.275	2.75	1.258	0.703	0.488

M = mean; SD = standard deviation; \*\* $p \leq 0.01$ ; \* $p \leq 0.05$

Source: Authors' calculations

From the data in Table 5, it is evident that there is a statistically significant difference between the variable of advertising of wine as a factor in wine promotion and years of operation ( $F = 3.582$ ,  $df = 3$ ,  $p < 0.05$ ). The obtained results should not be surprising because wine producers that have entered the market more recently must make additional efforts to earn a reputation. The

LSD test was conducted to determine the differences between the following groups of wineries: 1–10 years old and 10–50 years old,  $p = 0.011$  ( $p < 0.05$ ), and 1–10 years old and 50–100 years old,  $p = 0.025$  ( $p < 0.05$ ). The ones with 1–10 years of operation behind them consider advertising of wine to be more important for wine promotion than winemakers in other groups.

**Table 5 Testing for differences in the means of variables with regard to years of operation**

Variable	Years of operation								F	p
	1–10		10–50		50–100		>100			
	M	SD	M	SD	M	SD	M	SD		
Quality of the wine	4.43	0.787	4.59	0.795	5.00	0.000	4.75	0.500	0.367	0.777
Price	3.57	1.272	4.00	0.866	4.50	0.707	4.50	1.000	0.958	0.428
Wine tasting	4.00	0.816	3.82	0.883	3.00	1.414	4.75	0.500	2.095	0.125
Wine brand	3.71	1.113	3.71	1.359	4.50	0.707	3.775	1.893	0.208	0.890
Wine festivals	3.71	1.380	2.88	1.269	2.50	2.121	4.00	0.816	1.410	0.262
Geographical origin	3.57	0.787	3.53	1.281	2.50	2.121	2.00	1.155	2.123	0.122
Product label	3.43	1.134	3.41	1.326	3.50	0.707	2.00	1.155	1.512	0.235
Family tradition	2.57	1.512	3.76	1.393	2.50	2.121	2.50	1.000	1.839	0.165
Advertising of wine	4.14	0.690	2.76	1.200	2.00	1.414	3.75	1.258	3.582	0.027*

M = mean; SD = standard deviation; \*\* $p \leq 0.01$ ; \* $p \leq 0.05$

Source: Authors' calculations

Statistically significant differences were observed between the surveyed winemakers' opinions about promotional activities depending on the annually produced hectolitres of wine (Table 6). The winemakers who produce less than 100 hectolitres of wine reported a higher level of agreement with

the variables 'product label is important for wine promotion' ( $F = 3.723$ ,  $df = 3$ ,  $p < 0.05$ ) and 'family tradition is important for wine promotion' ( $F = 2.985$ ,  $df = 3$ ,  $p < 0.05$ ) than those that produce more than 100 hectolitres of wine. The LSD test was conducted to test for significant differences in an-



swers with regard to annually produced hectolitres of wine. Significant differences were observed between the following categories: less than 100 hectolitres of wine ( $M = 3.86$ ,  $SD = 1.464$ ;  $M = 4.14$ ,  $SD = 0.900$ ) and more than 1,000 hectolitres of wine ( $M = 3.63$ ,  $SD = 0.744$ ;  $M = 3.83$ ,  $SD = 1.302$ ). Winemakers who produce less than 100 hectolitres and those who produce more than 1,000 hectolitres indicated a higher level of agreement with the statements that product label and family tradition are important for wine promotion. In the Greek wineries, non-advertising promotional expenses were found to be the major part of promotional expenses, which include

promotion through the development of new informational labelling, referring to origin and specific wine attributes, free samples, catalogues, and new market channels through 'Wine Roads'. However, according to research by Vlachvei et al. (2009), total promotional expenses, along with market share, affect profitability. Wine producers should take advantage of PDO/PGDO quality signals, organic production of wine, and international wine exhibition awards as promotional tools to secure or gain a reputation on the market (Vlachvei et al., 2012; Troiano et al., 2016).

**Table 6** Testing for differences in the means of variables with regard to hectolitres of wine produced annually

Variable	Produced hectolitres of wine per year								F	p
	<100		100–500		500–1,000		>1,000			
	M	SD	M	SD	M	SD	M	SD		
Quality of the wine	4.71	0.488	4.70	0.483	4.40	0.894	4.50	1.069	0.277	0.841
Price	4.00	1.000	4.00	0.667	3.40	1.673	4.38	0.744	1.011	0.404
Wine tasting	4.14	0.690	3.70	1.059	3.80	0.837	4.13	0.991	0.473	0.704
Wine brand	4.00	1.528	3.80	0.919	2.80	1.789	4.13	1.126	1.220	0.322
Wine festivals	3.14	1.574	3.80	0.919	2.00	1.414	3.25	1.165	2.352	0.095
Geographical origin	3.14	1.069	3.60	1.350	2.40	1.342	3.50	1.309	1.104	0.365
Product label	3.86	1.464	3.20	1.135	1.80	1.095	3.63	0.744	3.723	0.024*
Family tradition	4.14	0.900	3.20	1.619	1.80	1.304	3.38	1.302	2.985	0.049*
Advertising of wine	2.29	0.951	3.80	0.789	2.80	1.789	3.38	1.302	2.540	0.078

M = mean; SD = standard deviation; \*\* $p \leq 0.01$ ; \* $p \leq 0.05$

Source: Authors' calculations

The respondents were also asked an open-ended question as to whether their vineyard or winery was open to the public during their business hours.

The frequencies of their summarised responses are shown in Table 7.

**Table 7** Respondents' answers to the question 'Is your winery open to the public during its business hours?'

Respondents' answers	Number of respondents
To tourists	11
Hospitality	5
Wine tasting and sales	20
Weddings, meetings, and special events	4
Winery not open to visitors	9

Source: Authors' calculations

The data shown in Table 7 reveal that most of the respondents offer wine tasting and sales at their wineries (n=20) and that their wineries are open for visitors (n=11). Only n=9 winemakers have not opened their wineries to visitors. Data shown in Table 7 coincide with the findings of the study by Čengić et al. (2013)<sup>1</sup> about the wineries' offer. The author of this study found that the relative majority of the vintners were able to offer their guests wine tasting with professional guidance. Only a handful of the vintners based in Požega-Slavonija County who participated in the study have their own restaurants and provide guest accommodation. In addition to wine tastings and direct sales, Croatian winemakers should strive for further development of wine and gastro-tourism within the scope of their business activities as this extends the duration of the tourist season, on the one hand, and increases the consumption of Croatian wines on the other (Meler, 2015). Vrontis et al. (2016) argue that the development of supporting activities such as wine tourism positively affects the competition between winemakers in the same region or territory, encourages knowledge-sharing, and attracts tourists, thus contributing to the overall development of the region.

#### 4. Conclusion

Distribution and promotion are both very important elements of the marketing mix. Distribution channels are used to move wine from a winemaker to a consumer, while promotion is used to establish communication between them.

To be competitive on domestic and foreign markets, Croatian winemakers must increase their

marketing efforts and move from sales-oriented to market-oriented strategies. The main conclusion of this study is that, among the surveyed winemakers, the majority do not have a marketing department and, while they have a person in their business who is in charge of marketing, this person has no formal education. The surveyed winemakers use a combination of direct and indirect distribution channels to sell their wine. The majority of surveyed winemakers sell wine through channels such as cellar door sales and wine festivals. This type of sales is particularly attractive for small and medium winemakers because they can earn higher profits. However, Croatian winemakers have to adopt new ways of communication with their customers and new distribution channels (e.g., the Internet) because it is evident that the marketing environment is changing and customers are demanding more interactive relationships with producers. Many winemakers are focused on wine production and distribution, but the promotion of wine is also very important for maximising sales. The surveyed winemakers gave the highest score to the quality and price of wine. Moreover, they consider that the promotion of wine is expensive. Wine tourism, wine festivals, and wine tasting as promotional strategies have a positive and direct influence on winemakers' business because they provide an opportunity for businesses to develop new markets and attract new consumers. Positive indicators are that winemakers are ready to diversify their production and expand their offer into the area of wine tourism. In addition, winemakers must take advantage of family tradition, product labels, geographical origin, and wine brand as promotional tools to establish or protect their reputation on the market.

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## ANALIZA DISTRIBUCIJSKIH I PROMOCIJSKIH AKTIVNOSTI VINARA

### SAŽETAK

Cilj je rada istražiti i utvrditi na koji način vinari u istočnoj Hrvatskoj koriste marketing u svome poslovanju, analizirati distribuciju i promociju vina te utvrditi koji oblik promocije smatraju najprikladnijim za promociju vina i daljnji razvoj vinskoga sektora. Za prikupljanje podataka korištena je metoda ankete, a kao instrument korišten je anketni upitnik. Istraživanje je provedeno na uzorku od  $n = 30$  proizvođača vina iz pet županija istočne Hrvatske (Osječko-baranjske, Vukovarsko-srijemske, Virovitičko-podravske, Požeško-slavonske i Brodsko-posavske županije). Anketirani proizvođači vina koriste se kombinacijom izravnih i neizravnih kanala distribucije prilikom prodaje proizvedenoga vina. Većina anketiranih vinara vino prodaje u podrumu vinarije te na vinskim festivalima. Ovakav oblik prodaje posebno je zanimljiv malim proizvođačima vina jer na taj način mogu ostvariti veću dobit. Međutim, istraživanje pokazuje da hrvatski proizvođači vina trebaju usvojiti nova sredstva komunikacije s kupcima, kao i nove kanale distribucije. Proizvođači vina, ako žele biti konkurentni na tržištu, trebaju razvijati marketinške strategije te prodajnu orijentaciju pretvoriti u marketing.

**Ključne riječi:** proizvođači vina, marketing, distribucija i promocija vina, istočna Hrvatska

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# BALANCED SCORECARD IMPLEMENTATION IN PUBLIC SOCIAL MEDICINE

## ABSTRACT

Social medicine is a segment of public health services aiming to improve the population's health through various preventive programmes and activities. This is why the metrics of performance measurement can be a challenge, because these are activities with a qualitative outcome that requires a time lag. The research subject is the assessment of effectiveness of social medicine programmes implemented in the public health system of the Republic of Croatia. For this empirical research, data were used by the county's Teaching Institute of Public Health, Social Medicine Department. The department has three basic objectives: to assess the health and health needs of the population, to develop public health policy, and to ensure the implementation of effective programmes. The aim of this research is to find the metrics that will be useful for the final outcome assessment of social medicine activities. The theory and the concept of the Balanced Scorecard (BSC) are relevant for the field of health care, but there is not much research on applying the BSC in preventive activities, especially those in the field of social medicine. Adjusted Balanced Scorecard is proposed for improving the effectiveness of performance assessment of current and future results. In a modified BSC, its perspectives and metrics help to achieve the set objectives and report critical outcomes through a strategic map. This research confirms the applicability and flexibility of the BSC and contributes to developing a set of common indicators that reflect the qualitative aspects of activities and enable effectiveness assessment of social medicine activities.

**Keywords:** Public social medicine, BSC, efficiency, effectiveness

## 1. Introduction

The public health sector has been facing the issue of rationalisation and the need to measure performance for a long time. Health care institutions are invited to demonstrate their efficiency and effectiveness in providing services for users for whom they exist. In this regard, finding a suitable measurement system is a challenge and a necessity for demonstrating the benefits of different health services for the community.

The Balanced Scorecard (BSC) introduced by Kaplan and Norton (1992, 1993, 1996, 2001) is known as one of the most commonly used tools for meas-

uring performance and a sort of an innovation that appeared towards the end of the 20<sup>th</sup> century. With its object-related modifications, the BSC model is still applicable in the 21<sup>st</sup> century. It is considered a very efficient management tool for describing, implementing and managing a strategy and the most discussed conceptual framework for transforming strategic objectives into a set of measurable and tangible performance measures. The model is based on four fundamental and logical factors (called perspectives) in the business process: financial perspective, internal business process perspective, customers' perspective, and innovation and learning perspective. The point is to keep score of

a set of measures that maintain a balance between “short and long-term objectives, financial and non-financial measures, between lagging and leading indicators, and between internal and external performance aspects” (Kaplan, Norton, 1996b).

Over time, studies became focused on the Balanced Scorecard in the public sector (Azizi et al., 2012), which encouraged Kaplan and Norton (2001) to modify the original model by increasing the number of perspectives and measures depending on the concrete vision and strategy of the organisation. The first article on the BSC in health care settings was published in 1994 (Gurd, Tao, 2008) and since then there have been 6,300 documents in which Balanced Scorecard was associated with health care, hospitals or community health. With the Web of Knowledge, there were 87 documents in which Balanced Scorecard was associated with health care, hospitals or community health in a document topic<sup>1</sup>.

Undoubtedly, the model has been increasingly used in the health care sector all over the world and explored as a management tool that can help organisations to effectively implement strategies (Bisbe, Barubés, 2012), or develop practical conceptualisation, mainly for hospitals (Baker, Pink, 1995; Lovaglio, Vittadini, 2012; Chang et al., 2008; Yilmaz, Erdem, 2015). In their review study, Zelman et al. (2003) concluded that “the theory and concepts of the balanced scorecard are relevant to health care, but a modification to reflect the industry and organisational realities is necessary”. A decade after Kaplan and Norton had introduced the BSC framework, a number of health care organisations in various healthcare settings started to adopt and modify the four quadrants (Voelker et al., 2001; Weir et al., 2009).

When developing a BSC for public health, the focus of which is on prevention and health promotion for the entire population, the proposed BSC is distinguished from BSC in other health care systems. In general, health care systems are specific because of their importance for the society and, therefore, the cause-and-effect relationships between financial and non-financial measures, internal and external short-term and long-term goals require BSC adjustments. As Kaplan and Norton pointed out, greater focus is placed on the qualitative side of performance and it therefore became necessary to develop strategies for the management of an organisation’s intangible assets. In health care, these intangible assets primarily include the relationship to customers – users of its services, innovative programmes and other various types of services,

workforce education, sophisticated technological support, information technology, supportive organisational climate, management by objective-oriented skills, etc.

This paper covers the adaptation of the BSC framework for measuring efficiency in social medicine, verifying the hypothesis that the adjusted BSC is suitable for designing and directing strategic and operational plans in accordance with the mission and vision of the Social Medicine Department.

## 2. *The complexity of public social medicine*

Since the mid-19<sup>th</sup> century, social medicine has become an important pattern of public health services. Over time, meanings of the term “social medicine” have changed as it was adapted to different societies and diverse social conditions. Rudolf Virchow (1821-1902), one of the greatest pathologists of the nineteenth century, recognised for his contribution to the understanding of disease at the cellular level, is considered to be the founder of social medicine. R. Virchow and his colleagues formulated in the nineteenth century certain common principles that define the term “social medicine” (Kostičová, 2015: 12):

- Social and economic conditions have a profound impact on health, disease, and the practice of medicine.
- The population’s health is a matter of social concern.
- Society should promote health through both individual and social means.

Sidney and Emily Kark (2006), two famous physicians in the mid-20<sup>th</sup> century, defined social medicine as a discipline “interested in the health of people in relation to their behaviour in social groups and as such concerned with care for an individual patient as a member of a family and of other significant groups in their daily life. It is also concerned with the health of these groups as such and with that of the whole community as a community”. The views of Professor W. Hobson about social medicine have been topical since 1949. He pointed out that “social medicine is a branch of medicine which provides a connecting link with the wider humanities. Its philosophy should permeate all branches of medicine, for its implications cannot be divorced from any branch of medical learning”. Galdston’s book, “The Meaning of Social Medicine,” should go a long way toward dispelling the confusion about differences between social and socialised medicine. He points

out very clearly that social medicine encompasses the whole of present-day diagnostic and therapeutic medicine, and according to some definitions it includes preventive medicine as well. However, in addition, social medicine comprises hygiene and public health. As community services they function in the social units of a nation, state, city, or local community. Nowadays, in the United States and many other countries with conservative views of the medical profession, social medicine has also developed, but the term has not been adopted, but rather incorporated in the term “public health”. In everyday terminology, social medicine and public health are synonymous, but is this really the case? Ryle (1943) thought not. He identified three differences. First, while public health focused on the environment, social medicine was concerned with the person, “and endeavours to study the person in relation to his/her environment”. Whereas public health was limited to housing, clean water, and sanitation, social medicine included “the whole of the economic, nutritional, occupational, educational, and psychological opportunity or experience of the individual or the community”. The second difference is in the level of interest in disease. Public health was mostly identified with communicable disease. By contrast, social medicine had a broader reach – non-communicable diseases, mental health, and injuries. The third distinguishing feature was social medicine’s acceptance of medical social workers: “the organisation of after-care, and the readjustment of the lives of individuals and families disturbed or broken by illness”. Social medicine united the clinical with the public. Ryle summarised the difference between social medicine and public health in this way: “social medicine extends the interest and alters the emphasis of the older public health, just as social pathology extends the interest and alters the emphasis of earlier epidemiological study.” (Horton, 2013). With a number of modifications to the definition, we are more inclined towards the definition of A. Štampar (1923), which is universally accepted and states that “social medicine is a science that examines the interaction of social relations and pathological phenomena in a nation and finds measures of a social character for the improvement of national health” (Jonjić et al., 2007).

Considering the complexity of social medicine activities and, simultaneously, the requirement to improve efficiency and effectiveness, this research aims to propose an appropriate metrics. Efficiency and effectiveness are usually combined for assessing performance in health care. Efficiency is a performance attribute measured by the relationship between specific public health services (out-

put) and the resources used to create that service (input). This means using a minimum number of inputs for a given number of outputs. Therefore, efficient health care is one that produces a given level of care, or quantity that meets an acceptable standard of quality, using a minimum combination of resources (Ozcan, 2014). Effectiveness evaluates the outcomes of health care or services and can be affected by efficiency or can influence efficiency. The focus in public health and social medicine is on the impact on overall national health. However, effectiveness of interventions in health promotion (HP), as part of social medicine, is often difficult to articulate, assess, and measure because the outcomes of any policy, programme or intervention are often temporally distant from the point of intervention. Moreover, the observed outcomes may be further complicated by interactions from other HP efforts or as a result of “natural” evolution or “history” of the phenomena upon which a HP intervention takes place. Indeed, changes over time are difficult to detect, measure, and evaluate (Campostini, 2007).

The case study of the Social Medicine Department is unique and complex, because it is more difficult to set the parameters for monitoring the activities and preventive programmes carried out by the Department. The programmes carried out by the Department of Social Medicine within the Institute are related to a segment or the entire population covered by the programmes and produce results only after a number of years. Prevention of various diseases and preservation of health are the basic purpose of public health care services that are, like other public services, constantly under pressure to increase rationality and be more budget-conscious while simultaneously improving effectiveness and increasing quality. The main objective of all the activities of the Social Medicine Department is to make a positive shift in the population’s health, and therefore, work efficiency is difficult to track by financial or short-term indicators.

### 3. Methodology

#### 3.1 Research aims

This study aims to find the metrics based on the BSC approach that will be useful for the assessment of the final outcome of social medicine activities. Social medicine is an integral part of public health services in Croatia in the framework of the entire health care system and is oriented to preventive activities. Public health preventive services comprise different activities (ecology, epidemiology, microbiology, so-

cial medicine, school medicine, mental health, and addictions) organised through departments, within institutes of public health. Each county has an institute of public health and in Croatia, there are 21 (20 counties plus the City of Zagreb and the Croatian Institute of Public Health). Only three of the largest institutes also have an educational function and are called teaching institutes. Department of Social Medicine is part of the Teaching Institute of Public Health in the County of Primorje and Gorski Kotar, which is the subject of case study in this research. The Department of Social Medicine has been involved in the entire project of implementation of the measuring system based on the BSC. Namely, the Teaching Institute of Public Health developed the BSC framework with the intention for it to be a management tool that aligns strategic direction with internal processes organised through six main departments: Health Ecology, Microbiology, Epidemiology, Social Medicine, School Medicine and Promotion of Mental Health, and Addiction Prevention.

### 3.2 Study design

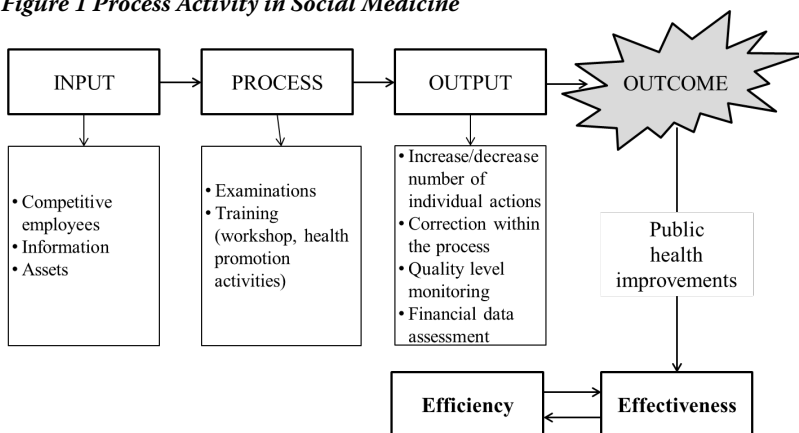
This study is a result of the scientific project “A Model for Measuring the Efficiency of Public Health Services” carried out from 2015 to 2020. We first developed a BSC at the level of a single Teaching Institute of Public Health with the intention to improve efficiency and ensure continuity of measurement of key processes. This was a long process marked by many discussions with the top and operational management; several workshops and meetings were held aiming to convince the department heads of the necessity and purposes of performance monitoring and measuring. The

unanimous opinion was that there was always room for improvement, although progress had already been achieved. Moreover, some of the services are also provided in the private sector, which has become more and more competitive. For this reason, the staff agreed that there was a need for quality improvement of various services in order to satisfy the users.

However, creating a BSC at the level of the entire Institute was a demanding task due to the complexity of the process of public health services. Various services have inputs and outputs which are quantitatively expressed in a different manner; for example, inputs: number of samples, intervention, programme, costs, and outputs: number of analyses, examinations, finished programmes, education, reports, income. Also, some outcomes are evident immediately, but some require a time lag. Therefore, the effects expressed naturally cannot be observed as a sum, but rather individually or expressed through the financial aspect of the effects, i.e. revenue or income. For this reason, each department has created its own strategic map in line with its mission and vision designed according to the vision and perspectives developed at the level of the entire Teaching Institute.

Social medicine outcomes are evident through a number of activities expressed in various quantitative measures, such as the number of prevention activities, children’s examinations, workshops etc. The advantage of BSC is that it enables continuous monitoring of non-financial indicators, possibility to focus on key performance indicators showing how the Institute translates its vision and strategy into concrete actions.

**Figure 1 Process Activity in Social Medicine**



Source: Authors



Given that the primary objective of all public health activities of the Social Medicine Department is to improve the health status of the population, monitoring the final result or outcome is of particular importance. The outcome is easier to track in preventive health programmes organised and implemented independently. Self-evaluation is carried out throughout the programme, which also allows quick interventions and, if necessary, corrections of activities. The presented activities (Figure 1) can be applied to the entire Social Medicine Department.

Inputs are highly trained employees who by adequate means based on statistical data on the trend of a phenomenon and the assessment of a possible intervention create and carry out the entire programme and define its ultimate goal. The programme consists of different activities: examinations, awareness-raising events, carrying out workshops, holding lectures, promotion, disseminating health care messages through the media and social media. During the implementation, outputs are monitored that can also be different, depending on the programme, and show an upward or downward trend of a phenomenon, the level of quality of the conducted activities, and financial indicators. During the period of implementation and monitoring of results of the implementation of the programme, oscillations in the interval outcomes become evident, which momentarily becomes a reason for a change in the way of implementing the programme and its improvement, aiming to achieve the best results possible.

All public health programmes have a common outcome – improving the health status of the population and early disease detection. Outcomes are generally achieved after a longer period of time and are mostly measured qualitatively. For example, the outcome of the Programme of Improvement of Oral Health of Children is an improvement of the oral state indicator. The most important input of the programme are experts designing it on the basis of statistical data on health, showing that oral health of school children is below the level prescribed by the World Health Organisation. The activities conducted in the programme are examining children's teeth, teaching them how to brush them properly, issuing referrals, and treatments. Furthermore, the programme is also accompanied by promotional materials; brochures, picture books, radio and TV broadcasts, newspaper articles. Lectures and workshops are organised for the parents at which they learn how to protect the health of their children's teeth. An output is the number of examined children, the number of children with healthy teeth, the number of children that need a dentist's

intervention, and monitoring and quality control of the conducted examinations. Another output is the number of publications and appearances in the media. The outcome to increase the number of children with healthy teeth is the ultimate goal of the programme, set at the beginning of its implementation. Other preventive programmes are carried out in a similar manner: Early Breast Cancer and Colon Cancer Programme, Cardiovascular Disease Prevention, Early Melanoma Detection, Osteoporosis Prevention and Early Detection of Osteoporosis. The outcome can also be monitored in these programmes (e.g., an increased number of early detected cancers, which directly contributes to the reduction of mortality from these diseases).

## 4. Results

### 4.1 BSC creation

Due to the complexity of social medicine activities, the application of BSC was demanding. We started with the mission and vision designed according to the mission and vision of the entire Teaching Institute:

**Mission:** To preserve and promote health of all citizens and visitors to the County

**Vision:** Being the leader in improving the health status and quality of life in the County

The second step in our research according to the already set perspectives (Figure 2) was to create the BSC and the strategic map. These main perspectives are common to other departments due to comparison of effectiveness:

- **Users and other stakeholders** – The primary perspective that verifies the mission and ensures the vision has been achieved. Customer satisfaction is the most important goal of the realisation of all activities. It is not just a matter of a subjective feeling, but an indicator that programmes and activities are conducted and that they are considered necessary by the users. It is necessary to increase the number of new programmes and promote them.
- **Financial management** – Financial management is a common perspective across departments and in line with the institute's policies. It is important to secure sufficient funds for implementation of the programmes and activities within the programmes, and, where

possible, to increase revenues from activities on the market.

- **Quality of internal processes and organisation** – Quality of processes and organisation is of utmost importance for competitiveness in the market, but also for creating customer and shareholder's satisfaction. The standards introduced indicate that the institute guarantees the quality of its activities.

- **Learning and development of innovation** – one of today's fundamental priorities is to create a climate that supports organisational changes, innovation, and growth. External and internal training and a number of innovative solutions are considered as benchmarks.

According to the set perspectives at the level of the Teaching Institute, the objectives were discussed and accepted in the Social Medicine Department (Table 1):

**Table 1 Perspectives and Objectives of the Social Medicine Department**

PERSPECTIVES	OBJECTIVES
Users and other stakeholders (US)	<ol style="list-style-type: none"> <li>1. Increase customer satisfaction through quality of services provided</li> <li>2. Increase the number of preventive public health services and programmes</li> <li>3. Improve the promotion of programmes</li> </ol>
Financial management (FM)	<ol style="list-style-type: none"> <li>1. Ensure sufficient financial resources to provide quality services (mandatory health insurance and the budget)</li> <li>2. Increase revenue from services on the market</li> </ol>
Quality of internal processes and organisation (PO)	<ol style="list-style-type: none"> <li>1. Certify, accredit and integrate a new management system</li> <li>2. Improve the staff structure (ratio between health care professionals and non-health care professionals)</li> </ol>
Learning and development of innovation (LI)	<ol style="list-style-type: none"> <li>1. Increase external and internal trainings</li> <li>2. Introduce innovative solutions</li> </ol>

Source: Authors

Objectives were developed for each of the set perspectives and the initiatives are explained in the following text.

**Users and other stakeholders (US):**

It was important for us to measure the satisfaction of programme users. This objective is easily measurable, because after each activity within the programme, we monitored the satisfaction through questionnaires, measured by a 1-5 scale. The programmes implemented by the Department are aimed at the general population. They often represent an intervention in the health care system aiming to provide users with an examination, education or an activity that they cannot obtain in the public health care system or that they would have to wait for a long time. It is important to introduce new programmes to improve the health of the users by promoting a healthy lifestyle, preventing the onset of the disease or achieve early detection. These programmes include, for example, Early Detection of

Breast Cancer, Prevention and Early Detection of Colon Cancer, Prevention and Early Detection of Cervical Cancer, Improvement of Oral Health of Children, Prevention and Early Detection of Osteoporosis, Prevention and Early Detection of Melanoma, Prevention of Violence... All programmes of the Department are carried out in co-operation with the media that disseminate information, monitor the progress of programme implementation and inform the public of the achieved results.

**Financial management (FM):**

The funds for the implementation of the programme are secured from the budget and own sources. A part of the budget revenues is provided by the Croatian Health Insurance Fund that funds three health teams, each comprised of a doctor specialised in public health and a nurse. The second part of budget revenues comes from local sources (from the County budget). Own revenues are generated from market activities by offering programmes to

local self-government units, companies, associations, which can be influenced by better marketing.

In order to improve the management of financial resources, there is a need to implement cost controlling per each service. Through PR services, it is possible to increase financing from non-public funds – services offered in the market.

These services are offered as programmes like Prevention of osteoporosis in women, Early detection of melanoma, Golden Age, Prevention of Violence, Health picture of a municipality or city.

#### **Quality of internal processes and organisation (PO):**

The quality of processes and organisation is monitored through the introduction of new certification and management systems. All procedures are monitored by the Quality Department and are in the common interest of all departments since they have a significant impact on the acceptance of social medicine programmes in the market. The objective of improving the staff structure has been set regarding the ratio of health care professionals and non-health care professionals, since the latter currently outnumber the first group.

Given that the Department mainly implements health programmes, a larger number of health professionals are also needed. In other institutes in Croatia, the situation is different, primarily due to differences in organizational structure and types of programmes implemented.

Namely, numerous activities in the field of public health are also a subject of interest of economists, lawyers, and other experts, but the activities related to the improvement of health of users in the narrow sense are conducted exclusively by health care professionals who are in short supply. An appropriate ratio also requires defining the process architecture at the strategic and operational level. It depends on the number of programmes that are directly related to improving the health status of the population, which can only be carried out by healthcare professionals (diagnostic procedures, examinations etc.).

#### **Learning and innovation development (LI):**

Learning and innovation development is important for increasing the quality of work of all employees in the Department. Training – external and internal – is an objective that, along with the introduction of innovation, is a foundation for improving and increasing the number of all activities. External trainings include workshops, courses, education,

etc., attended by employees outside of the Institute, upon which they transfer new information to other employees in the department through internal training. Innovations are related to new activities within the existing programmes, new programmes, new software, or introduction of new quality systems. An internal policy may encourage specialisations and development of scientific research. A reward system can be applied to encourage innovative solutions.

For now, there is no reward system and workers are expected to continually upgrade existing and introduce new programmes. Thus, all work is based on the personal level of employee motivation and not on targeted personal policy.

#### *4.2 Adjusted metrics*

It was suggested by Kaplan and Norton (1996) that a BSC should not exceed four or five indicators for each perspective – a total of 20 to 25, but Gurd and Gao (2008) found a great number of measures, from 13 to 44. Our approach was to measure each of the set objectives by a properly defined efficiency indicator. Indicators are selected with the aim to monitor all activities at the department level and are not directly related to performance outcomes. Efficiency is a measure of rationality and, basically, easy to understand – maximisation of valued outputs with as little input as possible, but it is often difficult to make them work in real-life situations. According to Cylus et al. (2016: 241), better efficiency measurement and greater understanding of how to interpret efficiency indicators are essential for developing more focused and effective policies towards enhancing efficiency. They propose a framework for the assessment of efficiency metrics that includes the entity to be assessed, outputs and inputs under consideration, external influences on achievement, as well as the links to the rest of the health care system. Starting with the first element, we assessed the Department of Social Medicine as one of DMUs within the Teaching Institute of Public Health which is a part of the comprehensive health care system. Considering the overall health policy in Croatia, especially the funding policy and population's needs and requirements, outputs and inputs were analysed separately for each DMU including the Department of Social Medicine. In accordance with the set vision, inputs and outputs within the processes, the set objectives are measurable.

**Table 2 Objectives and Measures at the Level of the Department of Social Medicine**

Mission: <b>To preserve and promote health of all citizens and visitors to the County through public health programmes.</b>				
Vision: <b>Being the leader in improving the health status and quality of life of the population in the County</b>				
PER.	OBJECTIVES		MEASURES	TARGET
US	US1	Increase customer satisfaction through the quality of services provided	<ul style="list-style-type: none"> <li>customer satisfaction rating (survey; 1-5)</li> <li>number of current complaints / number in the previous year</li> </ul>	<ul style="list-style-type: none"> <li>4.6/5</li> <li>20%</li> </ul>
	US2	Increase the number of preventive public health services and programmes	<ul style="list-style-type: none"> <li>number of actions/activities in the current year (workshops, lectures, public health activities) / previous year</li> <li>number of actions / planned activities in the current year (workshops, lectures, public health activities)</li> </ul>	<ul style="list-style-type: none"> <li>5%</li> </ul>
	US3	Improve the promotion of programmes	<ul style="list-style-type: none"> <li>number of promotional activities in the current year (media and social media) / previous year</li> <li>number of promotional activities in the current year (media and social media) / plan</li> </ul>	<ul style="list-style-type: none"> <li>5%</li> </ul>
FM	FM1	Provide sufficient financial resources for quality services (mandatory health insurance and the budget)	<ul style="list-style-type: none"> <li>average value (in HRK) per CHIF* team</li> <li>the share of CHIF's income in total revenue</li> </ul>	<ul style="list-style-type: none"> <li>xEUR/year</li> <li>xy%</li> </ul>
	FM2	Increase revenue from services on the market	<ul style="list-style-type: none"> <li>share of market revenue per programme / total revenue</li> <li>share of market in total revenue</li> <li>amount of invoiced services / number of employees in the provision of services</li> </ul>	<ul style="list-style-type: none"> <li>xy%</li> <li>5%</li> <li>xEUR</li> </ul>
PO	PO1	Certify, accredit and integrate new management systems	<ul style="list-style-type: none"> <li>number of implemented management systems / number of planned management systems (ISO / IEC 17025, ISO 9001, ISO 14001)</li> </ul>	<ul style="list-style-type: none"> <li>100% of the plan</li> </ul>
	PO2	Improve employment structure	<ul style="list-style-type: none"> <li>share of health care employees in the total number of employees</li> </ul>	<ul style="list-style-type: none"> <li>50%</li> </ul>
LI	LI1	Increasing external and internal trainings	<ul style="list-style-type: none"> <li>number of internal trainings / number of external trainings (congresses, conferences...)</li> </ul>	<ul style="list-style-type: none"> <li>more than 1</li> </ul>
	LI2	Increasing innovative solutions	<ul style="list-style-type: none"> <li>number of innovations (methods, procedures, analysis, processes ...) per programme</li> </ul>	<ul style="list-style-type: none"> <li>3</li> </ul>

\* CHIF: *Croatian Health Insurance Fund*

Source: *Authors*

Target values are defined on the basis of average results in the past three years and taking into consideration the environment situation set until 2022. The programmes included in the strategic map are the following: Cardiovascular Disease Prevention, Prevention and Early Detection of Melanoma,

Prevention and Early Detection of Osteoporosis, Prevention of Violence. Each programme consists of several activities (workshops, lectures, forums). Programmes are presented to the public through workshops, forums, and other events using various promotional activities (television broadcasts,

radio shows, newspaper articles, brochures, etc.). Financial management is crucial for the implementation of programmes and activities. Social medicine activities are funded, as other public services, through the Health Insurance Fund, county and city budget; these revenues are constant. There is a smaller share of revenues from market activities. Certification, accreditation and implemented man-

agement systems ensure better quality, which is a prerequisite for better quality of services. External and internal trainings encourage development and scientific research on innovation. The structure of employees is important, and efforts are made to increase the share of health care professionals. The described objectives can be achieved through the elaborated initiatives.

**Table 3** Number of Initiatives for Each Objective

Initiatives Objective	INITIATIVE 1	INITIATIVE 2	INITIATIVE 3	INITIATIVE 4
US1	•			
US2	•	•	•	•
US3	•	•		
FM1	•	•		
FM2	•	•	•	
PO1	•			
PO2	•	•		
LI1	•			
LI2	•	•		

Source: Authors

Initiatives from the perspective of users and other stakeholders are aimed at improving preventive actions, attracting new users, initiating changes in the regulatory framework, optimising the personnel structure, and new organisational solutions for promotion. From the perspective of financial management, the aim is to establish better controls and cost monitoring for each service in order to achieve better cost effectiveness. Activities that increase the share of revenues from the market are encouraged. The implementation of management systems and staffing activities for health care professionals are initiatives that improve the quality of the process. Finally, internal policy and an appropriate reward system should encourage the development and scientific research.

## 5. Discussion and conclusion

The basic purpose of public health services is prevention of various diseases and preservation of

health. They encompass the entire population and differ from other health care areas that are more focused on patients and treatments. Prevention activities are like other public services, constantly under pressure to increase rationality and be more budget-conscious, while simultaneously improving efficiency and quality. Efficiency leads to satisfaction of public health care users and is ultimately measured through outcomes which can be affected or influenced by efficiency. Both efficiency and effectiveness are measures of successful performance and influence each other. However, although efficiency is easier to measure, in most public health care services, it is still reduced to a numerical expression without continuous monitoring of the results, and their ultimate goal is measuring outcomes.

In this study, we used the BSC as a proven management tool, even in health institutions, to measure efficiency of the activities in a specific part of preventive health care services – social medicine. Our

study has confirmed the set hypothesis: namely, due to the complexity of social medicine activities, adjusted BSC is suitable for efficiency assessment and achievement of the final outcome in accordance with the set mission, vision, and goals. The study has also confirmed that the proposed metrics is possible with the implementation of an appropriate information system. Although failures in the implementation of the BSC have been attributed to poor design and difficulty of implementation, this case study has refuted these arguments. The only obstacle, which is not negligible, are employees who need to get used to extra work – recording the data used for measures. In this study, social medicine is represented by public health organisational units that have partially secured funds from the budget. A share of the revenues can be generated in the market, but there is lack of marketing activities, in part due to lack of experience in market activities of employees in the public sector.

A limitation in this research is lack of adequate literature regarding measuring of the results or effects in social medicine. No study covering the implementation of the BSC was found, which is an encouragement for further research in this area. The intention is to use Data Envelopment Analysis (DEA) for comparative analysis of the assessment of relative effectiveness of individual programmes at the level of all 22 public health institutes in Croatia.

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## ENDNOTES

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## IMPLEMENTACIJA *BALANCED SCORECARDA* U JAVNOJ SOCIJALNOJ MEDICINI

### SAŽETAK

Socijalna medicina dio je javnozdravstvenih usluga čija je svrha poboljšanje zdravlja populacije kroz različite preventivne programe i aktivnosti. Zbog toga je metrika mjerenja rezultata poslovanja svojevrsni izazov budući da se radi o aktivnostima s kvalitativnim ishodom koji zahtijeva vremenski odmak. Predmet istraživanja je ocjena učinkovitosti programa socijalne medicine, primjenjenih u javnozdravstvenom sustavu Republike Hrvatske. Za ovo empirijsko istraživanje koristili su se podatci Nastavnog zavoda za javno zdravstvo odjela Socijalne medicine. Odjel ima tri osnovna cilja: ocijeniti zdravlje i zdravstvene potrebe populacije, unaprjeđivati javnozdravstvenu politiku i osigurati učinkovitu primjenu programa. Cilj je ovog istraživanja pronaći metriku koja će biti korisna za ocjenu konačnog ishoda aktivnosti socijalne medicine. Teorija i koncept *Balanced Scorecarda* (BSC) su relevantni za područje javnog zdravstva, ali nema puno istraživanja primjene BSC-a u preventivnim aktivnostima, posebno onih koji se odnose na socijalnu medicinu. Kako bi se poboljšala učinkovitost ocjene tekućih i budućih rezultata rada, predložena je prilagođena BSC metoda. Modificirana BSC tj. perspektive i metrika uz pomoć strateške mape pomažu u postizanju postavljenih ciljeva kao i izvještavanju o ključnim rezultatima. Ovo istraživanje potvrđuje primjenjivost i fleksibilnost BSC-a i doprinosi razvoju niza zajedničkih pokazatelja koji odražavaju kvalitativna gledišta aktivnosti i omogućavaju mjerenje učinkovitosti rezultata rada socijalne medicine.

**Ključne riječi:** javna socijalna medicina, BSC, učinkovitost, djelotvornost



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# EMPIRICAL STUDY OF THE EFFECTIVENESS OF UNCONVENTIONAL THEATRE MARKETING ACTIVITIES TARGETING GENERATION Y

## ABSTRACT

Cultural institutions, specifically theatres, which are the main focus of this research paper, are struggling to find the best way to approach and attract the audience, in particular the young audience (in this case Generation Y). The authors of the paper believe that unconventional marketing has potential as a tool of communication with the audience in terms of both future research and practical application. Unconventional marketing can be used for the benefit of not only the theatres, but also the whole society by building a theatre audience and in general by raising awareness of the role cultural institutions play in the economic development of a country.

Based on empirical research of city and national theatres in the Republic of Croatia, the objective of this paper was to identify and understand unconventional marketing and determine if it can be a useful marketing tool for communication with Generation Y. The research focused on two types of theatres (i.e. city and national theatres) and comprised two surveys, one for theatre employees,  $n=41$ , and the other for Generation Y,  $n=285$ . Research hypotheses were focused on analysing the effectiveness of both promotional methods used by the theatres and unconventional marketing targeting Generation Y. Research results indicate that theatres have not adapted their promotional activities to Generation Y. However, they also show that unconventional marketing has great potential in both groups with respect to theatre events. Psychometric analysis confirmed the good metric properties of the proposed *Theatre PUMA Scale*, which measures the potential of unconventional theatre marketing.

**Keywords:** Marketing in culture, unconventional marketing, factor analysis, Generation Y, theatre

## 1. Introduction

Almost all sectors of the creative industry come together in theatre events and performances. According to Horvat et al. (2018), the creative industry contributes, *inter alia*, to the development of economy as a whole, has an export potential, and is based on innovation and talent development. Innovation is the key component that theatre marketing professionals have been increasingly relying on. In 1974, the Ford Foundation developed a new approach to potential theatre-goers that has been referred to by different names in the literature, including “unconventional marketing” and “unconventional promotional activities”.

This paper contributes to a theoretical explanation as well as to an overview of definitions of unconventional marketing and Generation Y by providing an analysis of relevant work.

The research is based on two parallel surveys conducted in two research groups. Group 1 answered questions related to promotional activities of theatres (theatre marketing professionals,  $n = 41$ ), whereas Group 2 questions related to their perception and the usefulness of information they received about theatre events (Generation Y,  $n = 285$ ). A total of 326 respondents participated in the two surveys. Multivariate statistical methods were used to explore the potential of unconventional promotional activities, compare the two research groups, and identify different approaches to the understanding of theatre marketing.

The paper comprises seven sections. Sections 1 is the Introduction, followed by a description of theatre marketing, including its definition and past studies given in Section 2. Section 3 gives a description of unconventional (guerrilla) marketing, while Section 4 is dedicated to a review of relevant work discussing Generation Y. Sections 5, 6 and 7 focus on methodology, research results and discussion, and conclusion, respectively.

## 2. Theatre unconventional marketing – theoretical background

One of the first marketing studies, which was conducted by the Ford Foundation to establish the impact of ticket prices and other factors (such as visitor income) on theatre attendance and audience, dates back to 1974. Other authors explored the same topic in the 1980s and the 1990s. Withers

(1980), Levy-Garboua and Montmarguette (1996) and Gapinski (1986) looked into ways how leisure activities such as reading, cinema and recreation affect the audience and their coming to theatre performances. On the other hand, Bonato (1990) investigated the impact of visitors' education on theatre attendance. Felton (1989) studied the effects of ticket prices on theatre subscribers and non-subscribers, and Thorsby (1989) analysed the impact of the quality of theatre plays on attendance. More recently, Walmsley (2011) looked into the motivation that attracts visitors to theatres, Leko Šimić and Biloš (2017) explored the use of websites to attract a young audience to the theatre, and Besana et al. (2018) investigated the impact of social media promotion on theatre attendance.

According to Kerrigan et al. (2004), a business tactic is the essence of theatre marketing. This implies the tactic of successful selection of marketing tools and the manner of communication with the environment.

According to Lukić (2010), theatre marketing is the procedure of selling tickets or services to the viewer (the consumer). The same author asserts that theatre marketing uses tools like promotion, advertising, public relations and audience relations.

The same author suggests a possible explanation that theatre marketing is based on sales but also on successful communication with the viewers that can ultimately contribute to attracting viewers and selling tickets and services.

Studies of theatre marketing in Croatia can also be found; according to Leko Šimić et al. (2018), if theatres want to be more successful in marketing performance, they have to implement marketing strategies that are more oriented towards young audiences. Another Croatian study (Meler, 2006) shows that a young audience is highly demanding about cultural programmes. When cultural institutions in Croatia are trying to reach their audience via social media, social media are an infallible tool for planning marketing activities, a great tool for building a business image, a suitable communication channel in crisis situations, and they can encourage people to visit cultural institutions (Njirić, 2017).

The word “guerrilla” originates from Spanish and it means “a small war” (Hutter, Hoffman, 2013) or a war fought by small independent armed groups outside of the regular army (Anić, 2000). According to Schulte (2007), the word “guerrilla” represents a group that uses aggression to implement their beliefs and ideologies.

The release of “Guerrilla Marketing” by author Jay Conrad Levinson in 1983 introduced a revolution that presented two ideas: a) marketing does not have to be expensive to be successful, and b) selling is the easiest job in the world.

Today, guerrilla marketing is a subject of interest for many scholars (and practitioners such as entrepreneurs, managers, etc.), but Kuttelwascher (2010) believes that it has not been sufficiently analysed from a scientific point of view. According to Anlager and Engel (2013) and Baack et al. (2008), guerrilla marketing is a synonym for unconventional marketing.

Nowadays, guerrilla marketing is also considered to be an art based on a grand idea, but it can also be a strategic tool of marketing departments for targeting a specific audience group. Guerrilla marketing is based on creative marketing, and the key to creative marketing is an intelligent and cunning strategy (Levinson, 2008).

Typical guerrilla marketing strategies are drastic (Guerrilla online, 2015), provocative (Hutter, Hoffmann, 2011), unexpected (Schwarzbauer, 2009), catchy (Huber et al., 2009), rebellious (Meier, 2014), untraditional (Sandber, Stierna, 2006) and unusual. They cause surprises in unexpected situations and in unexpected places to impressively create interest in one’s surroundings. Bruhn et al. (2009), Bartizan (2009), Omar et al. (2009)<sup>1</sup>, Prevot (2009), Andrews (2011) and Serazio (2009) also place emphasis on the effect of surprise.

Levinson (2008), Patalas (2006) and Jäckel (2007) consider guerrilla marketing campaigns to be funny, witty and spectacular.

Unconventional marketing aims to surprise people (to replace the sarcastic eye rolling with a mouth wide open in surprise (Margolis, Garrigan, 2008: 16)) and requires exceptional creativity and innovation. It can give cultural institutions a great and unsurpassed advantage, security in an uncertain market, as well as speed and ease of communication with the users of their services. Unconventional marketing strives to shock (Jurca, 2010) and change entrenched assumptions about marketing (Cova, Saucet, 2014). The business philosophy of unconventional marketing is to achieve maximum results with minimum costs.

The most important difference between conventional and unconventional marketing is the state of mind. The fundamental idea of guerrilla marketing,

as the name itself suggests, originated from guerrilla warfare in which atypical tactics were used to achieve goals. In his book “Guerrilla Warfare” written in 1960, Che Guevara defined guerrilla tactics as achieving victory over the enemy using the effect of surprise (Huber et al., 2009) and tactical flexibility, which is necessary to suddenly and unexpectedly attack a place where an attack is least expected, in a way that is not expected, and to very quickly withdraw from the place (Lukić, 2010).

In the years that followed, marketing became increasingly focused on consumers rather than on competition, and this trend is evident in guerrilla marketing as well (Solomon et al., 2009). In its history, guerrilla marketing has helped not only SMEs survive in a challenging market, but also theatre groups and private theatres when they could not afford classic elements of marketing, when they were short of funds, or when they simply wanted to strengthen their existing marketing without additional investments.

Ay et al. (2010) claim that, with the help of guerrilla marketing, companies strive to form a kind of marketing management that is dynamic and sensitive to consumer needs.

Guerrilla marketing is a different and alternative way of thinking (a technique or a method) that achieves conventional goals by unconventional methods and prefers extensive energy and imagination over a large budget (Buljubašić, 2015).

Definitions of guerrilla marketing by all authors mentioned above are obviously similar, defining it as unexpected, personalised marketing and the opposite of traditional marketing. Such marketing seeks to achieve and maximise conventional goals by using unconventional methods and a smaller budget.

It is important to note that guerrilla marketing is a new and fresh way of thinking as opposed to traditional marketing. Guerrilla marketing puts imagination and creativity first in order to achieve the desired goals through unconventional methods and minimum investments in the target audience or group.

When it comes to the relation between unconventional marketing and cultural institutions (museums, galleries and theatres) in the Republic of Croatia, according to Buljubašić et al. (2016), lack of experience and knowledge was identified as the biggest barrier to implementing and using unconventional marketing.

### 3. Generation Y – a review of relevant studies

Generation Y refers to the generation born from the early eighties (around 1983) to mid-nineties (around 1996), also known as “the millennials”. For the purposes of this paper, the authors considered reflections of several authors on Generation Y and gave their critical review.

According to Postolov et al. (2017), Generation Y thinks and learns differently from the preceding generations, in particular due to the rapidly changing, highly technological environment in which they have been raised. Postolov et al. (2017) agree that Generation Y has not lived in a world without computers, the Internet, DVDs and cell phones. This research study supports the previous definition to some extent, because Generation Y did not spend its childhood in the time of the Internet (the Internet just started to evolve), but only started to use the Internet, DVDs and cell phones in their adolescent years (as opposed to Generation Z, who had access to all of the above from early childhood).

According to Stoyanov and Stanoeva (2016), Generation Y is more price sensitive when it comes to theatre attendance, and the reason is their financial status. This generation refers to either new graduates looking for a full-time, permanent job, or parents with small children.

When it comes to relations between unconventional marketing, i.e. guerrilla marketing, and purchase intention of Generation Y, according to Tam and Khuong (2015), creativity, emotional arousal and message clarity in advertising have a direct positive impact. Milak and Dobričić (2017) dealt with a similar topic (customer perception of guerrilla marketing) and drew a conclusion that guerrilla marketing was mostly perceived by Generation Y and that creativity plays an important role in attracting attention.

An analysis of marketing strategies available for the four largest Croatian theatres reveals the existence of an element of unconventional marketing application. However, promotional activities using conventional and unconventional theatre marketing do not indicate the existence directed towards either target groups or Generation Y.

Consequently, spending on arts is not a priority in their budget. Thus, the authors set three main hypotheses:

H1: Theatres in Croatia target Generation Y with their promotional activities.

H2: Unconventional marketing has a great potential in theatres.

H3: Theatre professionals and Generation Y disagree as to the importance of different approaches to promotional activities of theatres.

On the one hand, the lack of previous specific empirical research about unconventional i.e. guerrilla marketing in cultural institutions remains a limitation of the study (because of the impossibility to compare the results with previous findings), but on the other, it means that this research has provided a significant theoretical contribution.

### 4. Methodology

The authors conducted two parallel surveys in the Republic of Croatia to test the hypotheses and address the objectives set in this paper. Both were focused on assessing the perception of promotional activities of theatres. The first survey was focused on theatre marketing professionals and their views about the organisation and effectiveness of various promotional activities of theatres. They comprise the first group ( $n_1 = 41$ ). In line with the formulated hypotheses, the second survey was focused on Generation Y ( $n_2 = 285$ ).

#### 4.1 Group 1: Theatre experts

According to the Theatre Register maintained by the Croatian Ministry of Culture, there are five national and 28 city theatres operating in Croatia. Considering the topic of the study, it was not difficult to include all relevant professionals in the sample. The authors used a structured online questionnaire on SurveyGizmo to collect the data. Since not all theatres have marketing departments, invitations to participate and links to the survey were sent to email addresses of theatre managers and/or heads of marketing. Persons working in marketing in the selected theatre institutions were eligible for participation.

Content validity of the questionnaire was tested in a focus group consisting of three theatre marketing professionals. The structured questionnaire consisted of the following four sections: 1) Demographic and business characteristics – 10 items; 2) Promotional activities of the theatre – 27 items; 3) Views about the audience – 19 items; and 4) Unconventional marketing – 24 items. SurveyGizmo estimated that the questionnaire would take an average of 13 minutes to complete.

The research study was conducted from December 2018 to February 2019. A total of 44 persons filled in the questionnaire, and 41 questionnaires met the criteria for further analysis (i.e. more than 90% responses).

**Table 1 Sample description: Group 1 – Theatre professionals**

Variable	n	%	Variable	n	%
<i>Gender</i>			<i>Educational background</i>		
Male	13	31.7	Economics	30	73.2
Female	28	68.3	Arts	6	14.6
<i>Educational level</i>			Engineering	2	4.9
High school	2	4.9	Other	3	7.3
Two-year university degree	4	9.8	<i>Marketing department</i>		
Four-year university degree	25	61.0	Yes	37	90.2
Master's degree	10	24.4	No	4	9.8

Source: Authors' research

The majority of survey respondents held university degrees (more than 85%), worked in marketing departments (90.2%) and had an educational background in economics (73.2%) or arts (14.6%). Their

job titles were analysed (Table 2) to determine their eligibility for participation in the survey. Participants were expected to work in marketing-related roles.

**Table 2 Job titles**

Job title	n	%	Cumulative %
Promotion/Sales Director	22	53.66	53.66
Marketing Associate	9	21.95	77.61
Head of Public Relations	8	19.51	97.12
Theatre Manager	2	4.88	100.00

Source: Authors' research

Even though the respondents do not hold management positions in their institutions, the majority of them (97.12%) are employed in positions related to theatre marketing. The respondents stated that the average number of employees in theatre marketing was almost three (Mean = 2.66; St. deviation = 1.493). Theatre professionals also recognise that only 26.8% of them used unconventional marketing methods in their previous marketing activities, while 73.2% of respondents did not use or do not know if they used any unconventional marketing methods.

#### 4.2 Group 2: Potential visitors (Generation Y)

The youth population, or Generation Y, was asked to evaluate the effects of the theatre promotional activities. The authors of the paper collected data at national level. The survey team leader visited three Croatian universities (Osijek, Varaždin, Rijeka) and

held meetings with Generation Y members to present the survey in coordination with their course teachers. The survey team leader invited the respondents to take part in the survey, explained the sections of the questionnaire and the meaning of the measurement scales, assured them that the survey was anonymous, and finally asked them to be honest in their responses. Data was collected by the "pen-and-paper" method in January and February 2019 (n = 285).

A highly structured questionnaire comprised the following five sections: 1) Evaluation of cultural events – 37 items; 2) Getting informed about cultural events – 2 items; 3) Theatre events – 39 items; 4) Unconventional theatre marketing – 18 items; 5) Lifestyle and socio-demographic characteristics – 18 items.

**Table 3 Sample description: Group 2 – Generation Y**

Variable	N	%	Variable	n	%
<i>Gender</i>			<i>One's own income</i>		
Male	75	26.3	Yes	163	57.2
Female	208	73.0	No	118	41.4
<i>Student status</i>			<i>Living standard</i>		
Full-time student	135	47.4	Below average	13	4.6
Part-time student	147	51.6	Average	234	82.1
			Above average	34	11.9
<i>Educational background</i>			<i>Visits theatres*</i>		
Humanities	214	75.1	Yes	186	65.3
Arts	71	24.9	No	99	34.7

\* In the last 12 months  
 Source: Authors' research

The respondents were undergraduate and graduate university students. The majority were women (73%) with an educational background in humanities (75.1%) and their own income (57.2%). The average participant age is consistent with Genera-

tion Y, which is the subject of this analysis (Mean = 26.25, St. deviation = 3.074). As the majority of the respondents visited a theatre at least once in the past 12 months (65.3%), their interests in attending different cultural events are shown in Table 4.

**Table 4 Interest in cultural events**

Event	n	Mean	St. deviation
Cinema	282	4.59	.654
Concert	283	4.41	.830
Sports event	280	4.15	1.176
Theatre	283	4.00	1.077
Book	284	3.72	1.260
Museum or gallery	282	3.68	1.203
Watching/listening to a cultural radio/TV programme	281	3.58	1.288

Source: Authors' research

The respondents' interest in cultural events were measured on a 5-point Likert scale. The respondents express the highest rate of interest in the cinema (Mean = 4.59) and concerts (Mean = 4.41), while theatres are positioned in the exact centre of the table (Mean = 4.00) measuring interest in attending different cultural events. Such results provide an extra incentive for the theatres to launch promotional activities in order to attract Generation Y visitors. This paper analyses the effectiveness of promotional methods and unconventional marketing targeting Generation Y.

#### 4.3 Statistical methods

The same questionnaire items were used to test the hypotheses in both groups (samples). The two groups differ in relation to variables referring to the professional and socio-demographic characteristics of the respondents. In order to test the formulated hypotheses, the authors conducted a reliability analysis, an independent samples t-test and exploratory factor analysis.

## 5. Research results

The analysis of the first respondent group shows that the majority of the theatres have a marketing department (90.2%) and are presumably aware of the need to employ different approaches when creating and implementing promotional activities with regard to different age and interest groups. In this section, we will analyse and compare data for both

samples. Data analysis will follow the formulated hypotheses.

Theatre visitors may differ in terms of characteristics by which a theatre can make strategic and marketing decisions. Although the focus of this paper is Generation Y, professional theatres were first asked about the presence and application of marketing activities aimed at specific target groups.

**Table 5 Target group oriented promotional activities of theatres**

Target group oriented promotional activities	n	%
Yes	18	43.9
No	23	56.1

Source: Authors' research

Even though descriptive, the results shown in Table 5 shed doubt on the formulated hypothesis since 56.1% of theatre professionals state that their theatres do not carry out promotional activities that are specifically oriented towards any target group. To test the hypothesis, the authors used an independent

samples t-test comprising all promotional methods (TV, radio, printed media, posters, email, the Internet, websites, social media) from the viewpoint of using methods of promotion (Group 1) and from the viewpoint of using methods to get informed about theatre events (Group 2 – Generation Y).

**Table 6 Independent samples t-test: comparison of two groups with regard to the effectiveness of promotional activities**

Promotional methods	Group	n	Mean	St. deviation	t-test for the Equality of Means
TV	1	41	2.80	1.364	t=-0.048, df = 324, p > 0.05
	2	285	2.81	1.106	
Radio	1	41	4.29	.782	t=8.535, df = 324, p < 0.001
	2	285	2.58	1.253	
Printed media (newspapers/magazines)	1	41	4.32	.756	t=10.418, df = 324, p < 0.001
	2	285	2.40	1.142	
Posters (outdoor)	1	41	4.37	.859	t=7.097, df = 323, p < 0.001
	2	284	2.99	1.201	
Email notifications	1	41	4.41	.706	t=6.494, df = 323, p < 0.001
	2	284	2.98	1.385	
Internet (search)	1	41	4.41	.741	t=3.841, df = 322, p < 0.001
	2	283	3.72	1.115	
Event website	1	41	4.32	.687	t=4.800, df = 324, p < 0.001
	2	285	3.46	1.118	
Social media	1	41	4.63	.536	t=5.963, df = 323, p < 0.001
	2	284	3.72	.961	

Group: 1 – Theatre professionals (those who use the methods); 2 - Generation Y (in relation to whom the methods are applied)  
Source: Authors' research

A promotional activity is considered efficient when there is no statistically significant difference in the perception of its effectiveness between the creators and implementers of marketing strategies in theatres on the one hand, and the audience that these activities are intended for on the other. T-test results indicate that there is a statistically significant difference between Group 1 and Group 2 with respect to all promotional activities (methods); namely, marketing method practitioners (Group 1) statistically rate marketing messages with a much higher average grade than the recipients of marketing messages (Group 2). TV was the only promotional activity where a statistically significant difference was not detected, but this method was identified as the method with the lowest utilization rate by Group 1 and it is expected that Generation Y will not notice it.

In order to compare the use of promotional activities by theatres and the receptivity of theatre-goers from Generation Y to their marketing messages, the authors developed a summation variable for all promotional methods. Response values were summed up for each respondent (eight variables) and a new variable effectiveness method of promotion was calculated: *effprom\_sum*. Independent samples t-test results indicate that there is a statistically significant

difference between the groups, where Group 1 (n = 41, Mean = 33.56, St. deviation = 4.691) has a significantly (t = 9.144, df = 324, p < 0.001) higher average grade than Group 2 (n = 285, Mean=24.60, St. deviation=6.017). In other words, theatres use promotional methods to advertise their events to a greater extent than Generation Y that uses the same methods to get informed about theatre events. On the grounds of the evidence presented above, the authors of the paper reject Hypothesis H1, stating that theatres in Croatia target Generation Y with their promotional activities.

### 5.1 Application and perception of unconventional theatre marketing

Average grades shown in Table 6 indicate that Generation Y gets its information through new digital communication channels (e.g. the Internet, social media). These channels of communication with the potential audience provide enough room for theatre marketing departments to develop innovative and creative approaches to theatre event promotion. The analysis of the potential of unconventional theatre marketing (H2) demands the overall sample to be analysed and the psychometric characteristics of the construct that measured unconventional marketing to be tested (5 items).

**Table 7 Unconventional theatre marketing**

<i>Unconventional theatre marketing</i>	<i>n</i>	<i>Mean*</i>	<i>St. deviation</i>
...is necessary	320	4.33	.793
...contributes to greater visibility	319	4.26	.834
...contributes to increasing the number of visitors	320	4.18	.859
...brings theatre services closer to the audience	319	4.07	1.021
...is more efficient than conventional marketing	320	3.97	.890

\*Variables measured on a 5-point Likert scale

Source: Authors' research

With their high average grades, Table 7 results confirm that unconventional marketing has a great potential and a high level of contribution. Survey results confirmed that unconventional marketing was necessary (Mean = 4.33) and that it greatly contributed to the visibility of the institution and the theatre programme (Mean = 4.26). To further test Hypothesis H2, the authors wanted to test the extent to which the analysed items (Table 7) measure the potential of unconventional marketing. For this purpose, they tested the unidimensionality of the construct (exploratory factor analysis) and then its reliability (the Cronbach's Alpha coefficient).

Bartlett's test of sphericity was used to test the intercorrelation of the manifest variables. The factor analysis results support its appropriateness for the six analysed items: the Kaiser-Meyer-Olkin Measure of Sampling Adequacy = 0.864, Bartlett's Test of Sphericity = 1088.505 (df = 10, p < 0.001). The unidimensionality of the construct, measured on the basis of five items, was confirmed by extracting all items into a general factor that could be described as the construct *Unconventional Marketing Potential (nmktg\_pot)*, with factor loading of items greater than 0.8 and variance explanation of 74.144%. Psychometric analysis of the construct demonstrates its internal consistency since



the standardised Cronbach's Alpha is 0.913, with an average Inter-Item Correlation of 0.617 and an Item-Total Correlation value higher than 0.7 (Scale Mean = 20.83, St. deviation = 3.767). Its unidimensionality and reliability having been confirmed, the new construct was named the *Potential of Unconventional Marketing in Theatre Scale* or **Theatre PUMA Scale**.

The aggregated variable used to test the H2 hypothesis was created by using the five items described above. The test was carried out for a sample group of Generation Y (n = 285) according to their theatre attendance, where it was expected that in comparison to non-goers, the theatre-going group of respondents would recognise great potential of unconventional marketing. The results of the independent samples t-test indicate that there is a statistically significant difference ( $t = 4.565$ ,  $df = 280$ ,  $p < 0.001$ ) between the respondents who visited a theatre in the past year (n = 183) and the ones who did not (n = 99). In comparison to the latter, the former recognise the efforts made by the theatres

using unconventional marketing to a greater extent (Mean for theatre visitors = 4.26 vs. Mean for theatre non-visitors = 3.83). This indicates that unconventional marketing has a great potential in theatres, particularly expressed through the views of Generation Y who visit theatres at least once a year.

### 5.2 Different approaches to theatre promotional activities

In the light of the results that have so far indicated that unconventional marketing has a potential, but also that target group oriented marketing has been neglected, further analysis is justified focusing on Hypothesis H3, which asserts that there is a difference in the evaluation of the perception of the use of marketing approaches between theatre professionals and Generation Y. To identify the items measuring different marketing approaches, the authors used exploratory factor analysis. The rotated factor matrix (the Varimax method using Kaiser's criterion) results in the distribution of items in three dimensions, with a total variance explanation of 62.886%.

**Table 8 Factor Analysis: Rotated Component Matrix**

Items	Factors		
	1	2	3
Promotion is not important if theatres have a high level of service quality	.823		
Word-of-mouth marketing is enough for popular programmes in culture	.812		
Only profit organisations need marketing	.783		
Marketing is not important when you have a good programme	.766		
Market research results are useful for the creation of programme contents		.780	
Creativity and innovation are the future of theatre marketing		.720	
Unconventional theatre marketing contributes to increasing the theatre profit		.637	
Theatres in Croatia need an organised form of marketing			.766
A large budget is required for a successful marketing campaign	.444		.668
Conventional marketing is the future of theatre marketing			.464
Total variance explained (in %)	32.462	16.456	13.969
<b>Dimensions</b>			
Theatre marketing	No need for marketing	Unconventional	Conventional
Mean	2.68	3.97	3.85
Standard deviation	.691	.609	1.058

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

Source: Authors' research

Extracted factors are important for the identification of indicators of marketing approaches to theatre events. The authors propose factor names in line with the grouping of items into factors. In the first factor (% of variance explanation = 32.462), four items are grouped that focus on programme quality, with no need for conventional or unconventional marketing. The first factor was therefore named *No Need for*

*Marketing*. Items focused on unconventional marketing (% of variance explanation = 16.456) are grouped into the second factor, which was named accordingly. Items focused on a conventional approach to marketing (% of variance explanation = 13.969) are grouped into the third and last factor. Hypothesis H3 was tested after aggregated variables were created based on extracted items according to the factors.

**Table 9 Independent samples t-test: comparison of application and perception of marketing approaches by respondent groups**

Promotional method	Group	n	Mean	St. deviation	t-test for the Equality of Means
Factor 1	1	38	1.87	.993	t=-5.212, df=318, p<0.001
	2	282	2.79	1.020	
Factor 2	1	38	4.33	.715	t=3.538, df=318, p=0.001
	2	282	3.92	.674	
Factor 3	1	38	4.04	.631	t=2.104, df=318, p=0.048
	2	282	3.82	.603	

Group: 1 – Theatre professionals (those who use the methods); 2 - Generation Y (in relation to whom the methods are applied)  
 Source: Authors' research

The results presented support the set hypothesis that there is a difference in the evaluation of the importance of different approaches to theatre promotional activities between theatre professionals and Generation Y. A statistically significant difference between the groups was identified for all three factors ( $p < 0.05$ ). Theatre professionals rate the need to use marketing (Factors 2 and 3) with a much higher average grade than Generation Y. The first group of respondents rated the status quo of theatre marketing (Mean = 1.87) with the lowest average grade, indicating the need to use marketing irrespective of programme quality.

However, Generation Y rated the *No Need for Marketing* dimension with statistically significantly higher average grades than theatre professionals. A high average grade by which Generation Y demonstrates its lack of interest in promotional activities that theatres design for their events/performances/programmes indicates that theatre marketing professionals must adapt their promotional activities to this generation and use the communication channels this generation uses to become informed about all events, including theatre events.

## 6. Discussion

Although there is a lack of scientific research comparing opinions of two groups (i.e., theatre professionals and audience) about guerrilla marketing,

research findings can be compared with a previous study according to the relationship between young audience and their perception of guerrilla marketing in theatres. Stoyanov and Stanoeva (2016) conducted research to identify determinants of theatre attendance regarding the differences of generations Y and Z. Research results correspond with the finding that the conventional advertising media such as radio, television and newspapers, are unnoticed, where only 17.2% of respondents find these media the preferred channel for theatre-related information. In this research, the lowest average scores were recorded in these categories. As Stoyanov and Stanoeva (2016) confirmed similar behavioral patterns between the two generations (there are no significant differences regarding the frequency of theatre going, preferences and determinants), it is justified to apply these research results to younger generations as well, e.g. to Generation Z.

A research study conducted by Tam and Khuong (2015) explores guerrilla marketing effects on consumer behaviour of Generation Y, where factors such as creativity, emotional arousal and message clarity in advertising have a direct positive impact on purchase intention. This finding emphasises the role of unconventional marketing in Generation Y.

By analysing Croatian marketing professionals, Buljubašić et al. (2016) found that 63% of cultural in-

stitutions have never or rarely used unconventional marketing in their promotional activities. The study showed that only 26.8% of marketing professionals have used unconventional marketing methods in their previous marketing activities. Leko Šimić and Biloš (2017) indicate that a good marketing communication tool between young audience and the theatres are the official websites. Also, Leko Šimić et al. (2018) conducted research on 876 young people aged between 18 and 35 in Eastern Croatia, where the Croatian National Theatre in Osijek is the major cultural institution and they conclude that if the theatre wants to improve its marketing performance, they need to use marketing strategies that are oriented towards young audiences.

## 7. Conclusion

The research objective of the paper was to explore, identify and describe factors that contribute to the effectiveness and potential of unconventional theatre marketing targeted at Generation Y. Two groups of respondents were surveyed and compared for this purpose. The first research group consisted of theatre marketing professionals ( $n_1 = 41$ ), whereas the second group of respondents was comprised of young people who belong to Generation Y ( $n_2 = 285$ ).

Even though almost all theatres have a marketing department, they do not use marketing strategies focused on different types of their potential visitors (56.1%), which demonstrates a lack of systematic research and a consequent lack of understanding of their potential visitors. This leads to uniform marketing that surely lacks innovation and creativity. Theatre marketing departments should bear in mind that members of Generation Y mostly use the Internet and social media to get informed about cultural and theatre events. Promotional strategies targeting this generation can ignore methods related to printed media (newspapers/magazines), outdoor posters, TV, radio, and email notifications. Considering a statistically significant difference in the results for each of the marketing methods used between the two groups, Hypothesis H1 was rejected. This implies that by implementing current marketing activities theatres are not targeting any particular audience. Therefore, theatre managers need to use more effectively unconventional marketing, the Internet and social media as their promotion channels.

A new measuring construct called the *Potential of Unconventional Marketing in Theatre Scale* or the Theatre PUMA Scale was confirmed by the survey. The scale is a research guideline for future researchers in terms of measuring the potential of unconventional marketing in theatres or other cultural sectors. Since the survey identified three dimensions evaluating the approach to promotional activities of theatres, the authors observed that unconventional marketing was identified as the most appropriate method of promotional activities of theatres (Mean = 3.97), while the method not including marketing activities received the lowest average grade (Mean = 2.68), both from the organisers of promotional activities and the recipients of marketing messages.

As the third hypothesis of the paper was not rejected and it was confirmed that theatre professionals and Generation Y differed in their assessment of the importance of different approaches to promotional activities of theatres, it is possible to relate the conclusions of the first and the third hypothesis. Namely, young individuals, i.e. Generation Y, rated the *No Need for Marketing* dimension with statistically significantly higher average grades than theatre professionals. This indicates that Generation Y sees no need for marketing that would attract them to the theatre. However, it is important to point out that in relation to other marketing approaches, Generation Y assigns the highest rating to the need for and the application of unconventional marketing methods (3.92).

Research limitations are reflected in the inability to compare each theatre with its target audience. The results were compared at the national level. Efforts must be made in future research to develop a marketing campaign for a selected theatre based on unconventional promotional activities and to test the elements of success on one or more target groups. The impact of an unconventional promotional activity on increasing or decreasing the intent to visit the promoted theatre event must also be tested.

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# ANALIZIRANJE UČINKOVITOSTI NEKONVENCIONALNIH MARKETINŠKIH AKTIVNOSTI KAZALIŠTA USMJERENIH PREMA GENERACIJI Y

## SAŽETAK

Kulturne institucije, posebno kazališta koja su u fokusu ovog istraživačkog rada, trude se pronaći najbolji način za pristupanje i privlačenje publike, posebno mlade publike, tj. generacije Y. Autori rada vjeruju da nekonvencionalni marketing ima potencijal, ne samo kao alat za komunikaciju s publikom, već i u pogledu budućih istraživanja, tj. u pogledu njegove praktične primjene. Nekonvencionalni marketing može se primjenjivati u korist, ne samo kazališta, već i cijelog društva, i to izgradnjom kazališne publike i općenito podizanjem svijesti o ulozi koju kulturne institucije imaju u gospodarskom razvoju zemlje. Cilj ovoga rada bio je na temelju empirijskih istraživanja gradskih i državnih kazališta u Republici Hrvatskoj identificirati i razumjeti nekonvencionalni marketing te utvrditi može li on biti koristan marketinški alat za komunikaciju s generacijom Y. Istraživanje je bilo usmjereno na dvije vrste kazališta (gradska i državna kazališta) za zaposlenike kazališta, n = 41, a drugo istraživanje je bilo za generaciju Y, n = 285. Istraživačke hipoteze usmjerene su na ispitivanje učinkovitosti promidžbenih metoda kazališta te nekonvencionalnog marketinga usmjerenog prema generaciji Y. Rezultati istraživanja pokazuju kako kazališta svoje promidžbene aktivnosti nisu prilagodila generaciji Y, ali su obje skupine ukazale na visok potencijal nekonvencionalnog marketinga za kazališna događanja. Psihometrijska analiza potvrdila je dobra metrička svojstva predložene skale *Theatre PUMA Scale* kojom se mjeri potencijal nekonvencionalnog marketinga u kazalištima.

**Ključne riječi:** marketing u kulturi, nekonvencionalni marketing, faktorska analiza, generacija Y, kazalište

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# THE RELATIONSHIP BETWEEN BALANCED ORGANIZATIONAL VALUES AND ORGANIZATIONAL EFFECTIVENESS: EVIDENCE FROM BUSINESS PRACTICE \*

## ABSTRACT

Organizational values are a part of the core ideology of any organization; therefore, managing organizational values is one of the preconditions for achieving business success. However, the question arises of how to manage organizational values to increase overall business success. The main research question asked in this paper is whether organizations with balanced values, i.e., those with an equal representation of values from different categories with a common focus, are more effective than those with imbalanced values. To test the research question, a study of 24 Croatian companies was conducted. The level of balanced values was measured with the *Mission-based model of organizational values*, distinguishing between four basic value categories—business values, relational values, development values, and contribution values. In addition to researching the impact of balanced organizational values on the overall level of organizational effectiveness, the impact of that balance was also investigated for the five different perspectives of organizational effectiveness based on the *Balanced Scorecard* approach. The findings indicate that organizations with balanced organizational values are, in general, more effective than organizations with imbalanced values. This paper therefore contributes to a better understanding of the role of organizational values in modern business and particularly to an understanding of the importance and role of balanced organizational values.

**Keywords:** Organizational values, balanced values, organizational effectiveness

## 1. Introduction

In modern business conditions, some novel organizational and management paradigms are increasingly being expressed. One of these is the concept of organizational values, which today presents an

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important field that people research and address in every serious organization. However, although the concept of organizational values appears to be rather straightforward, it seems that values-based organizations are not sufficiently represented in business practices.

The most important issue in considering the concept of organizational values is related to their role in business. The question is as follows: are organizations that are radically committed to a business based on the concept of values more successful than organizations that do not pay attention to the importance of organizational values? For a long time, both scholars and business practices have indicated that organizations with recognizable value systems perform better and are, in general, more successful than organizations whose business is not based on values (e.g., England, 1967; Cohn, 1969; Peters, Waterman, 1982; Woodcock, Francis, 1989; Dahlgard et al., 1998; Devero, 2003; Fitzgerald, Desjardins, 2004; Järvensivu, 2007; Jaakson, 2009; Johnson, 2009; Amah, Ahiauzu, 2014).

In recent studies, an especially interesting question concerns the composition of organizational values, and in that context, the term balanced values appear. Organizations with balanced values, in essence, strive to meet the interests of many different stakeholders, i.e., to achieve a certain value equilibrium that will be the basis for making business decisions. Contemporary organizations, irrespective of their size, activities, location, and even whether they are profit or non-profit, must take into consideration that they are facing a lot of interests of many stakeholders. A win-win is the only acceptable outcome in the era of social responsible business, and therefore balancing organizational values becomes a necessity. This study investigates the impact of balanced organizational values on organizational effectiveness, which may be viewed as a comprehensive objective factor of business success.

The theoretical elaboration of the impact of balanced organizational values on organizational effectiveness starts with the conceptualization of organizational effectiveness as a measure of business success and is followed by a brief overview of the *Balanced Scorecard* (BSC) as a reference model for measuring organizational effectiveness and determining organizational values as a predictor of overall business success. Finally, the results of the study

investigating the impact of balanced organizational values on organizational effectiveness are presented, clarifying the question of whether organizations with balanced values achieve a higher level of organizational effectiveness than organizations with imbalanced values.

## 2. From Managing Values to Greater Organizational Effectiveness

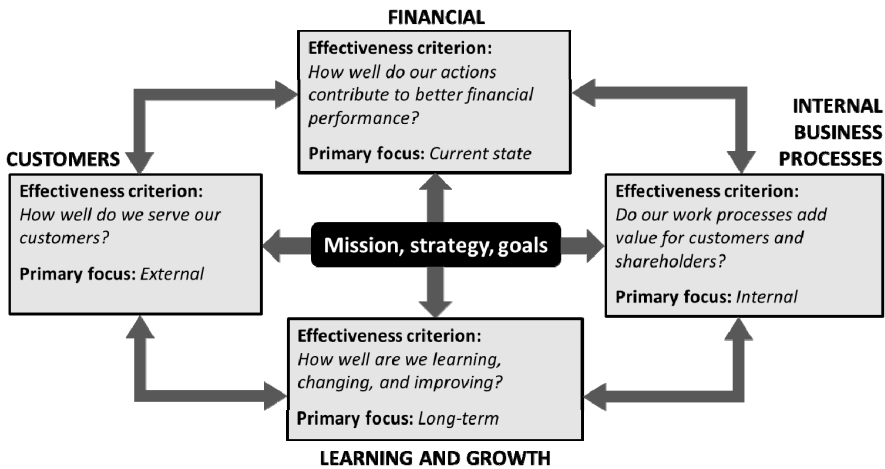
### 2.1 *Organizational Effectiveness as a Measure of Business Success*

The ultimate goal of any organization is to achieve success, although it can be understood in different ways. In this paper, the focus is on organizational effectiveness understood as the degree to which an organization is closer to realizing its mission, i.e., to achieving its goals, thus reflecting the harmonization of the organization with its environment (Lusthaus et al., 1999; Bahtijarević-Šiber, Sikavica, 2001). The generally accepted interpretation is that organizational effectiveness depends primarily on activities centered around three classes of factors: people, structure, and technology. People factors are attitudes, leadership and communication skills, as well as all other characteristics of the human resources within the organization; structural factors refer to organizational control, policies and procedures; and technological factors include all types of equipment and processes that help employees in the performance of their jobs (Certo, Certo, 2012).

The most widely used model for measuring organizational effectiveness is BSC, developed by Kaplan and Norton (1992, 1996). The BSC model, shown in Figure 1, contains not only traditional financial performance measures focused on the past but also indicators that initiate future actions in the organization (Kaplan, Norton, 1996; Wade, Recardo, 2001). The BSC was initially established to cover four key perspectives—finance, customers, internal business processes, and learning and growth. However, some authors (e.g., Parmenter, 2010) recommend that these four perspectives be enhanced with a strategic perspective to connect all other perspectives. Given the broad range of included perspectives, this model provides a realistic and complete assessment of organizational effectiveness.



**Figure 1 Main perspectives of the Balanced Scorecard**

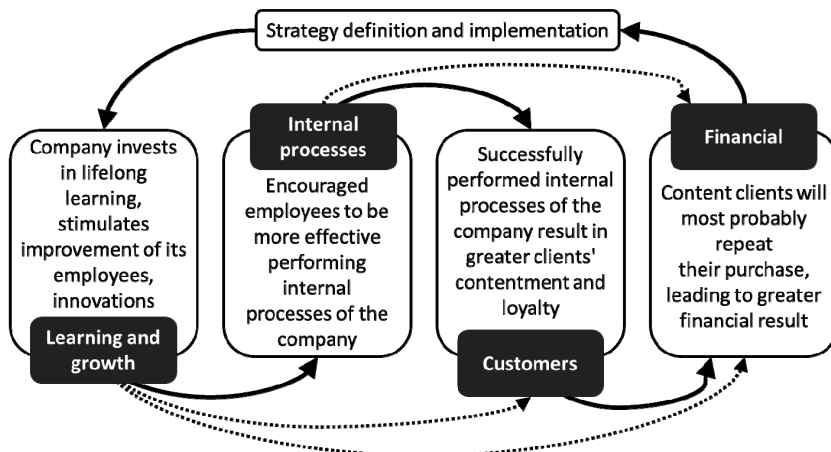


Source: Adapted from Kaplan and Norton (1996); Daft (2010)

Analyzing the concept of BSC, Čizmić and Crnkić (2010: 19) showed an even better connection between key perspectives of the BSC, as shown in Figure 2. According to them, BSC is designed as a

series of causal relations, both within and between perspectives, which results in the achievement of financial objectives.

**Figure 2 Cause-effect interactions between perspectives of the Balanced Scorecard**



Source: Čizmić and Crnkić (2010: 19)

Although the construction of BSC should be specific for each particular organization (depending on the specific organizational goals), it is possible to determine the usual (universal) indicators of ef-

fectiveness based on various published lists of generic indicators of organizational effectiveness, as indicated in Table 1.

**Table 1 Selected generic indicators of organizational effectiveness distributed according to the perspectives of the BSC**

Perspective	Generic indicators
<b>Financial</b>	income growth rate, net profit margin, business efficiency, return on investment, credit rating
<b>Customers</b>	market share, customer satisfaction, customer retention, new customer acquisition, customer relationship
<b>Internal business processes</b>	quality of products/services, new product introductions, level of capacity use, work productivity, response time
<b>Learning and growth</b>	employee satisfaction, employee productivity, information systems capabilities, continual improvement of processes, education and training of employees
<b>Strategic</b>	precise business objectives, mission achievement, business transparency, environmental protection, concern for the community

Source: Author's own research

## 2.2 *Balanced Organizational Values as a Factor of Business Success*

People always act in accordance with some value system, regardless of whether they are aware of it or not. The importance of organizational values is also reflected in business practice through their impact on organizational behavior and performance. Van den Steen (2010: 1718) states that they "lead to more delegation, less monitoring, higher utility (or satisfaction), higher execution effort (or motivation), less information collection, less experimentation, faster coordination, less influence activities, and less biased communication". Dolan and Altman (2012: 21) indicate that in the past, values were considered very "soft" for managing effectively, while today they have been accepted "as the core of an organization's identity and a central tenet of its strategy".

Stavru (2013) performed a detailed analysis of papers that examine the concept of organizational values and proposed a definition of organizational values that consolidates almost 50 definitions extracted from the review process. According to him, organizational values are "long-lasting constructs, which have emerged from the collective beliefs, experience and vision of a group or all members of the organization about what the organization should hold of intrinsic worth, and which have (explicitly or implicitly) certain weight in the process of decision making and the evaluation of individuals and organizations in terms of their modes, actions and end states" (Stavru, 2013: 31). According to Fassel (2002), commitment to shared organizational values is an important factor, if not the most important

one, in determining organizational effectiveness. Her research indicates that organizational values are "central to efficient functioning of organizations at all levels. In every instance, values are good for business. Consequently, values should be essential to any strategic plan and have a central place in every management meeting and organizational initiative" (Fassel 2002: 37).

At this point, the following question arises: does it matter what the shared organizational values are? More specifically—can it be assumed that organizations with balanced values achieve a higher level of organizational effectiveness than organizations with imbalanced values? In considering this question, inductive reasoning can be used by first considering the question of balance in an individual's life. As has already been emphasized, a balanced social and work life is crucial for the personal success of an individual. Building on this, Dressler (2004) states that every person needs a balanced social and work life. "If employees have a misbalanced personal life due to a heavy workload, and if they are not able to maintain social relationships, lifestyles, or personal interests, then work must compensate for all the unfulfilled necessities of life. In the short term, the company can profit from these people; they appear to be fully committed and strong performers. In the long term, the once-strong commitment can turn completely around, especially when compensation and career goals have not been realized" (Dressler, 2004: 12). Based on this, it can be assumed that balanced organizational values are a predictor of higher business success, i.e., that they ensure higher organizational effectiveness. However,

er, although some important views of the concept of balance have already been explored, there has not been sufficient courage to fully apply the concept to organizational values (Malbašić, Brčić, 2014).

Considering the positive impact of organizational values on organizational effectiveness, a further interest in researching this topic is understandable. "Organizations need values pertaining to essentially different categories if they want to accomplish several, in some cases even contradictory goals of their business" (Malbašić et al., 2015). For the purpose of understanding balanced values, in this paper the *Mission-based model of organizational values* (Malbašić et al., 2015) is used, which is not ignoring key value theories, but on the other hand is appropriate for the usage in contemporary business practice. According to that model, all organizational values could be classified into one of the main four characteristic groups of values, and that is in line with the proposal of Cardona and Rey (2008):

- a) Business values—refer to the organization's business and profit-making activity.
- b) Relational values—promote quality in interpersonal relations.
- c) Development values—aimed at differentiating and continuously improving the company.
- d) Contribution values—aimed at doing more for the stakeholders than strictly required by the business relationship.

Finally, it is necessary to point out that values determine culture, ethics, and norms. There are some authors who think that it is not possible to consider balanced organizational values without discussing their ethical dimension. It could even be said that any organization that promotes balanced values necessarily needs to act ethically, regardless of whether ethics is emphasized as its core value. Thyssen (2009: 228) has a similar view stating that ethics, among other things, necessarily means "balancing of values". This is one of the reasons why ethical values, regardless of whether they are formally called so, are today considered among the most important in business (Daft, 2010: 389). Thereby, it should not be ignored, as pointed out by Florea et al. (2013: 395), that "actual organizational ethical values are a composite of the individual values of managers and employees", and that they are reflect-

ed not only in an organization's code of conduct, but even more in everyday business activities.

Considering all the above, the main hypothesis of this study is as follows:

***Organizations with balanced values achieve a higher level of organizational effectiveness than organizations with imbalanced values.***

Additionally, the relationship between balanced organizational values and each of the five key perspectives of organizational effectiveness can be considered. Accordingly, five additional subhypotheses are established in this study as follows:

- 1<sup>st</sup> subhypothesis: Organizations with balanced values achieve a higher level of *financial* perspective of organizational effectiveness than organizations with imbalanced values.
- 2<sup>nd</sup> subhypothesis: Organizations with balanced values achieve a higher level of *customers* perspective of organizational effectiveness than organizations with imbalanced values.
- 3<sup>rd</sup> subhypothesis: Organizations with balanced values achieve a higher level of *internal business processes* perspective of organizational effectiveness than organizations with imbalanced values.
- 4<sup>th</sup> subhypothesis: Organizations with balanced values achieve a higher level of *learning and growth* perspective of organizational effectiveness than organizations with imbalanced values.
- 5<sup>th</sup> subhypothesis: Organizations with balanced values achieve a higher level of *strategic* perspective of organizational effectiveness than organizations with imbalanced values.

### 3. Research Sample

The purpose of the empirical study presented in this paper is to provide better insight into the relationship between balanced organizational values and organizational effectiveness. In this research, 24 privately owned companies participated and ensured that employees completed the questionnaire. Some more information on the companies included in the research, which form the research sample, are given in Table 2.

**Table 2 Selected characteristics of the companies included in the sample**

ID	Industry	Total number of employees	Filled questionnaires	
			in total	correct
1.	Manufacture of metal products	688	31	28
2.	Manufacture of food products	266	38	33
3.	Manufacture of wood products	610	27	27
4.	Wholesale and retail	589	32	28
5.	Manufacture of metal products	248	37	34
6.	Manufacture of footwear	703	30	29
7.	Manufacture of food products	209	39	33
8.	Manufacture of food products	340	46	42
9.	Manufacture of electrical equipment	960	41	39
10.	Insurance company	950	30	28
11.	Wholesale of pharmaceutical goods	357	37	32
12.	Design, consulting and research company	620	44	42
13.	Manufacture of glass and glass products	607	45	40
14.	Manufacture of apparel	270	34	32
15.	Publishing activities	330	50	47
16.	Manufacture of machinery and equipment	360	39	38
17.	Telecommunications	1100	41	40
18.	Manufacture of beverages	475	35	35
19.	Television programming and broadcasting	360	30	27
20.	Warehousing and support activities for transportation	216	30	30
21.	Insurance company	703	44	44
22.	Wholesale of pharmaceutical goods	272	32	31
23.	Building and construction	323	29	26
24.	Wholesale and retail	750	33	28
	<b>Σ</b>	<b>12,306</b>	<b>874</b>	<b>813</b>

Source: Author's own research

As shown in Table 2, in the 24 companies included in the research, a total of 12,306 workers were employed. The questionnaire was completed by a total of 874 respondents (7.10%), and out of that number, a total of 813 respondents (93.0%) completed the

questionnaire properly—among these respondents, 59.7% were female and 40.3% were male. Some descriptive/demographic statistics for the sample, according to the respondents' sex, are presented in Table 3.

Table 3 Descriptive/demographic characteristics of the sample according to sex

Variables	Categories	Sex			
		Females		Males	
		N	%	N	%
Age	29 years or less	73	15.1	71	21.7
	30 to 44 years	244	50.3	146	44.7
	45 years and above	168	34.6	110	33.6
	$\Sigma$	485	100.0	327	100.0
Total length of service	Under 10 years	153	31.6	129	39.4
	Between 11 and 20 years	164	33.8	97	29.7
	Between 21 and 30 years	104	21.4	54	16.5
	31 years and over	64	13.2	47	14.4
	$\Sigma$	485	100.0	327	100.0
Length of service in the current company	Under 10 years	259	53.4	189	57.8
	Between 11 and 20 years	125	25.8	85	26.0
	Between 21 and 30 years	64	13.2	28	8.5
	31 years and over	37	7.6	25	7.7
	$\Sigma$	485	100.0	327	100.0
Position in the organization	Operative workers	110	22.7	101	30.9
	Professional/administrative workers	268	55.2	134	41.0
	Lower/middle/top management	107	22.1	92	28.1
	$\Sigma$	485	100.0	327	100.0

Source: Author's own research

#### 4. Research Methodology

Two major research variables are explored in this study—the degree of values imbalance, and the overall level of organizational effectiveness. Given the particularities of balanced organizational values research, which have been outlined above in this paper, an instrument for measuring organizational values is developed for the specific needs of this research. This instrument collects attitudes and opinions of the respondents about the actual values of the organization in which they are employed, according to the *Mission-based model of organizational values* (Malbašić et al., 2015). The instrument is composed of a series of statements grouped into four categories/scales, according to the classification of organizational values that is the base for the mentioned values model. Content validity of this instrument is confirmed by conducting a system-

atic literature analysis, but also through the use of items from some of the best known instruments for measuring organizational values. The reliability of the measuring instrument was determined by identifying the internal consistency of each scale (i.e., category of values), and *Cronbach's alpha coefficient* was used for this purpose. *Cronbach's alpha coefficient* for the overall scale is very high - 0.925 - suggesting excellent internal consistency reliability for the overall scale. In addition, based on the results from the main research on a sample of 813 respondents, it showed that for all four scales *Cronbach's alpha coefficients* were greater than 0.7, indicating acceptable or even very good internal reliability consistency of scales, as shown in Table 4. The final version of the instrument for measuring organizational values, based on the *Mission-based model of organizational values*, is given in the Appendix.

**Table 4 Cronbach's alpha coefficients for the scales of organizational values**

Category of values	Cronbach's alpha coefficient
Business values	0.778
Relational values	0.926
Development values	0.855
Contribution values	0.767

Source: Author's own research

To identify the values of the researched companies, each of the researched companies' employees completed a questionnaire, thus estimating the importance and relevance of 28 specific organizational values for the company in which they were employed. These values were chosen in such a way that all main value categories, i.e., business values, relational values, development values, and contribution values, were evenly distributed according to the *Mission-based model of organizational values* (Malbašić et al., 2015). Respondents were asked to specify the degree to which each value is important and characteristic for the company in which they are employed, using a 5-point Likert-type scale. Response categories, representing organizational values, were assigned the following numerical values: 1 = *completely unimportant*, 2 = *unimportant*, 3 = *neither important nor unimportant*, 4 = *important*, and 5 = *very important*.

To test the main hypothesis, along with the corresponding subhypotheses proposed in this paper, the method for determining values imbalance presented by Malbašić et al. (2015) was used. In short, the degree of values imbalance is calculated in the following two steps: (1) differences between the score of each category of values and overall average score of all value categories should be calculated, and then (2) the sum of the absolute values of such calculated differences needs to be divided with the

overall average score of all value categories. "The resulting score represents the degree of imbalance; the higher that score is, the greater is the degree of imbalance of values in the observed organization. If all the value categories of an organization match exactly then the degree of imbalance is zero—the lowest theoretical score for degree of imbalance." (Malbašić et al., 2015).

Finally, to assess the level of organizational effectiveness, a simplified method for the overall measurement of organizational effectiveness based on the main perspectives of the BSC was used (Malbašić, Marimon, 2019). In brief, indicators of organizational effectiveness were collected using several sources—interviews of top management, surveys of employees, and an analysis of publicly available financial reports. To provide a level of effectiveness as objectively as possible, for almost all indicators, two data sources were used. In all these cases, an average score from the two data sources was taken as the final score for a particular effectiveness indicator, thus reducing the influence of subjective assessments of respondents on the overall score.

## 5. Research Findings

Two main variables investigated in this study were the degree of values imbalance and the overall level of organizational effectiveness. Given that the data for determining organizational effectiveness were obtained from several sources—surveys of employees, interviews of top management, and an analysis of financial reports of the organization—presenting all these data would be beyond the scope of this paper. However, the overall results, i.e., scores of the five perspectives of organizational effectiveness, are presented in Table 5. As it can be seen, these five perspectives have an overall average score in the range between 3.276 (*financial* perspective) and 3.842 (*strategic* perspective).

**Table 5 Overall average scores (means) of the five perspectives of organizational effectiveness for the research sample**

Perspectives of organizational effectiveness	Overall average score	Standard deviation
Financial	3.276	0.886
Customers	3.819	0.491
Internal business processes	3.623	0.327
Learning and growth	3.699	0.434
Strategic	3.842	0.389
<i>Overall level of organizational effectiveness</i>	<b>3.652</b>	

Source: Author's own research

The main research hypothesis tests whether organizations with balanced values are more effective than organizations with imbalanced values. In addition, five corresponding subhypotheses test the

relationship between balanced organizational values and five key perspectives of organizational effectiveness. These results are concisely presented in Table 6.

**Table 6** Correlations between the degree of values imbalance and different perspectives on organizational effectiveness

Hypothesis tested	Statistics obtained for testing hypothesis	Values imbalance
<b>Main hypothesis:</b> Overall level of organizational effectiveness	Spearman's Correlation	-0.546**
	Sig. (2-tailed)	0.006
	N	24
<b>1<sup>st</sup> subhypothesis:</b> Financial perspective of organizational effectiveness	Spearman's Correlation	-0.531**
	Sig. (2-tailed)	0.008
	N	24
<b>2<sup>nd</sup> subhypothesis:</b> Customers perspective of organizational effectiveness	Spearman's Correlation	-0.392
	Sig. (2-tailed)	0.058
	N	24
<b>3<sup>rd</sup> subhypothesis:</b> Internal business processes perspective of organizational effectiveness	Pearson's Correlation	-0.253
	Sig. (2-tailed)	0.233
	N	24
<b>4<sup>th</sup> subhypothesis:</b> Learning and growth perspective of organizational effectiveness	Pearson's Correlation	-0.414*
	Sig. (2-tailed)	0.044
	N	24
<b>5<sup>th</sup> subhypothesis:</b> Strategic perspective of organizational effectiveness	Spearman's Correlation	-0.475*
	Sig. (2-tailed)	0.019
	N	24

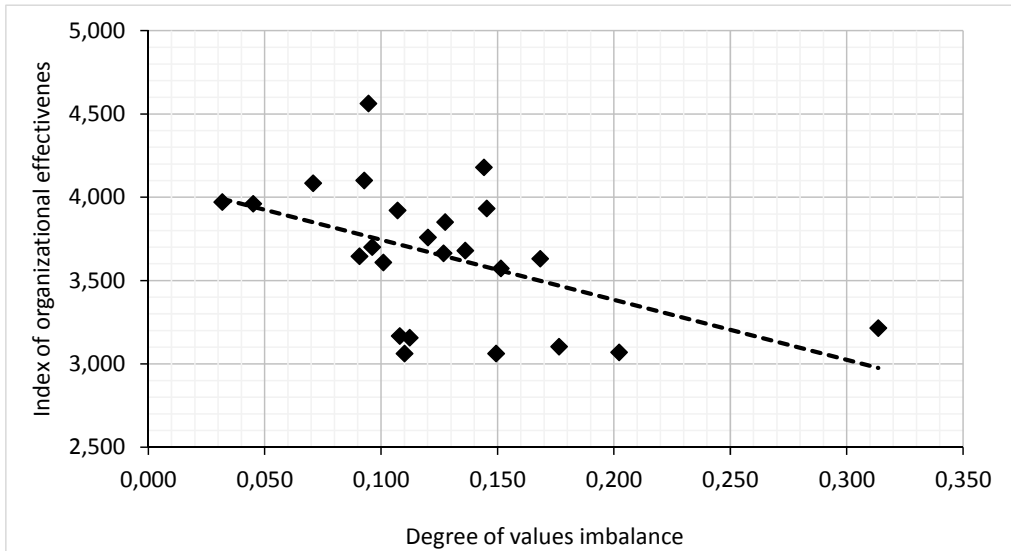
Correlations are significant at the \*\*0.01 level (2-tailed) or at the \*0.05 level (2-tailed).

Source: Author's own research

According to the main hypothesis of this study, organizations with balanced values achieve a higher level of organizational effectiveness than organizations with imbalanced values. The relationship between the degree of organizational values imbalance and overall organizational effectiveness was investigated using the Spearman's rank order correlation coefficient based on the results of the

preliminary data analysis. There was a strong, negative correlation between the two variables,  $\rho = -0.546$ ,  $n = 24$ ,  $p = 0.006$ , with high levels of the degree of organizational values imbalance associated with lower levels of overall organizational effectiveness, thus supporting the main research hypothesis. This relationship is further indicated in Figure 3.

Figure 3 Scatterplot showing relationships between the degree of values imbalance and overall organizational effectiveness



Source: Author's own research

In addition to researching the relationship between balanced organizational values and the overall level of organizational effectiveness, the relationship between values balance and the five different perspectives of organizational effectiveness based on the BSC approach was also investigated. Furthermore, the relationships between the degree of organizational values imbalance and different perspectives of organizational effectiveness were investigated using Spearman's or Pearson's correlation coefficients based on the results of the preliminary data analyses.

As seen from Table 6, organizations with balanced values achieve a higher level of *financial* perspective of organizational effectiveness than organizations with imbalanced values (there is a strong and negative correlation between the two variables, with high levels of degree of organizational values imbalance associated with lower levels of *financial* perspective of organizational effectiveness). Additionally, research findings also confirmed that organizations with balanced values achieve higher levels of *learning and growth* as well as *strategic* perspectives of organizational effectiveness than organizations with imbalanced values. On the other hand, the research findings did not confirm a di-

rect relationship between balanced organizational values and the *customers'* perspective or between balanced organizational values and the *internal business processes* perspective of organizational effectiveness; the degree of values imbalance was not significantly related to those two perspectives of the BSC.

Finally, one additional question was set up in this research: "Is there a relationship between the overall average score (mean) of organizational values and the level of organizational effectiveness?" That relationship was investigated using the Spearman's rank order correlation coefficient. The results showed that there is a strong, positive correlation between the two variables,  $r=0.587$ ,  $n=24$ ,  $p<0.05$ , with high levels of overall average score (mean) of the degree of organizational values associated with higher levels of organizational effectiveness.

## 6. Conclusions

The results presented in this paper indicate that organizations with balanced organizational values are, in general, more effective than organizations with imbalanced values. Moreover, this correlation was found not only for the overall level of organi-



zational effectiveness but also for most of the perspectives of organizational effectiveness based on the BSC approach. In this context, it was found that a higher level of organizational values balance directly affects the *financial, learning and growth* and *strategic* perspectives of organizational effectiveness. On the other hand, such a correlation was not found for two of the perspectives of organizational effectiveness—the *customers'* and *internal business processes* perspectives. However, with regard to the *customers'* perspective, it should be noted that although this subhypothesis was rejected, it was almost confirmed (since  $p=0.058$ , while  $0.05$  is the limiting sig. value for a result to be considered statistically significant). Likewise, the fact that there was no direct correlation between the level of organizational values balance and the *internal business processes* perspective of the BSC does not mean that there is no impact of balanced organizational values on that BSC perspective. It should therefore be useful to present and test more complex models of influence of balanced organizational values on specific BSC perspectives, also taking into consideration some other moderating variables.

One limitation of this research related to the BSC model needs to be mentioned. Namely, one of the ideas behind the BSC model is to continually monitor the effectiveness of an observed organization. This allows a comparison of the measured values. Based on that comparison, it can be determined if the taken actions have resulted in an expected result. However, given that the topic of this research is not improvement in organizational effectiveness, organizational effectiveness indicators are not mea-

sured continuously but only at one time. To test the hypotheses of this study, information about the level of organizational effectiveness at the time when the research was carried out was considered sufficient. Therefore, in this study, the BSC was used in an adjusted form to suit the purposes of this research.

Awareness of the importance of balanced organizational values, which can be seen through their very specific (positive) impact on business, necessarily leads to the question: what actions does an organization need to take to make its values more balanced? Within this paper, balanced organizational values and their importance for an organization are presented. However, approaches for managing organizational values in terms of their balance still need to be examined in further studies.

In conclusion, it is useful to recall the thoughts of a famous management guru, Peter F. Drucker, who already more than a half century ago pointed to the problem of achieving effectiveness, stating that in business practice, there are not many effective organizations. This is because the business results are too mediocre, the efforts are too fragmented, and too much attention is paid to the past. Additionally, decision making and actions are avoided, and all this indicates that these organizations have yet to acquire the habit of effectiveness (Drucker, 1966). Maybe a focus on organizational values, especially balanced values, is one of the answers as to how to achieve efficiency. This paper is an attempt to promote the concept of balanced organizational values as a tool that can be used in modern business practice to increase overall business success.

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**Appendix: Instrument for measuring organizational values**

INSTRUCTIONS: Please evaluate each of these 28 specific organizational values specifying the degree to which each value is important and characteristic for the company in which you are employed. Please do so by rounding only one of the proposed rates (from 1 – Completely unimportant, to 5 – Very important) for each value.						
1.	<b>Teamwork</b> – Promoting and encouraging the spirit of unity, togetherness, and co-operation	1	2	3	4	5
2.	<b>Creativity</b> – Developing new ideas and applying innovative approaches	1	2	3	4	5
3.	<b>Cost consciousness</b> – Responsible and careful use of the company’s assets	1	2	3	4	5
4.	<b>Environmental protection</b> – Care for clean and healthy environment	1	2	3	4	5
5.	<b>Mutual respect</b> – Promoting relationships of mutual respect and appreciation	1	2	3	4	5
6.	<b>Innovation</b> – Promoting and encouraging new, better, and changing solutions and ways of doing things	1	2	3	4	5
7.	<b>Loyalty</b> – Unswerving allegiance to the organization and its rules, ideals and defining principles	1	2	3	4	5
8.	<b>Corporate citizenship</b> – Commitment to the communities in which we live and work	1	2	3	4	5
9.	<b>Respect for people</b> – Respect for the values and uniqueness of each individual	1	2	3	4	5
10.	<b>Courage</b> – We have the courage and readiness to act on our convictions	1	2	3	4	5
11.	<b>Diligence</b> – A positive attitude towards work and engagement in business activities	1	2	3	4	5
12.	<b>Social responsibility</b> – Supporting a variety of efforts to improve development of society	1	2	3	4	5
13.	<b>Trust</b> – Mutual trust is the basis of good interpersonal relationships in a company	1	2	3	4	5
14.	<b>Learning</b> – Passion for learning and sharing ideas	1	2	3	4	5
15.	<b>Commitment</b> – Emotional commitment to the organization and believing in organizational values	1	2	3	4	5
16.	<b>Integrity</b> – Uncompromising adherence to moral values	1	2	3	4	5
17.	<b>Good interpersonal relationships</b> – Harmonious and pleasant relations between employees and management	1	2	3	4	5
18.	<b>Entrepreneurship</b> – Constantly seeking for new opportunities and ways to improve results and succeed	1	2	3	4	5
19.	<b>Tolerance</b> – Promoting tolerant interpersonal relationships	1	2	3	4	5
20.	<b>Status</b> – Concern for the general reputation of the company	1	2	3	4	5
21.	<b>Serviceability</b> – Every client is served in a friendly, competent and courteous manner	1	2	3	4	5
22.	<b>Initiative</b> – Initiative and agility in identifying and exploiting business opportunities	1	2	3	4	5
23.	<b>Results achievement</b> – Focus on outcomes or final positive effect of effort	1	2	3	4	5
24.	<b>Sustainability</b> – Meeting today’s needs of our organization without compromising tomorrow’s development	1	2	3	4	5
25.	<b>Continuous improvement</b> – Striving for continuous improvements in everything we do	1	2	3	4	5
26.	<b>Professionalism</b> – Performing activities in accordance with the rules and standards of the profession	1	2	3	4	5
27.	<b>Customer satisfaction</b> – Customer delight and satisfaction drive our action	1	2	3	4	5
28.	<b>Working environment</b> – Promoting positive and optimistic work environment	1	2	3	4	5

NOTES FOR RESEARCHERS: specific organizational values categorized in specific category of values:

- **Business values:** Cost consciousness, Loyalty, Diligence, Commitment, Status, Results achievement, Professionalism.
- **Relational values:** Teamwork, Mutual respect, Respect for people, Trust, Good interpersonal relationships, Tolerance, Working environment.
- **Development values:** Creativity, Innovation, Courage, Learning, Entrepreneurship, Initiative, Continuous improvement.
- **Contribution values:** Environmental protection, Corporate citizenship, Social responsibility, Integrity, Serviceability, Sustainability, Customer satisfaction.

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Ivan Malbašić

## POVEZANOST URAVNOTEŽENIH ORGANIZACIJSKIH VRIJEDNOSTI I ORGANIZACIJSKE UČINKOVITOSTI: DOKAZI IZ POSLOVNE PRAKSE

### SAŽETAK

Organizacijske vrijednosti dio su osnovne ideologije svake organizacije te je stoga upravljanje organizacijskim vrijednostima jedan od preduvjeta za postizanje poslovnoga uspjeha. Međutim, postavlja se pitanje na koji način upravljati organizacijskim vrijednostima kako bi se povećao ukupni poslovni uspjeh. Glavno istraživačko pitanje postavljeno u ovom radu stoga propitkuje jesu li organizacije s uravnoteženim vrijednostima, tj. one s jednakom zastupljenošću vrijednosti iz različitih kategorija sa zajedničkim usmjerenjem učinkovitije od onih s neuravnoteženim vrijednostima. Za testiranje istraživačkoga pitanja provedeno je istraživanje na uzorku od 24 hrvatskih poduzeća. Razina uravnoteženosti vrijednosti mjerena je pomoću *Modela organizacijskih vrijednosti temeljenog na misiji*, prema kojem razlikujemo četiri osnovne kategorije vrijednosti – poslovne vrijednosti, relacijske vrijednosti, razvojne vrijednosti i doprinosne vrijednosti. Osim istraživanja povezanosti uravnoteženih organizacijskih vrijednosti i ukupne razine organizacijske učinkovitosti, istraživana je i povezanost vrijednosne uravnoteženosti s pet različitih perspektiva organizacijske učinkovitosti temeljenih na pristupu *Uravnotežene tablice rezultata*. Rezultati pokazuju da su organizacije s uravnoteženim organizacijskim vrijednostima općenito učinkovitije od organizacija s neuravnoteženim vrijednostima. Stoga ovaj rad doprinosi boljem razumijevanju uloge organizacijskih vrijednosti u suvremenom poslovanju, a posebno razumijevanju važnosti i uloge uravnoteženih organizacijskih vrijednosti.

**Ključne riječi:** organizacijske vrijednosti, uravnotežene vrijednosti, organizacijska učinkovitost



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# HOW ECONOMIC UNCERTAINTY AFFECTS FOREIGN DIRECT INVESTMENT INFLOWS: EVIDENCE FROM CENTRAL AND EASTERN EUROPEAN COUNTRIES

## ABSTRACT

This paper investigates the impact of the Economic Uncertainty (proxied by World Uncertainty Index of Ahir et al., 2018) on the foreign direct investments (FDI) inflows for 10 countries in Central and Eastern Europe for the period of 1990-2018. Panel data analysis shows that economic uncertainty in a country does not have any statistically significant effect on FDI inflows. However, European uncertainty and global uncertainty dampen the FDI inflows to CEE countries (Central and Eastern European Countries). This shows that the regional (European) and global uncertainty rather than domestic uncertainty affect the FDI inflows. This finding provides important implications for policy makers.

**Keywords:** Economic uncertainty, foreign direct investment, CEE countries, panel data

## 1. Introduction

The world economy has been liberalized due to the increase in free trade and international investments since 1980s. Foreign direct investment (FDI) is one of the most important aspects of the globalization, playing a crucial role in the global economy. The growth of FDI in this period has been remarkable. It has significantly increased in the last decades all over the world. According to UNCTAD (2019)<sup>1</sup>, the global FDI flows are 1.3 trillion USD. The FDI flows are important for host countries and therefore the countries compete with each other and develop strategies to attract more FDI. This is especially vital for developing economies where FDI serves as a powerful engine for economic growth and development.

This importance brought it to the top of the economic agenda in many countries of the developing world. In other words, for the host countries, there are many determinants of FDI inflows that might vary from country to country. For example, political stability, the legal system, the level of bureaucracy, macroeconomic indicators, tax policies, the investment climate, and the costs of doing business can be mentioned as the main determinants of FDI. Nevertheless, the impact of the economic and political uncertainty on the FDI has been a popular issue in recent years. The uncertainty in the economic and political environment has an important effect on FDI inflows.

As in other developing countries, FDI inflows are also crucial for the Central and Eastern European Countries (CEEC & EU11) in their developing process. Most of CEEC countries are the former communist countries and their economies are in the transition and developing process after the East Bloc collapsed in 1989. FDI has been an important driver of the transition and developing process of the CEEC. FDI has been driving economic growth in many countries of CEE. Therefore, attracting more FDI has become a key component of national strategies for these countries. Largely sourced from the more advanced European countries, FDI has played a strong role in the export-led growth of these countries that are new members of the EU (Jirasavetakul, Rahman, 2018). In other words, Kornecki (2011) mentions that FDI has played a vital role during the development and modernization process in CEEC. Likewise, Alter and Wehrlic (1993) report that FDI has been an important catalyst for the economic transformation in transition economies and therefore attracting more FDI has been on the top of the public policy agenda in these countries for many years. In this regard, there is competition among CEEC for attracting more FDI. They have attracted large FDI inflows since 1990. Although FDI inflows have declined after the 2008 global economic and financial crisis, the region is still an attractive place for FDI inflows compared to other emerging-market regions.

On the other hand, the coronavirus (COVID-19) outbreak, which began in Wuhan, China, has expanded to almost everywhere and has become a global pandemic. As Karabulut et al. (2020) mention, the number of infections and deaths has increased rapidly. As has been observed, this global pandemic has serious effects on the global economy and output, world trade, capital flows, investments, and other economic and social indicators. In this regard, it can be said that FDI inflows to CEE countries will also be affected by this global pandemic. Additionally, as this research shows, there is a close relation between uncertainty and FDI. It is clear that this global pandemic has increased global economic uncertainty.

This paper investigates the impact of the Economic Uncertainty (proxied by World Uncertainty Index of Ahir et al., 2018) on FDI inflows for 10 countries in Central and Eastern Europe. To our knowledge, this is the first paper using the new index of Ahir et al. (2018) as a determinant of FDI inflows in the

Central and Eastern Europe countries where FDI inflows play an important role for economies. By using data on 10 Central and Eastern Europe countries from the period 1990 to 2018, we show that economic uncertainty in a country does not have any statistically significant effect on FDI inflows. However, European uncertainty and global uncertainty dampen the FDI inflows to CEE countries. This shows that the regional and global uncertainty rather than domestic uncertainty affect the FDI inflows. We have investigated the impact of domestic, regional (Europe) and global uncertainties. We believe that the findings can provide insights to policy makers.

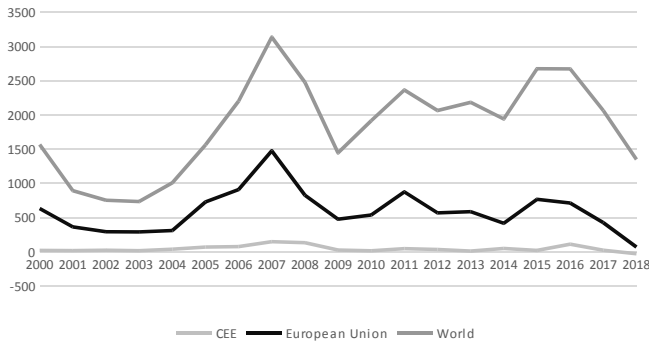
This paper is organized as follows. Section 2 displays the trends in FDI inflows to Central and Eastern European countries. In Section 3, we review the existing literature on uncertainty and the relationships between uncertainty and FDI. Section 4 presents the data and methodology. Section 5 presents the empirical results. Finally, the last section brings our conclusions.

## 2. FDI Inflows to CEE Countries

In this section, we present the FDI inflows data to Central and Eastern European Countries and compare them with the global trends. Figure 2 presents the FDI inflows (in billion USD) to CEE, EU and the world. The impact of global financial crisis in 2008-2009 can be clearly observed from Figure 1. In 2008 and 2009, global FDI flows decreased significantly and CEE countries were also affected by the crisis. Although FDI inflows tend to recover after the crisis, the post-crisis trends have not been achieved yet. From 2000 to 2008, the share of CEE countries in global FDI inflows rose from 1.48% to 5.51%. In the transition periods, CEEC managed to attract rising FDI inflows. However, after the crisis, the share of CEE countries in global FDI inflows tends to be relatively lower and stable. FDI inflows to both groups has decreased over the last years. For example, the value of FDI inflows to CEEC rose from 23.1 billion USD to 150.36 billion USD from 2000 to 2007, however, this value is only around 27.02 billion USD in 2017. Once we check the behavior of FDI inflows for Central and Eastern European Countries, EU, and the world, we see that the flows to CEE countries are highly correlated with the global trends.



**Figure 1 Foreign direct investment, net inflows (in billion USD) in Central and Eastern European Countries, European Union, and the World**



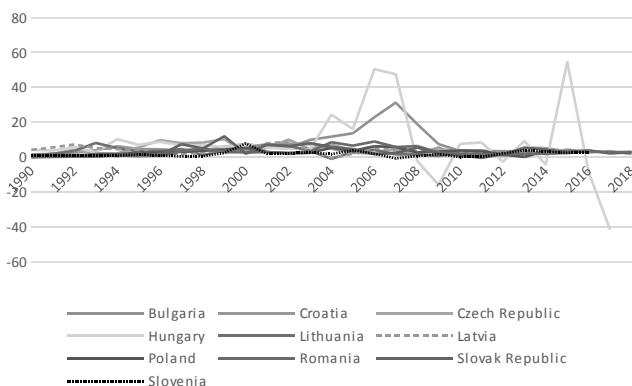
Note: CEEC includes Bulgaria, Croatia, Czech Republic, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia, and Slovenia.  
Source: World Bank

Figure 2 presents the FDI inflows to GDP (Gross Domestic Product) ratio for each country in Central and Eastern Europe. It can be seen that most of the countries display similar trends, however, especially Hungary and Bulgaria to a certain degree have very volatile FDI / GDP ratios. Countries experienced increasing FDI / GDP ratios from 1990 to 2007 (till the global financial crisis). The transition period and the increasing openness to global economic conditions created an attractive environment for global businesses. After the crisis, the performance of those countries tends to be relatively stable.

In Figure 3, we compare the FDI to GDP ratio of Central and Eastern Europe Countries with the

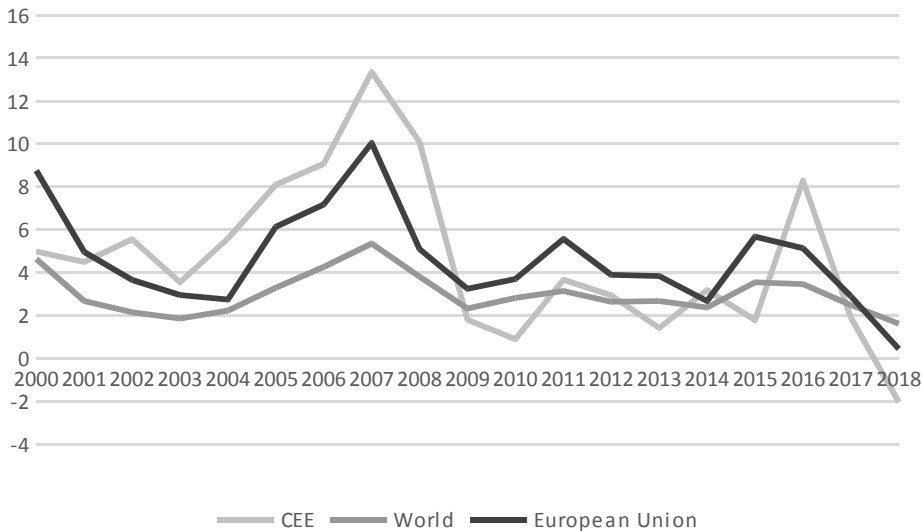
European Union and the World. We see that CEE countries managed to attract higher FDI inflows until the global financial crisis. This implies that CEE countries performed better than the EU and the world in terms of attracting FDI inflows. However, after the global financial crisis, CEE countries' performance decreased compared to the EU and the world. This might reflect a need for a new strategy development for CEE countries to attract more FDI inflows. The positive impact of transition and openness periods seems to have decreased with the global financial crisis. Therefore, the region and its members should develop new and alternative plans to create a more attractive economic environment.

**Figure 2 Foreign direct investment, net inflows (% of GDP) in Central and Eastern European Countries**



Source: World Bank

Figure 3 Foreign direct investment, net inflows (% of GDP) in the CEE, European Union, and World



Source: World Bank

In other respects, besides the global FDI flows, the FDI flows and entrepreneurship movement among the CEE countries are also very important for their development. There are close historical, cultural, and economic relations among most of the countries in the region and this creates FDI flows and entrepreneurship movement among them. The total amount of FDI flows among these countries may not be high relatively, however, it can be argued that it is nonetheless very important. For instance, Turkey has a large entrepreneurship movement and FDI flows to some countries in the region.

### 3. Literature review

Since the 1980s, a large number of studies have been focused on determinants of FDI flows. The existing literature focuses on these determinants and also argues the relationships between FDI flows and a range of factors. For instance, Bui et al. (2018) focus on the relationship between gender inequality and FDI in developing countries. Several studies analyze the relations between uncertainty (economic and political) and other economic variables, such as FDI. In other words, uncertainty has been a hot topic, especially in the last decade. Researchers have long discussed the impact of uncertainty on

FDI flows. In this context, Gupta et al. (2019) examine the impact of geopolitical risks on trade flows, among 164 developing and developed countries in the period 1985 to 2013. Furthermore, Goel and Saunoris (2017) consider the influences of political uncertainty on corruption. Emerging literature has explored the relationships between uncertainty and the product and financial markets. For instance, Le and Nguyen (2018) analyze the behaviors in the market for safe vegetables under information asymmetry. Vardar et al. (2018) examine the shock transmission and spillover of volatility in commodity and stock markets for the advanced and emerging markets.

The uncertainty-investment relationship has been examined intensively for several decades now. In this regard, the uncertainty-FDI inflows relationship has also been a popular topic in recent decades. In an earlier study, Firoozi (1997) develops a stochastic model of FDI by multinational companies under cost uncertainty and documents fundamental parameters of the FDI-uncertainty association. Chen et al. (2019) examine the impact of policy uncertainty on FDI by using data on 126 countries from 1996 to 2015. Additionally, Vadla-

mannati (2012) studies the impact of political risk on FDI by using U.S. firms' investments in 101 developing countries in 1997-2007 period. In their paper, Solomon and Ruiz (2012) focus on African, Asian, and Latin American economies to explore how political risk and macroeconomic uncertainty affect FDI patterns.

Abdel-Latif (2019) examines the FDI response to political shocks, i.e. whether FDI inflows are affected by the political or institutional quality by using a panel VAR methodology for 146 countries over the period 1989 to 2015. Julio and Yook (2016) examine the impact of political uncertainty (measured by election timing) on cross-border capital flows. In the literature, there are also some country-specific studies. For instance, Noria and Fernández (2018) investigate the impact of uncertainty on FDI inflows into manufacturing subsectors in Mexico. Furthermore, Ramasamy (2003) focuses on the FDI and uncertainty relationship for the Malaysian case and explains the behavior of potential foreign investors during periods of uncertainty. In recent years, an increasing number of studies have examined the relationship between EPU (Economic Policy Uncertainty) and FDI. For instance, Hsieh et al. (2019) analyze the impact of EPU on FDI by using the recently developed Economic Policy Uncertainty Index. They explore the impact of economic policy uncertainty on the outward FDI of the USA. It is found that there is a strong relationship between the EPU Index and outward FDI flows. This effect is documented not only for the U.S. EPU Index but also EPU Indices of the host countries. Canh et al. (2019) investigate the effects of the domestic economic policy uncertainty and the world uncertainty (WUI) on FDI inflows. The sample of the study includes data from 21 economies over the period 2003 to 2013. The authors document that besides the host country's EPU, the global uncertainty and uncertainty in other countries also determine the FDI inflows.

#### 4. Data and methodology

The macro-economic data are obtained from "World Development Indicators" (WDI) of the World Bank. The data period of the study is from 1990 to 2018 and includes 10 European Union member states from Central and Eastern Europe,

namely Bulgaria, Croatia, Czech Republic, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia, and Slovenia. Due to some missing yearly data for some countries, we end up with an unbalanced panel data.

Based on Kumari and Sharma (2017), Aziz and Mishra (2016), and Jimborean and Kelber (2017), we estimate the following model:

$$FDI_{i,t} = B_0 + B_1 WUI_{i,t} + B_2 C_{i,t-1} + \varepsilon_{i,t} \quad (1)$$

where  $FDI_{i,t}$  is the FDI net inflows (in natural logarithm), and  $C_{i,t}$  represents the determinants in the country  $i$  at time  $t$ , human capital (HUMCAP-proxied by the gross tertiary education enrollment rate), inflation rate (INFLATION-proxied by a change in annual consumer prices), market size (GDP current US\$ in natural logarithm), GDP growth rate (GD-PGR), and trade openness (TRADEOP-proxied by the ratio of total trade to GDP).  $WUI_{i,t}$  is World Economic Uncertainty Index for country  $i$  and time  $t$ , developed by Ahir et al. (2018)<sup>2</sup>. WUI is the main variable of interest in the study. Mainly, this is a kind of extension of the Economic Policy Uncertainty Index of Baker et al. (2016). Ahir et al. (2018) calculate the frequencies of uncertainty and its variants in the Economist Intelligence Unit (EIU) country reports. The country-level data in WUI is comparable across the countries because the values are scaled by the number of words in each report (Ahir et al., 2018). In this regard, this index can be considered as superior to Economic Policy Uncertainty. The EPU Index is developed for each country by using different sources. However, the World Uncertainty Index (WUI) is constructed for 143 individual countries on a quarterly basis from 1996 onwards. We use several alternative measures: 1) Economic Uncertainty of Each Country (EU), 2) Global Economic Uncertainty (GEU), 3) Economic Uncertainty in Europe (EEU). All uncertainty measures are used in natural logarithm and the related data set is available at <https://worlduncertaintyindex.com/>. This enables us to examine the effects of uncertainty on the country, global, and European level. The descriptive statistics of the data is available in Table 1. The mean value of FDI is 20.99 with a standard deviation of 1.8. We run Im-Pesaran-Shin (IPS) unit root test (Im et al., 2003) to examine if the data is stationary or not. According to the IPS results, it is documented that country-level variables are stationary<sup>3</sup>.

**Table 1** Descriptive statistics

Variable	Mean	Std. Dev.	Min	Max
FDI	20.99	1.80	9.21	25.04
GDP	24.67	1.02	22.48	27.10
GDPGR	0.03	0.04	-0.15	0.12
TRADEOP	1.05	0.34	0.39	1.90
INFLATION	0.38	1.44	-0.02	15.00
HUMCAP	0.48	0.21	0.08	0.89
EEU	6.22	0.38	5.40	7.05
EU	-2.07	0.70	-4.61	-0.48
GEU	-1.91	0.28	-2.30	-1.27

Note: FDI=FDI net inflows (in natural logarithm); HUMCAP=Gross tertiary education enrollment rate; INFLATION=Inflation rate; GDP=Gross Domestic Product (in natural logarithm); GDPGR=annual GDP growth rate; TRADEOP=Ratio of total trade to GDP; EU=Economic Uncertainty; EEU=European Economic Uncertainty; GEU=Global Economic Uncertainty

Source: Author

We extend Model 1 by introducing the lag of FDI ( $FDI_{i,t-1}$ ) in the model as follows (Jimborean, Kelber, 2017):

$$FDI_{i,t} = B_0 + B_1 FDI_{i,t-1} + B_2 WUI_{i,t} + B_3 C_{i,t-1} + \varepsilon_{i,t} \quad (2)$$

In Model 3, we consider the lagged effect of uncertainty ( $WUI_{i,t-1}$ ) as investment decisions can be made in advance; therefore, their impact can be observed with one year lag:

$$FDI_{i,t} = B_0 + B_1 FDI_{i,t-1} + B_2 WUI_{i,t-1} + B_3 C_{i,t-1} + \varepsilon_{i,t} \quad (3)$$

The data set of the study constitutes a panel as it has both time and cross-sectional dimensions. Fixed effects and random effects techniques are the most commonly used static models for analyzing panel data. If there is no correlation between the disturbance term and the explanatory variables, random and fixed effects models provide consistent estimations. However, if the correlation exists, the random-effects model is inconsistent and the fixed-effects model should be preferred over the random-effects model (Tahir, Khan, 2014). We employ the Hausman test (1978) to decide between fixed and the random-effects model.

## 5. Findings

The estimations of Model 1 are presented in Table 2. The columns represent the estimations by using uncertainty in the country, Europe and the world, respectively. The Hausman test results imply that the random-effects method is more appropriate, therefore we present the RE estimations. It is shown that the economic uncertainty of a country does not affect the FDI inflows to that country, as the coefficient of “EU” is statistically insignificant. For 10 countries in Central and Eastern Europe, economic uncertainty is not a determinant of FDI attractiveness. However, the coefficient of European Economic Uncertainty is -0.626 (statistically significant at 1%), implying that a rise in uncertainty in Europe will lower FDI inflows in CEE countries. This is in line with the expectations, as EU countries constitute an important part of FDI inflows to CEE countries (Jirasavetakul, Rahman, 2018). Global uncertainty has also a negative and statistically significant effect on FDI flows. Our findings contradict with Canh et al. (2019), who find that economic policy uncertainty in the country has a negative effect on FDI while an increase in uncertainty at the global level could increase FDI inflows into the country. This can be

explained by the data set of Canh et al. (2019), which includes mostly advanced economies. In terms of other control variables, we find that only the market size, proxied by GDP, and the annual growth rate of GDP positively affect FDI inflows. Economic conditions matter in attracting more FDI inflows for those countries. This finding is in line with Jimborean and Kelber (2017) and Kumari and Sharma (2017). We also control for the impact of 2008 global financial crisis by introducing CRISIS dummy variable which takes the value of 1 for the years of 2008 and 2009 and zero otherwise. We

find the financial crisis has a negative effect and our main finding holds in all estimations.

In terms of diagnostic tests, we first test for heteroscedasticity and find evidence of its presence. Therefore, we use the robust standard errors to deal with heteroscedasticity. We implement Ramsey's RESET (Regression Equation Specification Error Test) by using square of the fitted values. Misspecification is rejected implying that there is no trait of model misspecification. We perform Wooldridge test for serial correlation in panel data models in Stata and no serial correlation is detected.

**Table 2** Regression results

Variables	Model 1 (RE)	Model 1 (RE)	Model 1 (RE)	Model 1 (RE)
GDPGR	10.569*** (1.57)	11.606*** (1.574)	10.737*** (1.44)	11.212*** (1.46)
GDP	1.236*** (0.16)	1.126*** (0.17)	1.345*** (0.15)	1.298*** (0.15)
INFLATION	-0.021 (0.08)	-0.0213 (0.08)	-0.000 (0.07)	-0.022 (0.08)
HUMCAP	0.031 (0.60)	-0.12 (0.615)	-0.139 (0.56)	-0.092 (0.56)
TRADEOPP	0.138 (0.34)	0.354 (0.35)	0.625 (0.35)	0.634 (0.38)
EU	-0.065 (0.08)	-0.0607 (0.08)		
EEU			-0.636*** (0.17)	
GEU				-0.685* (0.31)
Crisis		0.699*** (0.23)		
Constant	-9.901** (3.60)	-7.414* (3.89)	-8.953* (3.49)	-13.069*** (3.70)
R <sup>2</sup>	0.64	0.65	0.66	0.65
N	227	227	227	227

Note: Robust standard errors are given in parenthesis under each coefficient. \*\*\*, \*\*, and \* represent 1, 5 and 10% significance level, respectively. The dependent variable is FDI inflows.

Source: Author

In Table 3, we present the estimations for Model 2 and Model 3. The Hausman test results imply that the fixed-effects method is more appropriate, therefore we present the FE estimations for Model 2 and 3. It is shown that there is a positive and statistically significant coefficient for lagged FDI. This implies that countries that attracted a higher level of FDI in a period are more likely to attract FDI in the next period. Coefficients of GDP and GDP growth rate

are positive and statistically significant in line with Model 1. The negative effect of economic uncertainty in Europe and the world still negatively affects FDI inflows while domestic uncertainty does not have a statistically significant effect. In terms of the lagged effect of uncertainty measures, we find that only lag of uncertainty in Europe is statistically significant at 10% and has a negative effect on FDI inflows.

**Table 3 Regression results for additional analysis**

Variables	Model 2 (FE)	Model 2 (FE)	Model 2 (FE)	Model 3 (FE)	Model 3 (FE)	Model 3 (FE)
L.FDI	0.348*** (0.05)	0.276*** (0.05)	0.292*** (0.05)	0.329*** (0.05)	0.268*** (0.05)	0.293*** (0.05)
GDPGR	5.768*** (1.47)	7.623*** (1.38)	7.590** (1.39)	7.905*** (1.41)	7.990*** (1.39)	7.982*** (1.40)
GDP	0.836*** (0.21)	1.024*** (0.21)	0.967*** (0.21)	0.896*** (0.21)	1.036*** (0.22)	0.950*** (0.21)
INFLATION	0.062 (0.07)	0.061 (0.07)	0.038 (0.07)	0.077 (0.07)	0.063 (0.07)	0.056 (0.07)
HUMCAP	-0.365 (0.63)	-0.486 (0.62)	-0.384 (0.62)	-0.852 (0.66)	-0.611 (0.63)	-0.487 (0.63)
TRADEOPP	0.072 (0.35)	0.465 (0.36)	0.654 (0.39)	0.266 (0.36)	0.366 (0.36)	0.390 (0.39)
EU	-0.052 (0.07)					
EEU		-0.464** (0.16)				
GEU			-0.742** (0.28)			
L.EU				0.031 (0.08)		
L.EEU					-0.344* (0.17)	
L.GEU						-0.371 (0.30)
Constant	-6.934 (4.47)	-7.460 (4.45)	-10.897* (4.68)	-7.849 (4.65)	-8.192 (4.52)	-9.523 (4.88)
R <sup>2</sup>	0.75	0.74	0.74	0.63	0.63	0.62
N	2190	225	225	219	225	225

Note: Standard errors are given in parenthesis under each coefficient. \*\*\*, \*\*, and \* represent 1, 5 and 10% significance level, respectively. The dependent variable is FDI inflows.

Source: Author

## 6. Conclusion

In recent decades, numerous studies have examined the factors affecting FDI inflows. Uncertainty has become increasingly important in the global economy and the world has been suffering from a rising uncertainty, especially in the last decades. We analyze the impact of the Economic Uncertainty (proxied by World Uncertainty Index of Ahir et al., 2018) on the FDI inflows for 10 countries in Central and Eastern Europe. More specifically, we use domestic, European, and global economic uncertainty in the analysis. Our empirical findings show that economic uncertainty in a country does not have any statistically significant effect on FDI inflows. On the contrary, European uncertainty and global uncertainty dampen the FDI inflows to CEE countries. This shows that the regional and global uncertainty rather than domestic uncertainty affect the FDI inflows. To our knowledge, this is the first study using the new index of Ahir et al. (2018) as

a determinant of FDI inflows in CEE countries. In terms of control variables, we only find that GDP and GDP growth rate positively affect FDI inflows.

Policy makers can benefit from the findings. Rising regional and global uncertainties will be an obstacle for attracting FDI to CEE countries. During such periods, those countries should develop strategies such as providing tax incentives or tax exemptions, and easing the procedures for doing business to attract more FDI. Those strategies can be considered as the necessary steps to attract FDI at all times, however, during uncertainty special emphasis should be given.

The finding of this paper cannot be generalized as it provides insights from CEE countries. This is a limitation of the paper. Future studies can extend the analysis by using quarterly data. Moreover, a comparison within Europe and other regions can be performed. Also, studies can compare economic uncertainty in the host and home countries.

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## ENDNOTES

- 1 UNCTAD (2019), "World Investment Report 2019", available at: [https://unctad.org/en/PublicationsLibrary/wir2019\\_en.pdf](https://unctad.org/en/PublicationsLibrary/wir2019_en.pdf).
- 2 See Ahir et al. (2018) and <https://worlduncertaintyindex.com/> for details about the World Uncertainty Index.
- 3 The results are available upon request.

*Selim Suleyman*

## KAKO EKONOMSKA NESIGURNOST UTJEČE NA PRILJEV IZRAVNIH STRANIH ULAGANJA: PRIMJER ZEMALJA SREDIŠNJE I ISTOČNE EUROPE

### SAŽETAK

U ovom se radu istražuje utjecaj ekonomske nesigurnosti (približna procjena prema svjetskom indeksu nesigurnosti kako je definiran u Ahir i sur. 2018) na priljev izravnih stranih ulaganja (FDI) za 10 zemalja središnje i istočne Europe u razdoblju 1990. - 2018. Analiza panel podataka pokazuje da ekonomska nesigurnost zemlje nema statistički značajan utjecaj na priljev izravnih stranih ulaganja. Međutim, europska i globalna nesigurnost koče priljev izravnih stranih ulaganja u zemlje središnje i istočne Europe. Priljev izravnih stranih ulaganja znatno više ovisi o regionalnoj (europskoj) i globalnoj nesigurnosti, nego li o nesigurnosti određene zemlje. Taj zaključak ima važne posljedice za tvorce politika i donositelje strateških odluka.

**Ključne riječi:** ekonomska nesigurnost, izravna strana ulaganja, zemlje središnje i istočne Europe, panel podatci

## Appendix 1 Literature Review

Author and Date	Method	Modelling Parameters
Bui, Hoai & Vo (2018)	Generalized Method of Moments(GMM)	1992-2011 period, FDI, infrastructure, market size, inflation, openness, unemployment, institution and social rights and gaps (tertiary, health and secondary gaps, political and social rights)
Goel and Saunoris (2017)	Cross Sectional OLS	1986-2005 period, 100 countries, corruption, political assassinations, fragility, political legitimacy, colony, GDP, general government, final consumption and bureaucracy quality
Vardar et al. (2018)	VAR-BEKK GARCH Model	05 July, 2005 - 14 October, 2016 period,10 countries, stock market indices
Chen et al. (2019)	Panel Fixed Effects	1996-2015 period, 126 countries, electoral results, FDI, GDP, GDP growth, trade openness, real interest rates and population
Vadlamannati (2012)	Multilevel Mixed-effects Linear IV Approach	1997-2007 period, 101 developing countries, FDI, GDP per capita, GDP per capita growth rate, population, infrastructure, domestic credit/GDP, exchange rate, oil exports share, labor growth, FDI policy reforms index
Solomon and Ruiz (2012)	Fixed Effects Panel Data, GMM	1985-2004 period, 28 developing countries, FDI, exchange rate, GDP, labor force, natural resource, inflation, openness, literacy rate, GARCH, investment profile and dummy variables
Abdel-Latif (2019)	VAR, DID, Propensity Score Matching	1989-2005 period, 146 countries, FDI, GDP annual growth rate, policy index, political shocks
Noria and Fernandez (2018)	GMM, ARCH, GARCH	2007-2015 period, manufacturing subsectors, FDI, uncertainty index, cash flow, interest rate, exchange rate, export/GDP, industrial production, Federal Fund rate

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# AN EXPLORATORY VIEW OF THE FOUNDATIONS OF FOREIGN TRADE ENTREPRENEURSHIP\*

## ABSTRACT

This study aims to reveal the foreign trade entrepreneurship and entrepreneurial tendency in the context of economic nationalism which expresses a protective approach in terms of foreign trade policy which is one of the main components of the policy of economics. The study was designed as a single case study from qualitative research designs. The sample of the study consists of foreign trade entrepreneurs who have been in foreign trade for at least five years and who are in the industry as a producer/manufacturer. In the study, the semi-structured interview technique was used for the data gathering process. A purposeful sampling technique was used in order to determine enterprises and individuals to conduct interviews. The findings of the data analysis showed that the foreign trade policy adopted by the individual is the basis of the commercial activity. The result of the study was examined in two dimensions as “foreign trade entrepreneurship” and “international entrepreneurship”. It shows that the companies are predominantly foreign trade entrepreneurs in the context of evaluating the income obtained from abroad, benefiting from incentives, future targets, opportunities and threats of foreign commercial activities. For this reason, the finding obtained reveals that the firms subject to the study are mainly economically nationalist. Considering this, it is suggested to support foreign trade entrepreneurs, who act mainly with an economically nationalist motivation, to find new market opportunities abroad, to increase the government incentives for bringing the foreign currency revenues to the country and to facilitate the access of companies to them.

**Keywords:** Foreign trade entrepreneurship, international entrepreneurship, economic nationalism, commercial nationalism, foreign trade, international trade

## 1. Introduction

Entrepreneurship might occur at transnational and extra-national levels in the international dimension. Here what matters is whether international trade activity is carried out between or beyond national borders. The basic argument that gives meaning to this question is that transnational and

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extra-national levels differ regarding the ways of producing and utilizing added value. This difference is closely related to the meaning attributed to foreign trade gains and macro-scale limits of the expected gains. This approach brings the following question to minds; is added value production triggered by a motivation within national political and economic borders or a motivation globally exceeding these borders? In order to answer this question, one needs to know and evaluate macro targets of national economies in the context of economic policy and micro expectations of companies while embarking on international trade.

One of the basic assumptions of the study is that national economies conflict economic and commercial levels. As mentioned above, several countries follow aggressive commercial processes, while others pursue protective commercial processes at the global economic level. From a historical perspective, it is apparent that developed economies have long been using their production power and engaged in policies that shape the consumption and production patterns of nations which they claim to be their “commercial partners” and impose their economic targets on these nations. Developed nations can practice this policy through international technology transfer, intellectual and industrial property rights, international funds flow and direct foreign investments. Justification of these aggressive policies is free trade. The attempt of developed countries to take over particularly developing economies by imposing free trade is an aggressive process defined as commercial nationalism. The perspective that as the Ritzer (2014) says, deals with the world as a single market in global terms is the view that dominates this process.

The opposing view is the policy of national economies to protect their economic independence and overcome the aggressive commercial understanding mentioned above. Developing nations might follow a protective policy to protect the domestic market against external interventions and get the maximum benefit from international commercial affairs in an attempt to sustain the industrialization process. This policy has many well-known means. Political means such as import substitution, foreign exchange administration, tariffs, subsidies, and damping are implemented in order to protect national economies. The goal of strengthening the national economy by increasing import revenues besides protecting the domestic market against external impact and supporting the national industry is an approach named “economic nationalism”.

As mentioned earlier, both aggressive commercial nationalist and protective economic nationalist tendencies need micro actors; in other words, companies that will adapt to policies arising from these tendencies and implement these policies. The reason is obvious. The total added value that nations can offer to the global market is produced by companies that they own. As mentioned earlier, added value production is an organizational issue, and the basic component of this organization is the “entrepreneur”. In other words, no matter countries follow commercial nationalist or economic nationalist policy, these tendencies might be implemented only through entrepreneurs. Therefore, it is possible to conclude that commercial nationalist and economic nationalist tendencies influence entrepreneurial activities that might emerge at the international level.

The internationalization of enterprise might occur at various dimensions after this stage. If the entrepreneur creates an added value as a result of entrepreneurship and production activities in various countries and uses this added value in order to expand activities outside his origin country or realize new direct foreign investments or portfolio investments in that country, such an entrepreneurial activity might be called international entrepreneurship. On the contrary, if the entrepreneur tends to carry out production, investment and activities only in his origin country and aims to transfer domestically created added value to foreign markets through foreign sales and use revenue of these sales in origin country as fixed capital or portfolio investments rather than overseas production activities, such entrepreneurship might be defined as foreign trade entrepreneurship.

International entrepreneurship has been defined by various authors from different points of view. In this context, definitions of international entrepreneurship have been determined by definitions of McDougall (1989) and Oviatt and McDougall (1994, 1997, 2000). A literature review of international entrepreneurship indicates that the first systematic approach to the issue was carried out by Oviatt and McDougall (1994: 49). Tayauova (2009) compiled the international entrepreneurship definitions in the literature and defined international entrepreneurship as “a process that a business pursues within the organization by displaying innovative, proactive and risk-taking behaviours while exploring and using opportunities beyond national borders for goals such as creating value, gaining profits or growing”.

Ersoy (2018) defines foreign trade entrepreneurship as “a process where domestic industrialists sell the added value they produce domestically and use the revenues to produce new added values within the country”.

It is apparent that meanings attributed to the revenues obtained with entrepreneurship activity might be dealt with in different ways in terms of internationalization of entrepreneurship, international entrepreneurship, and foreign trade entrepreneurship. Determinants of the internationalization level of trade must be discussed in order to identify the scale of these various levels. Commercial activities across and between national borders give rise to two different flows named as “*international trade*” and “*foreign trade*”. International trade involves every economic activity between nations, including direct foreign investments. On the other hand, foreign trade is limited to import and export activities between nations. From this point of view, it might be said that international entrepreneurship is a reflection of international trade while foreign trade entrepreneurship is the reflection of foreign trade.

The motivation of this study is to reveal possible conceptual differences between international entrepreneurship and foreign trade entrepreneurship. Therefore, its goal is to identify the different aspects of international entrepreneurship and foreign trade entrepreneurship in the context of entrepreneurs who carry out foreign trade activities.

## 2. Literature review

Foreign trade entrepreneurship is the outcome of protective foreign trade strategies expressed as economic nationalism and might be considered as a means of foreign trade policy in economic terms. To state it again, foreign trade entrepreneurship is a reflection of economic nationalist attitude to close foreign trade deficits. From this point, a literature review on *the concept of foreign trade entrepreneurship* reveals that relevant studies are quite limited. Ersoy's (2018) study “*Foreign Trade Entrepreneurship: Concept, Scope, and Theory*” is the pioneering and comprehensive study on the issue of foreign trade entrepreneurship.

Ersoy and Saygılı (2018a) studied the factors that influence foreign trade entrepreneurship by means of formal interviews with ten foreign trade entrepreneurs from the current sample of foreign trade entrepreneurs. The basic motivation of the study is

to identify the risk perception of foreign trade entrepreneurs and threats against foreign trade as well as factors that motivate them to foreign trade and foreign trade opportunities.

Ersoy and Saygılı (2018b), who considered it necessary to study the quality and outcomes of risk-taking behaviours of companies that make foreign trade and carry out entrepreneurship activities in international markets, wished to reveal obstacles and problems that foreign trade entrepreneurs encounter in the foreign market entry as current foreign trade entrepreneurs have become significant actors who influence political, economic and cultural features of the target market.

Ersoy and Saygılı (2018c) aimed in their study to define foreign trade entrepreneurship and reveal the meaning attributed to the concept of foreign trade entrepreneurship from international trade students who are considered as potential foreign trade entrepreneurs. Data were analyzed through a four-phase process where responses given to the questions on the definition of foreign trade entrepreneurship were examined. Definitions developed in the context of each theme and definition of foreign trade entrepreneurship that was obtained by studying these themes are presented below (Ersoy, Saygılı, 2018c: 429-430):

*“Foreign trade entrepreneurship is the transfer of goods and services to international markets according to the goals of foreign trade policy by benefitting from cultural differences between countries and using financial and logistic channels actively.”*

Results of the study that Ersoy and Saygılı (2018d) investigated the foreign trade entrepreneurial intentions of international trade students in the context of Planned Behavior Theory indicated that foreign trade entrepreneurial intention might be explained by Planned Behavior Theory.

## 3. Methodology

### 3.1 Study question and goal

This study aims to define foreign trade entrepreneurship and focus on revealing the aspects that differ from international entrepreneurship by dealing with foreign trade entrepreneurship based on a protective approach as a means of foreign trade policy, in other words on the basis of economic nationalism. Thus, it is possible to put the central question of the study as “*How the foreign trade entrepreneurship reflects*

*on the basis of economic nationalism as a protective policy that is foreign trade policy?"*

By dealing with foreign trade entrepreneurship in the context of protective macro-economic policy, it is aimed to fill a conceptual gap and contribute to empirical studies. As foreign trade entrepreneurship differs from international entrepreneurship in terms of ideological arguments, it is essential to make a distinction between these two concepts. In the context of our study, another goal is to reveal suggestions for problems experienced in international market entry and operations by companies that make foreign trade and are dealt with current foreign trade entrepreneurs. In this context, the primary motivation of this study is to reveal foreign trade enterprises and tendencies in the context of economic nationalism expressing a protective structure that might be assessed within foreign trade policy which is a macro-economic policy.

### 3.2 Research design: qualitative single case study

This study was planned based on the qualitative method in the context of its questions and goal. On the other hand, the sample case study was selected for the research design, which is one of the qualitative research patterns.

As this study was designed as a sample case study, which is one of the qualitative research designs, it required a research pattern that study topic and context are integrated (Yin, 2003).

In the framework of qualitative research in general and features of sample case studies and research focus in particular, this type of study, which deals with the reflections of foreign trade entrepreneurship on the basis of economic nationalism and how foreign trade enterprises and tendencies are shaped, was designed as a single case study which is one of the research patterns. As the study deals with the subject in terms of the individual's foreign trade policy (economic nationalism-commercial nationalism), scope of trade (foreign trade-international trade), and entrepreneurship (foreign trade entrepreneurship-international entrepreneurship), cases and phenomena were analyzed in an integrated way because of the contextual conditions of entrepreneurs and entrepreneurship operations which are the subject of the study. In this context, the interview technique was used as a study data resource.

### 3.3 Study sample

A purposeful sampling technique was used for determining the analysis unit of the study. Analysis unit comprises companies that have been making foreign trade for a minimum of 5 years and take place in the industry as producer/manufacturer. As the study has a single case pattern, it was carried out on a single case within the scope of the identified analysis unit.

As it might not always be possible to contact with companies to carry out sample case research (Coşkun et al., 2015), this study was exposed to limitations in terms of availability of every foreign trade company in the analysis unit. Therefore, the identification of the sample involved in the research was made with a convenience sampling method, which is one of the non-probable sampling methods.

Companies that share similar contextual backgrounds have been making foreign trade for a minimum of 5 years and take place in the industry as producer/manufacturer was involved in the analysis unit according to relevant criteria. Turkish Statistics Institute 2018 data indicates that Marmara is the region that produces the largest share of gross national product. Therefore, considering the proximity of Sakarya province to both international and national main transit roads, ports, and Turkey's significant free zones its production capacity, it is quite significant for foreign trade potential of the Marmara Region. Moreover, as this study deals with the permanency potential of companies that have been making foreign trade for a minimum of 5 years, companies in Sakarya that have been making foreign trade for a minimum of 5 years and take place in the industry as producer/manufacturer was involved in the study.

As business owners, partners or chairman of the executive board of foreign entrepreneur companies are likely to have better knowledge and awareness on the study subject. They were purposefully involved in the study.

In this context, features of study participants indicate that the industrial experience of participants ranged between 6 and 45 years, with an average of approximately 18 years of experience in the industry. Classification of the positions of interviewees indicates that the number of company owners is much higher than company partners and chairman of the board of executives. The number of companies in the sample group that operate in machinery

production is relatively higher than companies operating in other industries. The study sample also includes companies operating in furniture, construction materials, agricultural products, automotive, textile industries.

### 3.4 Indicators and themes that drive research design

In order to deal with qualitative research design in a particular context and carry out data analysis, a framework might be established from study questions, conceptual framework or dimensions in interviews and/or observations and themes under which these data will be arranged and presented might be determined according to this framework (Yıldırım, Şimşek, 2016: 240). Due to the limited number of studies on foreign trade entrepreneur-

ship, there is not a theoretical framework to determine themes that might drive such research on foreign trade entrepreneurship in the context of economic nationalism. In such cases, relevant literature/background, theoretical explanations, models might be taken as the basis for managing data collection and analysis processes of qualitative research.

In this context, the authors designed a framework from literature/background on how *economic nationalism forms the basis of foreign trade entrepreneurship and what role it plays as a result of reading on fields of international trade discipline where studies are carried out on "foreign trade entrepreneurship"*. Themes established according to the literature's emphasis have been presented in Table 1.

**Table 1** The relationship between interview questions and literature emphasis on themes that drive the research

Literature Emphasis/ Background	Themes	Interview Questions
The way of evaluating overseas commercial activity determines the scope of entrepreneurship.	Foreign Trade Entrepreneurship International Entrepreneurship	How do you utilize the revenue you gain from overseas commercial activities?
The goal of practising overseas commercial operation determines the scope of trade.	Foreign Trade International Trade	What do you aim while carrying out overseas commercial activity?
The level of benefitting from government incentives determines the scope of trade policy.	Economic Nationalism Commercial Nationalism	Do you benefit from government incentives provided for overseas commercial activities? *If you do, what are the incentives you benefit from? *If you do not, why?
Overseas investment and scale of the investment determine the scope of trade policy and entrepreneurship.	Economic Nationalism Commercial Nationalism Foreign Trade Entrepreneurship International Entrepreneurship	What does overseas investment mean to you? *What do you understand from overseas investment? *Could you tell us about your overseas investments, if any?
Perceived opportunities and threats determine the scope of trade policy and entrepreneurship.	Economic Nationalism Commercial Nationalism Foreign Trade Entrepreneurship International Entrepreneurship	What do you see as opportunities and threats in your overseas commercial operations?
The weight of the target market (domestic market-foreign market) determines the scope of entrepreneurship.	Foreign Trade Entrepreneurship International Entrepreneurship	Considering your commercial activity, is your target market predominantly domestic or foreign market? Tell us the reasons.
Commercial or general targets for the next five years, which indicates the company vision, determines the scope of trade policy and entrepreneurship.	Economic Nationalism Commercial Nationalism Foreign Trade Entrepreneurship International Entrepreneurship	What are the commercial and general targets of your company for the next five years?

Source: Prepared by the authors

The framework established with the help of literature emphasis/background helped data collection and analysis processes of the study. Themes are also crucial for the internal reliability of the research. For internal validity, themes must be compatible and consistent among themselves, between each other and with the studied phenomenon (Arslan, 2019: 65). Thus, the framework contributes significantly to the consistency and compatibility of the research.

### 3.5 Data sources and data collection process

As this research was carried out as an instrumental sample case study based on a single data source, the interview technique, one of the most significant data sources for sample case studies, was used (Yin, 2003). The primary motivation for selecting interview techniques for data collection of this research is to make direct inferences about foreign trade entrepreneurial experiences, feelings and thoughts of company owners, partners and chairman of boards of executives who constitute the analysis unit of the study.

Table 1 presents the relationship between the study background and emphasis on the study goal and interview questions. Interviews are semi-formal structured.

The research was carried out with 22 different foreign trade entrepreneurs in Sakarya province. Research data were collected on April 2019 through semi-structured interviews with 22 business owners, partner or chairman of the board of executives who were foreign trade entrepreneurs. As the interview data kept repeating, they did not continue after the 22<sup>nd</sup> interview. Therefore, 22 interviews were included in the study. Interviews done in the context of the research took about 25 to 50 minutes, audio and written records were taken.

### 3.6 Preparation of interview questions

Study questions were prepared with the help of a literature review, and expert opinion was taken to give the questions their final form. A 12-question interview form was designed at the end of the literature review and discussions with 3 foreign trade experts and 2 academicians from the field. Several questions were dropped to 7 in terms of their scope and comprehensibility at the end of the evaluations of academicians and foreign trade experts. In addition to 7 questions, the study on foreign trade entrepreneurs who make foreign trade and take place in the industry as producer/manufacturer also involved questions regarding age, educational status, experience and current position in industry and company to reveal demographic features.

### 3.7 Data decoding

After the completion of the interview process, each sample case was fully decoded in order to translate voice records into written texts. As the total interview duration of 22 sample cases covered more than 750 minutes of voice records, the authors received support from experts for the decoding of the records. Voice records were translated into written texts by transferring them from Microsoft Office programs to Word program. The decoding of all voice records was completed in April 2019. Moreover, notes taken for each interview were adapted and translated into a written version of the Word program.

### 3.8 Reliability of data

Different ways might be resorted to providing the internal consistency of qualitative studies. In this study, the following methods were used (Meriam, 2015: 203-210).

- Access to appropriate and sufficient number of participants for data collection process: Saturation of data and findings in terms of the number of interviewees according to the nature of the study goal.
- The stance of the researcher: Honesty, the trueness of the researcher, reflecting criticism.
- Expert review: Assessment, interpretation of research findings by expert opinion.

It is also stated that raising the internal validity of a study is related to the connection and consistency of themes and indicators of the study subject with the phenomena (Yin, 2003).

To raise internal validity of this research, participants were involved in the study until data and findings came to the saturation point; the researcher quoted directly from interviews to reveal findings as clearly and accurately possible and resorted to the views of 5 experts including 3 foreign trade experts and 2 academicians at the critical phases of the study.

### 3.9 Data analysis

Directive content analysis was used in data analysis of this research. As data of this study were analyzed deductively, themes and categories were determined in order to establish a specific framework before beginning the analysis and obtained data were subjected to analysis according to this



framework (Julien, 2008). After establishing the themes that direct the research, data are sorted out and unified, and dimensions are established in the context of these themes (Coşkun, 2014: 3). Data gathering and analysis of this study were directed by the framework that was established according to the background emphasis related to the reflections of foreign trade entrepreneurship in the context of economic nationalism. Therefore, data of this study were analyzed deductively from themes to excerpts.

In the data analysis stage, obtained data were first written down, and each interview was transformed into a written document. These documents were categorized according to the themes in Table 1 and indicators relevant to these themes. Indicators of foreign trade policy, the scope of commercial ac-

tivity and entrepreneurship have shown in Table 1 were accepted as separate themes. Literature/background emphasis on the reflections of foreign trade entrepreneurship based on economic nationalism, which directs this study, was also used as category structures in data analysis. In this context, themes and categories were associated using excerpts from data on each theme. Thus, it was assured that the literature/background emphasis in the conceptual framework section has empirical responses.

### 3.10 Interpretation of findings

Findings on data analysis, which was carried out as a directive content analysis, are presented in Table 2 separately for each theme regarding supportive statements on the basis of thematic determinants.

**Table 2** Distribution of thematic determinants according to supportive statements

<i>Thematic Determinants</i>	<i>Themes</i>	<i>Supportive Statements</i>
<i>Way of assessing overseas commercial activity</i>	Foreign Trade Entrepreneurship	*R1, R2, R3, R5, R6, R7, R9, R10, R11, R12, R13, R14, R15, R16, R18, R19, R21, R22
	International Entrepreneurship	R4
<i>The goal of carrying out overseas commercial activity</i>	Foreign Trade	R1, R2, R3, R5, R7, R8, R9, R10, R11, R12, R13, R14, R15, R16, R17
	International Trade	R9
<i>Level of benefitting from government incentives</i>	Economic Nationalism	R2, R3, R5, R6, R7, R8, R9, R13, R14, R15, R16, R18, R20, R21
	Commercial Nationalism	-
<i>Overseas investment and scale of investment</i>	Economic Nationalism	R5, R6, R17, R20
	Commercial Nationalism	R9
	Foreign Trade Entrepreneurship	R1, R2, R5, R6, R8, R13, R16, R18
	International Entrepreneurship	R7, R9
<i>Perceived risk and opportunity in overseas commercial activity</i>	Economic Nationalism	R10, R12, R13, R22
	Commercial Nationalism	R1, R6
	Foreign Trade Entrepreneurship	R1, R6, R7, R8, R10, R12, R14, R15, R16, R17, R19, R21
	International Entrepreneurship	R15
<i>Weight of the target market (domestic-foreign market) in commercial activities</i>	Foreign Trade Entrepreneurship	R1, R2, R3, R5, R6, R8, R9, R10, R13, R16, R17, R18, R19, R20, R22
	International Entrepreneurship	-
<i>Commercial or general targets for the next five years which indicate company vision</i>	Economic Nationalism	R5, R6, R8, R11, R12
	Commercial Nationalism	-
	Foreign Trade Entrepreneurship	R1, R2, R3, R5, R6, R7, R8, R9, R10, R12, R13, R15, R16, R17, R18, R19, R21, R22
	International Entrepreneurship	R9, R18

\*R: Respondent

Source: Prepared by the authors

### 3.10.1 Findings on utilization of revenues obtained from overseas commercial activities

When excerpts from data related to the ways that participants utilize the revenues, they gained from overseas trade are examined in terms of foreign trade entrepreneurship, it is understood that participants utilize these revenues again within their business. Foreign trade entrepreneurs also utilize overseas trade revenues to expand their business, purchase raw materials and increase corporate capacity by purchasing machinery and equipment. Having stated that providing employment matters for them as well, foreign trade entrepreneurs expand production fields and attach importance to quality and standards and focus on technology, innovation, and R&D activities.

### 3.10.2 Findings on the goal of overseas commercial activity

When findings on the overseas trade goal of participants are examined in terms of foreign trade, finding and developing markets come to the fore. In this context, it is essential in overseas trade activity to do market research, enter into and expand the market, increase the number of customers, fill the market gaps, expand product range and gain more revenue by achieving sales volume which cannot be achieved in the domestic market. On the other hand, the goals of participants in doing overseas trade activity involve raising recognition of both the company and Turkey as well as providing foreign currency inflow. Overseas trade goals also include participating in international fairs, establishing a sense of trust overseas utilizing innovation and growing by raising sales and achieving the turnover target. Besides the ultimate goal of earning money, findings include a desire to take a more significant share of the market by enhancing after-sales service quality and increasing the quantity of machinery and contribute to the national economy.

When findings related to the overseas trade goals of participants are examined in terms of international trade theme, international trade is encouraged by advantages such as location and opportunity to use existing resources and use cheaper resources.

### 3.10.3 Findings on benefitting from government incentives

Findings on economic nationalism theme in terms of benefitting from government incentives indicate that participants instead benefit from incentives to attend international trade fairs. Incentives for patent and equipment investment are other incentives

that participants benefit from. Incentives provided to participants also include Eximbank benefits, support of KOSGEB and logistics support provided by the government for overseas shipping.

No finding was found related to commercial nationalism in responses given in terms of benefitting from government incentives.

### 3.10.4 Findings on what overseas investment means

When findings on what overseas investment means to the participants are examined in terms of economic nationalism, contributing to the national economy comes to the fore. In this context, the existence of producers using local goods, desire to contribute to the national economy and its recognition as national income support the importance attached to the national economy.

When findings on what overseas investment means to the participants are examined in terms of commercial nationalism, it is seen that participants are likely to use an investment country's incentives to in facility construction in the relevant country.

When findings on what overseas investment means to the participants are examined in terms of foreign trade entrepreneurship, it is seen that overseas investment is essential for the participants in having knowledge flow and raising the number of markets. Some of the participants stated that they did export directly even though they selected a partner for marketing network and marketing activity. On the other hand, overseas investment and overseas target markets require participants to produce and export products with suitable quality and standards. For facilities and/or factories that are impossible to establish for overseas investment (water factories), the essential investment seems to be increasing brand recognition.

When findings on what overseas investment means to the participants are examined in terms of international entrepreneurship, overseas investment means doing production by using cheaper labour in the cheaper location and obtaining more added.

### 3.10.5 Findings on perceived opportunities and threats of overseas trade activities

When opportunities and threats of overseas trade activities perceived by participants are examined in terms of economic nationalism, participants emphasize that export companies must be supervised and subjected to specific standards. On the other hand, they also stated that there are participants who used government incentives to pursue different activities instead of attending trade fairs and learned nothing wherever they went.

When opportunities and threats of overseas trade activities perceived by participants are examined in terms of commercial nationalism, findings indicate that not being recognized overseas as a brand is seen as a threat.

When opportunities and threats of overseas trade activities perceived by participants are examined in terms of foreign trade entrepreneurship, threats perceived by participants include fluctuations in the economy and foreign currency rates, political and economic crisis, contract terms and failure to deliver products accurately. On the other hand, one of the most significant opportunities of working overseas is working with ready cash because more significant sales potential due to the market size and payment without keeping the money indicate a significant opportunity. Moreover, overseas activities are seen as less risky than domestic activities. This is because export is considered a more profitable way of exchange, and it enables finding customers faster by realizing market gaps. Logistics and cost advantage is also other opportunities for overseas trade activities. Other opportunities of overseas trade activities in terms of foreign trade entrepreneurship are government incentives, cash flow and perceived the excellent quality of Turkish goods.

When opportunities and threats of overseas trade activities perceived by participants are examined in terms of international entrepreneurship, it is seen that economic situation drives people to take place in overseas markets and make the overseas investment, which is seen as an opportunity of overseas trade activities in terms of international entrepreneurship.

### 3.10.6 Findings on the predominant target market in terms of commercial activities

When findings on whether participants predominantly aim domestic or foreign markets in terms of their commercial activities are examined in terms of foreign trade entrepreneurship, it is emphasized that foreign market is essential for participants due to easy transport, accessibility of customers and shipping system. Participants stated that the domestic market is essential for brandization and the foreign market is indispensable in terms of the company vision. Considering the customer intensity and market opportunities, taking place in particularly export-oriented foreign markets is essential for participants both for sustainability and because of the narrowing market structure of Turkey. Participants, who select foreign markets as the predominant activity field in order to compete, survive in the market, grow and enable sustainability, focus on overseas commercial activities to preserve

their current status and avoid domestic market conditions which are risky due to fluctuations in foreign currency rates. Therefore, participants continue their domestic activities while simultaneously trying to take place in overseas markets as well in terms of foreign trade entrepreneurship. Moreover, the statements of participants indicate that export is one of the leading commercial activities that keep a company standing. Embarking on foreign markets on condition that companies achieve a specific market size, several customers and capacity indicate that the domestic market is the critical and foreign market is the main goal for the participants. In other words, although participants see both markets risky, they try to find a place in the foreign market by improving their domestic market position.

No finding relevant to the international entrepreneurship theme was found among the responses given by participants to the questions on the predominant target market in terms of commercial activity.

### 3.10.7 Findings on the goals of company for the next 5 years

When findings on company targets for the next five years are examined in terms of foreign trade entrepreneurship, participants generally aim to make more sales overseas and increase sales volume, invest in machinery and equipment, expand product range and variety and increase production capacity. Plans for the next five years also include building facilities suitable for production structure, building factories in origin country that will increase production as well as having machinery that will reduce production costs and increase production capacity and raising the number of production fields. Targets within foreign trade entrepreneurship also include growth targets, a more active overseas structure, a desire to grow and carry out operations in more countries, better quality and standards and sustainability of export, product range, and abundant technology.

When findings on company targets for the next five years are examined in terms of *international entrepreneurship*, it is seen that participants emphasize primarily doing export and then direct foreign investment. Besides, realizing a production model in different countries is among the plans of participants.

Findings on company targets for the next five years are examined in terms of *economic nationalism* indicate that lack of support is seen as an export problem despite the desire of the company to grow. Even when there are offers from different countries or overseas, participants display a determined attitude to continue their production and activities in Turkey by preserving their current position, mar-

ket, and brands, emphasizing on an economic nationalistic structure.

No finding was found among responses given by participants to the questions on the company goals for the next five years in terms of international entrepreneurship.

#### 4. Conclusion

Considering the context of the research, it is understood that international entrepreneurship which is a reflection of international trade, is not conceptually recognized by participants of the study. The reason is that the Republic of Turkey follows import substitution gradually and then export-oriented strategic foreign trade policy. The majority of companies operating in our country are in SME status. According to the research finding, the participants use the export incentives provided by the government extensively and it reveals that SME-scale firms subject to the research have demands for government incentives. Therefore, the basic argument of this study that foreign trade is the antecedent of international trade is politically verified. SMEs will not end up with advantages from the international competition without being supported and protected by the government. It is known that new protective measures are taken under two categories. These categories are (1) the support policies of the government and (2) protective policies. In the context of our research, entrepreneurs who constitute the study sample want direct protective measures on imports rather than public incentives and support.

We might say that definitions examined in this study (foreign trade, international trade, foreign trade entrepreneurship, international entrepreneurship, economic nationalism, commercial nationalism) overlap with the findings of the study. When study results are analyzed in the context of foreign trade entrepreneurship definition, study findings confirm the assumption that foreign trade entrepreneurship is “*selling domestically produced added value overseas and utilizing monetary equivalent to produce new added value within the country of origin*”. When study results are analyzed in the context of international entrepreneurship definition, study results overlap with the assumption that international entrepreneurship is “*utilizing the monetary equivalent of the added value produced with investments in both domestic and foreign markets for profitable overseas markets*”. On the other hand, study findings confirm the assumption that “foreign trade entrepreneurs strongly expect to be supported and protected by the government”. In the context of international trade definition, study findings confirm the assumption that international entrepreneurs “see

differences between global markets as a significant opportunity rather than incentives or support of any country). In the context of economic and commercial nationalism, study findings also confirm the assumption that “economic nationalism is the motive underlying foreign trade entrepreneurship while commercial nationalism is the political motive that directs international entrepreneurship.

#### Limitations

It was not possible to do a comprehensive literature review on the concepts investigated in this research as the number of studies on foreign trade entrepreneurship is quite limited. However, it was concluded that basic assumptions of the study are confirmed by study findings.

It is not possible to evaluate fixed capital investment based on service industry in equal terms with industrial investment. Service export must be investigated apart from industrial export. Therefore, sample of this research involve producer/manufacturer companies and study results are evaluated only in this context.

#### Implications

Leading factor that motivates foreign trade entrepreneurs to overseas markets is that installment sales in domestic markets constitute a significant risk while pre-payment sales in foreign markets reduce such risks. Therefore, carrying out studies to investigate the factors that motivate and hinder foreign trade entrepreneurship might be useful.

This research involves producer/manufacturer companies. As service export is dealt apart from industrial export, it is important that future studies investigate international entrepreneurship and foreign trade entrepreneurship in various service sectors and in different contextual dimensions.

When the research findings are interpreted, it is seen that the participants are eager to explore new market opportunities especially in abroad. It is also revealed that the participants are willing to benefit from government incentives. Considered in these contexts, it is suggested to support foreign trade entrepreneurs, who act mainly with an economically nationalist motivation, to find new market opportunities abroad, to increase the government incentives for bringing the foreign currency revenues to the country and to facilitate the access of companies to them. Future studies on this subject may contribute to determining the scope of government incentives for foreign trade entrepreneurs. In addition, the effects of cultural differences on foreign trade entrepreneurship can be investigated with future studies.

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## **ISTRAŽIVAČKI PRIKAZ TEMELJA PODUZETNIŠTVA U VANJSKOJ TRGOVINI**

### **SAŽETAK**

U ovom se istraživanju ispituju poduzetništvo u vanjskoj trgovini i poduzetnički trendovi u kontekstu ekonomskog nacionalizma koji je izraz zaštitnog pristupa u vanjskotrgovinskoj politici, koja je jedna od glavnih elemenata ekonomske politike. Prikaz je zamišljen kao studija slučaja koja se temelji na kvalitativnom istraživanju. Uzorak se sastoji od poduzetnika aktivnih u vanjskoj trgovini najmanje pet godina i koji se bave proizvođačkom djelatnošću. Za prikupljanje podataka korištena je tehnika polustrukturiranog intervjua. Nadalje, poduzeća i pojedinci s kojima će se provesti intervju odabrani su metodom namjernog uzorka. Analiza podataka pokazuje da se komercijalna aktivnost temelji na vanjskotrgovinskoj politici koju je pojedinac odlučio provoditi. Rezultati istraživanja ispitani su u dvije dimenzije kao „poduzetništvo u vanjskoj trgovini“ i „međunarodno poduzetništvo“. Pokazalo se da su poduzeća uglavnom poduzetnici u vanjskoj trgovini kad je riječ o procjeni prihoda ostvarenog u inozemstvu, ostvarivanju koristi od poticaja te budućim ciljevima, prilikama i prijetnjama u kontekstu inozemnih komercijalnih aktivnosti. Na temelju rezultata može se zaključiti da su poduzeća ispitana u okviru istraživanja uglavnom ekonomski nacionalisti. Stoga se predlaže da se poduzetnicima u vanjskoj trgovini, čija je motivacija uglavnom ekonomski nacionalizam, pruži potpora u pronalasku novih tržišnih prilika u inozemstvu, da država poveća poticaje za ostvarivanje deviznih prihoda i poduzećima olakša pristup tim poticajima.

**Ključne riječi:** poduzetništvo u vanjskoj trgovini, međunarodno poduzetništvo, ekonomski nacionalizam, komercijalni nacionalizam, vanjska trgovina, međunarodna trgovina

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# THE RELATIONSHIP BETWEEN FOREIGN DIRECT INVESTMENT AND CURRENT ACCOUNT THROUGH PROFIT OUTFLOWS: THE TURKISH CASE

## ABSTRACT

The developing world invites Foreign Direct Investment (FDI) to their countries nearly unconditionally for the developmental benefits. However, in literature there are concerns regarding 'unfettered FDI' in terms of several factors including FDI outflows which contribute to Current Account Deficits. This paper investigates the relationship between FDI and profit outflows on the case of Turkey via economic causality analysis through Granger causality test using a method developed by Toda and Yamamoto (1995) and the impulse-response analysis. The results indicate that although there are short-term positive effects of FDI inflows in terms of current account financing, the causality results point to the long-term adverse effects of FDI inflows on profit remittance leading to current account deficit, which is an issue that policy makers should consider when trying to attract FDI.

**Keywords:** Foreign Direct Investment, profit outflows, Turkish case

## 1. Introduction

The formal definition of Foreign Direct Investment (FDI) by the IMF (1998) is as follows:

"...a category of international investment made by a resident entity in one economy (direct investor) with the objective of establishing a lasting interest in an enterprise resident in an economy other than that of the investor (direct investment enterprise). 'Lasting interest' implies the existence of a long-term relationship between the direct investor and the enterprise and a significant degree of influence by the direct investor on the management of the direct investment enterprise."

Such 'lasting interest' of FDI together with the facts that the debt crises in the 1980s reduced the foreign

bank loans availability as a financial resource and also the short term portfolio investment, another possible financial resource, created several financial crises in the 1990s has made FDI a unique financial source for developing countries. Hence, the developing world has invited FDI to their countries nearly unconditionally for developmental purposes offering a range of incentives, such as 'financial and tax incentives' as well as 'market preferences' in order to attract FDI. However, in literature there are concerns regarding 'unfettered FDI' in terms of several factors including FDI outflows which contribute to Current Account Deficits (CAD). It is argued that if the right kind of FDI in the right amounts is to be attracted by the developing countries in order to maximize the benefits from FDI for developmen-

tal purposes, effective state should be there to manage the process (Singh, 2005: 12). In this regard, in order to avoid financial fragility stemming from the 'unfettered FDI', which makes the economic structure prone to crises, the amount and timing of FDI would need to be monitored and regulated by the governments. It is argued that aggregate foreign exchange inflows and outflows, both in the short and long run, which stem from the large FDI projects that may generate a 'time profile' of these outflows (in the form of dividend payments or profits transaction) and inflows, could be time inconsistent. In this regard, this time inconsistency can cause liquidity crises and even solvency crisis with the worst consequences for economic development as seen in Asia (Singh, 2005: 9-10).

In this regard, this paper investigates the relationship between FDI and CAD through profit outflows on the case of Turkey via economic causality analysis and the impulse response analysis. Such an analysis and evaluation in the regard of Turkish case are original and try to fill the gap in the existing literature. To do this, unit root tests for testing the stationarity of data for Turkey are examined first and then the economic causality of FDI profit outflows with FDI inflows is analyzed by Granger causality tests, using a method developed by Toda and Yamamoto (1995: 225-250). This is followed by an impulse-response analysis with the variance decomposition test. In this regard, the paper is organized as follows. After the background part that tackles the eras of 1980s and 1990s with the FDI Characteristics in Turkey, a brief literature review is done; in the second part, the data set is described with the descriptive statistics and in the last part, the economic causality is conducted with the im-

pulse-response analysis followed by the variance decomposition test.

## 2. The Background Era: The 1980s and the 1990s with the FDI Characteristics in Turkey

Through the liberalisation trend in the 1980s, the developing world including Turkey started to implement liberalisation and privatisation policies, which promoted capital inflows into these countries. These capital flows in the first years of the 1980s following the late 1970s were mostly in the form of syndicated, variable rate foreign bank loans denominated in major currencies, mostly in dollars, which is called 'petro-dollars', due to the fact that these dollars were gained from the dramatic increase of oil prices made by the Organization of Petroleum-Exporting Countries (OPEC), which led to the oil crises in the 1970s. IMF (1998) explains that "The capital flows that took place between the first oil crisis of 1973 and 1982 were linked to the recycling of oil revenues" (IMF, 1998: 59)<sup>1</sup>. However, following the 1982 debt crisis, the structure of capital flows to developing countries started to change from bank lending to FDI and portfolio investment (Eichengreen, Fishlow, 1998: 24) as seen in Table 1. This process was accelerated by the liberalisation and privatisation programs in developing countries. Schmukler and Zoido-Lobaton (2001) put the situation as follows: "Deregulation, privatization, and advances in technology made FDI and equity investments in emerging markets more attractive to firms and households in developed countries. The 1990s witnessed an investment boom in FDI and portfolio flows to emerging markets" (Schmukler, Zoido-Lobaton, 2001: 2).

**Table 1 Composition of Private Capital Flows to Developing Countries (in million dollars - on average and % of the total flows - on average)**

Type of Flow	1973-81	1982-1989	1990-97
Bonds	1,216.1 (4%)	1,370 (5.4%)	22,261 (16.2%)
Bank Lending	20,449.4 (70%)	10,317.5 (40.6%)	17,008.5 (12.4%)
Foreign Direct Investment (FDI)	7,506.9 (26%)	13,369.1 (52.7%)	79,820.7 (57.9%)
Portfolio Equity	31.8 (0%)	328 (1.3%)	18,643.3 (13.5%)

Source: Author's research; WB Global Development Finance Data (Edition 2010)



The restructuring of the world economy, which started in the 1980s through the policies of liberalisation and deregulation of financial markets continued into the 1990s, under the name of 'globalisation'. This was by virtue of the significant developments in ICTs and in the political arena through having entered a new unipolar world order after the collapse of the Soviet Union. In this regard, the 1990s globalisation, which has already left the 'global village' stage, brought new dimensions to the countries – whether economic, social and political restructuring, making them

"open," never seen before in the world economy. In other words, "global economic activity is significantly greater relative to domestically-based economic activity than in previous historical periods and impinges directly or indirectly on a greater proportion of national economic activity than ever before" (Peraton et al., 1997: 274). However, such 'openness' has created several vulnerabilities for economies in terms of crises through various channels, such as CAD. Table 2 summarizes some of the 1990s globalisation tendencies stated above.

**Table 2** *Some Indicators of the Globalisation of the 1990s*

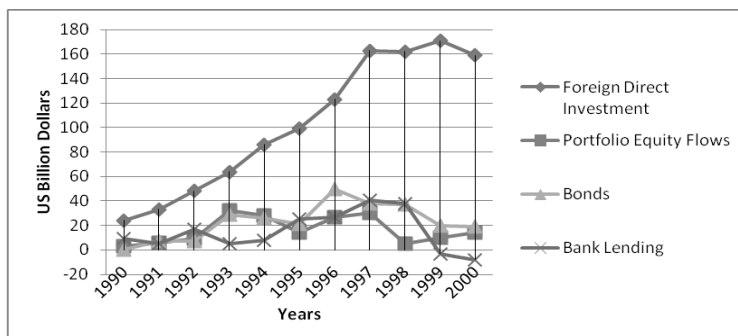
Item	Annual Growth Rate (per cent)		
	1986-1990	1991-1995	1996-2000
FDI inflows	23.6	22.1	39.4
FDI outflows	25.9	16.5	35.6
FDI inward stock	15.1	8.6	16.0
FDI outward stock	18.1	10.6	16.9
Cross-border M&As	32.0	15.7	62.9
Sales of Foreign Affiliates	19.7	8.8	8.1
Gross Product of Foreign Affiliates	17.4	6.8	6.9
Total assets of Foreign Affiliates	18.1	13.7	18.9
Exports of Foreign Affiliates	22.2	8.6	3.6
Employment of Foreign Affiliates (Thousands)	5.5	5.5	9.7
Gross Domestic Product (GDP) (in current prices)	9.5	5.9	1.3
Gross Fixed Capital Formation	10.0	5.4	1.1
Royalties and Licence Fee Receipts	21.1	14.6	8.1
Exports of Goods and Non-factor Services	11.6	7.9	3.7

Source: United Nations Conference on Trade and Development (UNCTAD), *World Investment Report (2009)*<sup>2</sup>

As Table 2 shows, both international trade (exports) and FDI, some of the indicators of the globalisation of the 1990s, had grown relatively faster than world output since the mid-1980s. Follow-

ing the tendencies in the 1980s, the structure of capital flows to developing countries continued to be in the form of FDI and portfolio investment as seen in Figure 1.

**Figure 1** *Private Capital Flows to Developing Countries*



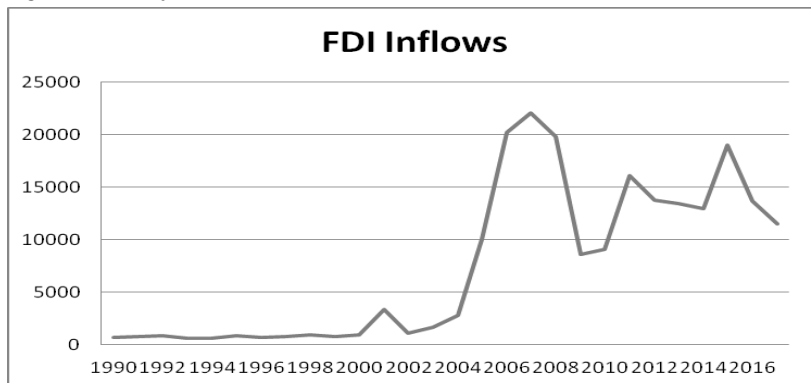
Source: Author's research; WB Global Development Finance Data (Edition 2010)

Among these developing countries, since the 1980s Turkey has implemented liberalized policies for attracting FDI<sup>3</sup>. In this regard, Akpolat and Inancli (2011) put the liberalization process in Turkey as follows: “Turkey is one of the emerging economies which have changed its trade and investment regimes in the early 1980s. Turkey carried out this transformation by adopting a new liberal macroeconomic framework. Turkey, as many developing countries, has implemented foreign capital-promoting policies. Obstacles which prevent foreign capital to enter into Turkey have been removed gradually” (Akpolat, Inancli, 2011: 57). Moreover, by passing the Foreign Direct Investment Act (No. 4875) in 2003 the foreign capital regime of Turkey continued to be highly liberalized. Hisarciklilar et al. (2010)<sup>4</sup> commented on the importance of this law with the following words: “With this legislative change, invest-

ment climate has been made more favourable for the entries of foreign firms. The Act guarantees non-discriminatory treatment, with equal rights for foreign and national investors. The FDI Act removed the screening and pre-approval procedures for FDI projects, redesigned the company registration process so that it was equal for domestic and foreign firms, facilitated the hiring of foreign employees, included FDI firms in the definition of ‘domestic tenderer’ in public procurement, granted foreign investors full convertibility in their transfers of capital and earnings and authorized foreign persons and companies to acquire real estate in Turkey...” (Hisarciklilar et al., 2010: 4).

It can be said that thanks to such liberalized policies, in addition to several other factors, Turkey had an upward trend in FDI inflows for the period of 1990-2017, as seen in Figure 2.

Figure 2 FDI inflows, US\$ million, 1990-2017



Source: Author's research; UNCTAD, FDI/MNE database, available at: [www.unctad.org/fdistatistics](http://www.unctad.org/fdistatistics)

However, when Turkey's performance in attracting FDI inflows is observed in detail in Figure 2, it can be said that although in this period Turkey's ability to attract more FDI into the country seems remarkable, it mostly stems from the period 2004-2010 in which mass privatisation, which attracted brown-field investments (M&As) of FDI, was experienced. Onis (2011) explains this fact as follows: “...The major boom in privatisation revenues occurred in the post-2004 era, which corresponds with the start of formal negotiations with the European Union for full-membership. ...illustrates the fact that privatisation and foreign direct investment are highly interrelated phenomena” (Onis, 2011: 711). In this

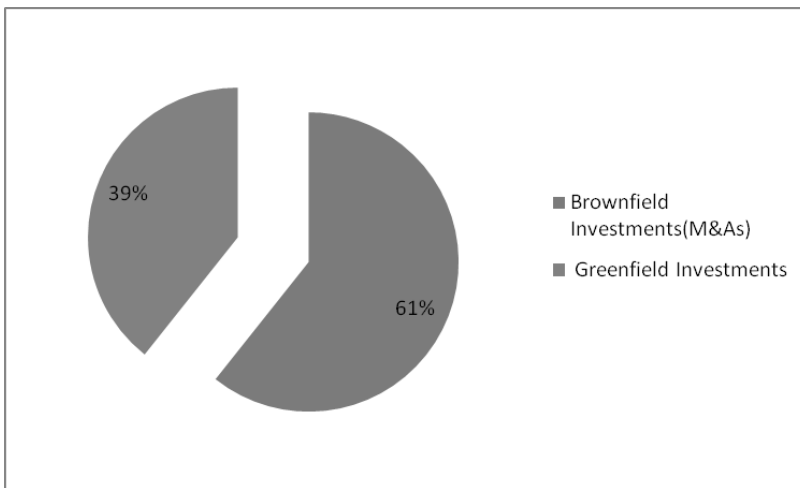
period Turkey also benefitted from the macroeconomic policies that were implemented to ensure macroeconomic stability after the country's financial crisis in 2001, during which a dramatic increase in FDI inflows is also noticeable in Figure 2, as a result of the “fire sale” of local firms. In this regard, Kazgan (2012) puts this issue as following words:

“Until 2001, which is the severest crisis year of Turkey that ever experienced, it [FDI inflows] annually remained at a value such as an average of 800 odd million dollars, which can be ignored. [On the other hand] While the stocks market bottomed out at the crisis year of 2001, it peaked up at 3.3 billion dollars. This means (due to the accelerating exchange rate

and bottoming out the stock prices) the taking over of the local firm stocks at these lower prices by the foreigners. If the stocks to be sold at 10 dollars in normal conditions are sold at 5 dollars it is clear that this is a significant capital loss. In this regard, in the crises of 1994 and 2000-2001 a significant share of banks, tourism firms and food industry were taken over through this way" (Kazgan, 2012: 253).

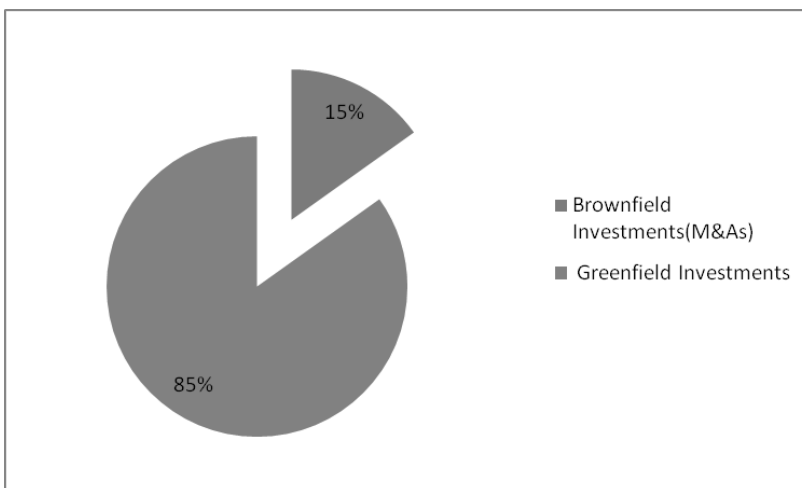
Moreover, as seen in Figure 3 for the 1990-2010 period, FDI inflows mostly entered Turkey as brownfield investments, namely, via cross-border M&As, rather than new greenfield investments. This was contrary to the rest of the developing world in terms of the entry mode of FDI<sup>5</sup>, as seen in Figure 4.

**Figure 3 Percentage share of brownfield and greenfield investments of FDI inflows into Turkey, annual average 1990-2010**



Source: Author's research; UNCTAD, FDI/TNC Database (2010) and UNCTAD Cross-border M&A Database (2010)

**Figure 4 Percentage share of brownfield and greenfield investments of FDI inflows into developing world, annual average 1990-2010**

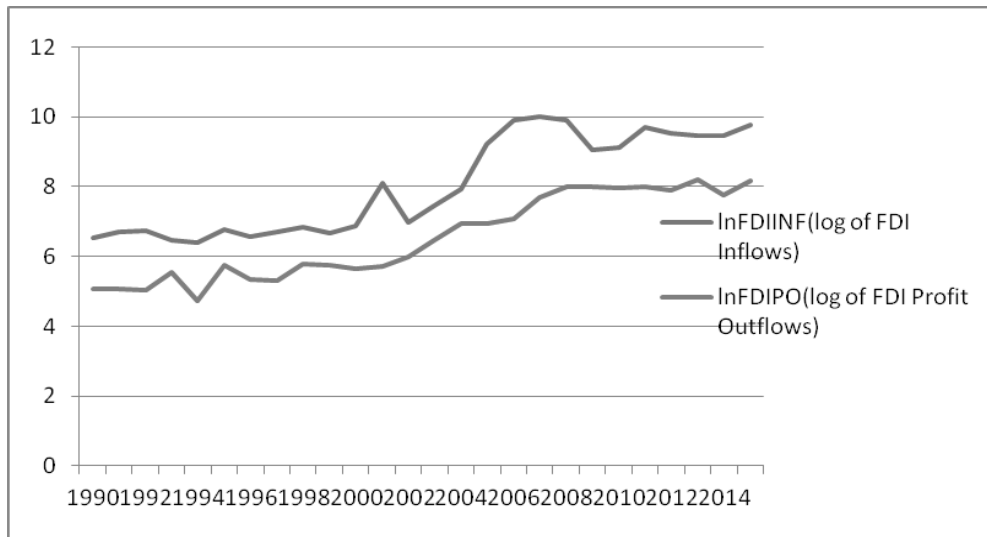


Source: Author's Research; UNCTAD, FDI/TNC Database (2010) and UNCTAD Cross-border M&A Database (2010)

Moreover, Kazgan (2012) notes that although there was not any upward trend of direct fixed capital investments of FDI inflows from 1995 till 2003 except for the crisis years, there was an upward trend of the FDI outflows from Turkey, which were over 2 billion dollars for the severest crisis years 1999-2001, and in 2003, almost equal with the FDI inflows (Kazgan, 2012: 253). When the FDI profit outflows is added to this picture, as seen in Figure

5, then it turns into a significant issue that should be paid attention to by the policy makers. Figure 5 indicates the upward trends of both FDI inflows and FDI profit outflows. Moreover, Figure 5 underlines that especially in 2009, in the year in which Turkey was experiencing the Global Crisis, while FDI inflows were dramatically decreasing, the FDI profit outflows were increasing.<sup>6</sup>

**Figure 5 FDI inflows and FDI profit outflows (in US\$ and in logarithmic transformation), 1990-2014**



Source: Author's Research; Central Bank of Turkey

### 3. A Brief Literature Review

Although in literature there have been large theoretical (Dunning, 1994; Milberg, 1999; Chudnovsky, Lopez, 1999) and empirical works on FDI and economic development/growth<sup>7</sup> (Balasubramanyam et al., 1996; Borensztein et al., 1998; Agosin, Mayer, 2000; Carkovic, Levine, 2005; Hermes, Lensink, 2003; Samimi et al., 2010 and Adeniyi et al., 2012, etc.), there are few works pointing out the potential detriments of the FDI inflows, including the profit outflows of FDI. The latter happens mostly by increasing CAD and leads to financial fragility and prone-to-crisis economy (Seabra, Flach, 2005; Mahnaz, Salma, 2013; Geyikdagi, Karaman, 2013; Akkermans, 2017). Among these, Seabra and Flach (2005) deal with the issue in terms of the Brazilian case using the Granger causality test developed by Toda and Yamamoto (1995) in order to investigate

the causal relationship between FDI and profit remittance, which finds out a unidirectional causality running from FDI to profit outflows. According to the empirical results of their paper, FDI causes profit remittance by pointing out the significant possible adverse long-term effects of the FDI attraction policies of Brazil. Mahnaz and Salma (2013) deal with the issue on the case of Pakistan using Autoregressive Distributed Lag (ARDL) approach in order to determine the long-term and short-term relationships between FDI inflows and income outflows, which are found to be co-integrated, pointing out a long-term relationship. According to the empirical results of their paper, FDI inflows in Pakistan have negative implications for current account balance as well as positive effects on growth and employment. Geyikdagi and Karaman (2013) deal with the issue in terms of the Turkish case by investigating FDI inflows to Turkey and trying to estimate

the transfer of profits. The results of their regression analysis using the annual data of 1995-2011 show that as the FDI stock remains positive, profit transfers are positive. Although they found a small impact on profit repatriation, they stress that this is due to transfer pricing manipulation of FDI, which should be paid attention to besides the M&As kind of FDI (Geyikdagi, Karaman, 2013). Different from other authors, Akkermans (2017) deals with the issue of 'repatriation of profits' in terms of the 'drain of wealth' aiming at describing and explaining 'net profit flows' per country for the period 1980-2009 through a panel data analysis. In this regard, the paper, in which a dataset on 'net profit flow' per country is calculated, investigates the 'net profit flow' as a consequence of foreign investment stocks for the period 1980-2009 for the three world-system groups, such as core, semi-periphery and periphery and finds that the net profit inflow grew for core countries, net profit outflow grew for the semi-periphery and in particular the periphery, concluding that "...neoliberalism served core countries and TNCs well. To be precise: it served capital owners in the core well; workers in those countries have not benefited at all..." (Akkermans, 2017).

It can be interpreted from the findings of the empirical studies on FDI and its spillovers<sup>8</sup> or growth that there is not such a rule that FDI will create the spillovers in every host country, although in theory, FDI is accepted to have important positive effects on the economy of the host country, such as *"1-promotes economic growth and development, 2-raises employment and wages, 3-generates technological spillovers that raise productivity, 4-provides export market access, 5-leads to improvement in the balance of payments"* (Milberg, 1999: 100). In this regard, it is criticised as the benefits of FDI depend on the conditions of the host developing countries and the Multinational Companies (MNCs) themselves and the characteristics of their investments. So such benefits are difficult to measure and also are not uniform. Moreover, when the positive impact of FDI inflows on the balance of payments are considered, it is underlined that the profit outflows of FDI can offset the positive impact or even transform it to the negative impact on the balance of payments in the long run.

In this regard, Willet et al. (2004) maintain that there are not just short-term effects, but FDI also can create volatility in capital movements, contrary to the expectations, as experienced in the Asian cri-

sis countries (Willet et al., 2004: 30). The crisis effect of the short-term capital inflows, the so-called hot money, as leading to CAD by appreciating local currency and creating virtual welfare increase were widely examined in the literature. Compared to them, FDI was accepted as more innocent and beneficial for the host country. However, FDI has recently started to be criticized in terms of its possible crisis effect through time inconsistencies of the transfers of its profits, which are from the host country to home country.

Lall (2000) underlines that if the government is not strong enough in both regulating and bargaining on FDI, then it will cause 'unequal distribution of benefits or abuse of market power' by MNCs (Lall, 2000: 8). Milberg (1999) contributes that by virtue of the development and high liberalization of financial markets of the developing economies, FDI can easily be hedged, which contributes to diminishing the difference between them and the portfolio investments more than ever before and so gives it the capability of creating financial crises by being unstable and volatile (Milberg, 1999: 101). Singh (2005) argues that to avoid the financial fragility, stemming from the 'unfettered FDI', which makes the economic structure prone to crises through CAD, the governments would need to monitor and regulate the amount and timing of FDI. He stresses that the aggregate foreign exchange inflows and outflows, both in the short and long run, which can stem from the large FDI projects, can create a 'time profile' of these outflows (in the form of dividend payments or profits transaction) and inflows, which could be time inconsistent. In this regard, he underlines that this time inconsistency can cause liquidity crises and even solvency crisis with worse consequences for economic development as seen in Asia (Singh, 2005: 9-10). In this regard, since restrictions of such outflows are not regarded as 'smart policies', rather than imposing restrictions, incentives that achieve the same result, but this time voluntarily, would be among 'smart policies'. As China<sup>9</sup> did, incentives towards reinvestment of FDI profits such as tax incentives by governments would be efficient in order to prevent the adverse effects of FDI inflows on profit remittance leading to CAD. Moreover, such incentives also divert the reinvestment to specific sectors, which are vital for development. OECD (2000) puts China case as follows: "...To encourage reinvestment of profits, China has been offering FDI a refund of 40 per cent of taxes

paid on its share of income, if the profit is reinvested in China for at least five years. Where profits are reinvested in high-technology or export-oriented enterprises, the foreign investor may receive a full refund..." (OECD, 2000: 15). Moreover, not restriction of profit outflows but managing the time of such outflows can be arranged by governments. But before it, the domestic residents, who think to make profit remittance, should inform the government in advance, e.g. two weeks before the arranged date of

such outflow for the amounts higher than, for instance, one million dollars.

#### 4. Data Set

A monthly data set, both in US\$ and in logarithmic transformation, including the era of 1991m12-2017m8 is used in the research. The data source is the Central Bank of Turkey. Table 3 indicates the symbols, definitions, units and scales of all variables used in the research.

Table 3 Explanations of the Variables

Symbols	Definitions	Units and Scale
lnFDIPO	NATURAL LOGARITHM OF FDI PROFIT OUTFLOWS	US Dollars Millions
lnFDIINF	NATURAL LOGARITHM OF FDI INFLOWS	US Dollars Millions

Source: Author's Research; Central Bank of Turkey

#### 5. The Economic Causality Between lnFDIPO and lnFDIINF for the Turkish Case

With regard to the Turkish case, the causal link between FDI profit outflows and FDI inflows is analyzed by Granger causality tests, using a method developed by Toda and Yamamoto (1995). This is designed to improve the standard F statistics in the causality test process after examining the unit root properties.

##### 5.1 Unit Root Tests: Testing Stationary

The VAR model covers the period of 1991m12-2017m08. In order to determine the maximum order of integration of each series, stationary tests of the variables have been conducted by the most common method, Augmented Dickey-Fuller unit root test (ADF), which was developed by Dickey and Fuller (1981). It is as follows:

$$\Delta Y_t = a + b_t + \gamma Y_{(t-1)} + c \Sigma \Delta Y_{(t-1)} + u_t$$

The basic model was as follows:

$$Y_t = pY_{(t-1)} + u_t \text{ or } y_t - y_{(t-1)} = (p-1) y_{(t-1)} + u_t \quad (u_t \text{ is the stochastic error term})$$

Namely;  $\Delta y_t = \gamma y_{(t-1)} + u_t$

If  $(p-1) = 0$  or  $\gamma = 0$  then it can be concluded that  $y_t$  series has a unit root, namely, it is not stationary on its level.

To test the null hypothesis,  $y_t$  has a unit root, alternative versions of the model are used as follows:

Dickey-Fuller Equation without Intercept and Trend:

$$\Delta Y_t = \gamma Y_{(t-1)} + u_t$$

Dickey-Fuller Equation with Intercept but Without Trend:

$$\Delta Y_t = a + \gamma Y_{(t-1)} + u_t$$

Dickey-Fuller Equation with Intercept and Trend:

$$\Delta Y_t = a + b_t + \gamma Y_{(t-1)} + u_t$$

The obtained test results of the ADF, which is automatic based on the Akaike Information Criterion (AIC) in Table 4 are as below:

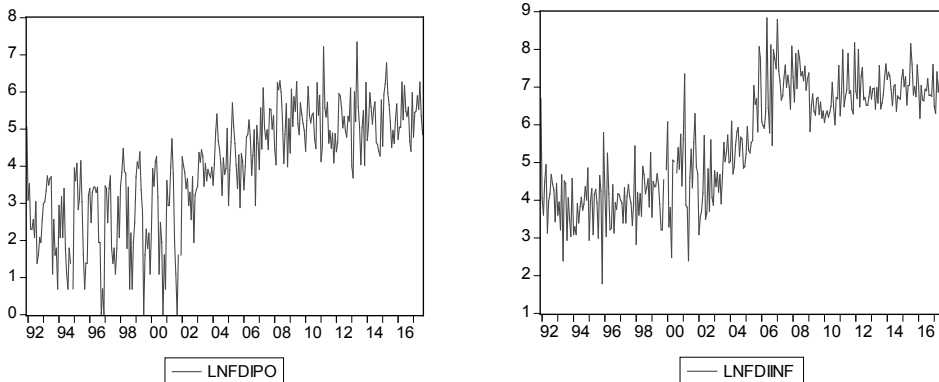
Table 4 The Results Table of the Unit Root Test Using the ADF Test

Variables	AIC/SIC	ADF Test Statistics		
		Without Intercept&Trend (None)	Without Trend (Constant)	Intercept With Trend (Constant, Linear Trend)
<i>Level</i>				
LNFDIINF	10/10/10	0.822029	-0.624781	-1.924770
LNFDIPO	12/12/11	0.920110	0.459670	-1.070362
<i>First Differential</i>				
$\Delta$ LNFDIINF	9/9/9	-7.491843 <sup>a</sup>	-7.555531 <sup>a</sup>	-7.543043 <sup>a</sup>
$\Delta$ LNFDIPO	11/11/11	-11.92833 <sup>a</sup>	-11.94879 <sup>a</sup>	-11.96229 <sup>a</sup>

The superscript a denotes significance at the 1% critical level. The lag orders are computed according to AIC. The series marked with (a) do not exhibit a unit root at 1% significance level.

Source: Author's research.

Figure 6 The Graphs of the Series



Source: Author's research

### 5.2 The Interpretation of the Results

According to the results in Table 4, it is concluded that LNFDIINF and LNFDIPO are not stationary on their levels, they are integrated of order one, namely,  $I(1)$ , for lag 9 and for lag 11, respectively. The stationarity of the series was also checked by the graphs of the series as seen in Figure 6. According to these graphs, all series seem unstationary, which can stem from the breaks in the crisis periods. These variables, which are integrated of order one, are used in the VAR model in order to have the maximal integration order as one<sup>10</sup>.

### 5.3 Test for Granger – Causality with Toda and Yamamoto Modified Wald Test

In the second step, the following augmented Granger causality test suggested by Toda and

Yamamoto (1995) is performed<sup>11</sup>. The application of the procedure leads to a point where the usual test statistics for Granger causality exhibit standard asymptotic distributions. A modified Wald test (MWald) for restrictions on the parameters of a VAR ( $k$ ), where  $k$  is the lag length in the system, is utilized by the procedure that was developed by Toda and Yamamoto (1995). When a VAR ( $k+d_{max}$ ) is predicted (where  $d_{max}$  is the maximal order of integration to occur in the system), this test displays asymptotic chi-square distribution. It is also shown that if variables are integrated of order  $d$ , the usual selection procedure is valid whenever  $k \geq d$ . The lag length order in the VAR model is determined as 12 according to the AIC criterion.

**Table 5 VAR Lag Order Selection Criteria**

VAR Lag Order Selection Criteria						
Endogenous variables: LNFDIPO LNFDIINF						
Exogenous variables: C						
Sample: 1991M12 2017M08						
Included observations: 247						
Lag	LogL	LR	FPE	AIC	SC	HQ
0	-803.4208	NA	2.330008	6.521626	6.550042	6.533066
1	-611.9165	378.3566	0.510493	5.003373	5.088621	5.037694
2	-574.2623	73.78405	0.388728	4.730869	4.872949	4.788071
3	-530.9641	84.14219	0.282788	4.412665	4.611577*	4.492749
4	-522.7198	15.88776	0.273244	4.378298	4.634043	4.481263*
5	-516.5024	11.88098	0.268396	4.360344	4.672921	4.486190
6	-514.7993	3.226989	0.273455	4.378942	4.748351	4.527669
7	-512.6047	4.122643	0.277511	4.393560	4.819802	4.565169
8	-511.2560	2.511836	0.283572	4.415028	4.898102	4.609517
9	-500.2466	20.32499	0.267972	4.358272	4.898178	4.575642
10	-494.8394	9.894939	0.264993	4.346878	4.943616	4.587129
11	-490.0015	8.774842	0.263269	4.340093	4.993663	4.603226
12	-477.6048	22.28391*	0.246040*	4.272104*	4.982506	4.558117
* indicates lag order selected by the criterion						
LR: sequential modified LR test statistic (each test at 5% level)						
FPE: Final prediction error						
AIC: Akaike information criterion						
SC: Schwarz information criterion						
HQ: Hannan-Quinn information criterion						

Source: Author's research

The following VAR (k+dmax=13) model is estimated by OLS and SUR methods.

$$\ln FDIPO_t = \sum_{i=1}^{k+d} (\alpha_{1i} \ln FDIPO_{t-i}) + \sum_{i=1}^{k+d} (\beta_{1i} \ln FDIINF_{t-i}) + u_{1t} \quad (1)$$

$$\ln FDIINF_t = \sum_{i=1}^{k+d} (\alpha_{2i} \ln FDIINF_{t-i}) + \sum_{i=1}^{k+d} (\beta_{2i} \ln FDIPO_{t-i}) + u_{2t} \quad (2)$$

After determining that the most appropriate lag length as k=12 and dmax=1, the causal link between FDI Profit Outflows (lnFDIPO) and FDI Inflows (lnFDIINF) series based on p values for the modified Wald (MWald) statistics are presented in Table 6.

**Table 6 The Results Table of the Test for Granger – Causality with Toda and Yamamoto Modified Wald Test**

		VAR(13) k=12, d <sub>max</sub> =1			
		OLS		SUR	
The Null hypothesis		χ <sup>2</sup> Statistics	P-Value	χ <sup>2</sup> Statistics	P-Value
LNFDIPO	<b>does not Granger cause</b> LNFDIINF	15.65929	0.2073	17.57140	0.1293
LNFDIINF	<b>does not Granger cause</b> LNFDIPO	28.02340	0.0055 <sup>a</sup>	31.52826	0.0016 <sup>a</sup>

The superscript a denotes significance at the 1% critical level.

Source: Author's research



#### 5.4 The Interpretation of the Results

According to the estimation results, FDI Profit Outflows (lnFDIPO) and FDI Inflows (lnFDIINF) are causally related in the long-run, and the Granger causality is uni-directional running from FDI Inflows to FDI Profit Outflows in the Turkish Case. This finding is consistent with the Seabra and Flach (2005) findings about the Brazilian Case. As already noted, although there are short term positive effects of FDI inflows, the causality results point to the long term adverse effects of FDI inflows on profit remittance leading to CAD. In addition, previous FDI inflows are the driving force of current profit outflows.

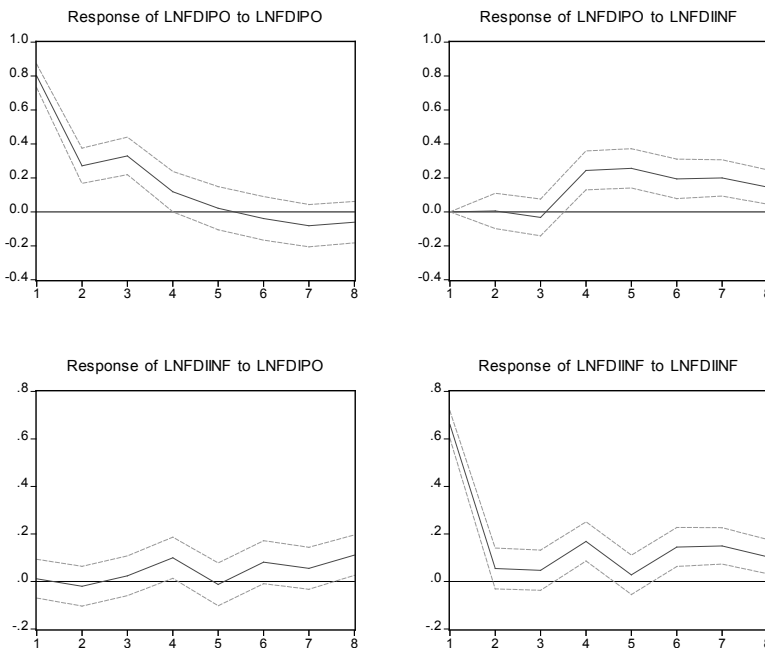
Figure 7 shows the impulse responses of the variables, namely, how two variables react to each other in the next 8 months. Considering the Impulse Responses of the profit outflows, namely, when there is

shock to FDI inflows, it can be seen that after three months profit outflows are always positive and growing. Since most of the FDI inflows to Turkey is in brownfield FDI formation (Sarialioglu Hayali, 2012), the three-month period for profit outflows makes sense and points to the fact which policy-makers should consider since the issue, the relationship of brownfield FDI with the profit outflows in a short time, is put by UNCTAD (2000) as follows:

“The impact of profit repatriation and transfer pricing on financial flows and the balance of payments of a host economy may differ according to the mode of entry. On the one hand, outflows of earnings are likely to begin sooner with M&As than with greenfield FDI when the acquired firm is profitable — though they may take longer where an affiliate has to be restructured” (UNCTAD, 2000: 146).

**Figure 7** Graphs of the Impulse Responses

Response to Cholesky One S.D. Innovations  $\pm$  2 S.E.



Source: Author's research

When it is looked at the Variance Decomposition of Profit Outflows shown in Table 6 it is seen that in the short run, an impulse (innovation/shock) to lnfdipo accounts for 93% of fluctuations in profit outflows as its own shock, while shock to lnfdiinf

accounts for 7% of fluctuations in profit outflows. However, in the relatively long run a shock to lnfdiinf can account for 20% of fluctuations in profit outflows.

**Table 6 Variance Decomposition of Profit Outflows**

Variance Decomposition of LNFDIPO:			
Period	S.E	LNFDIPO	LNFDIINF
1	0.800166	100.0000	0.000000
2	0.844968	99.99569	0.004307
3	0.907521	99.86504	0.134961
4	0.947165	93.23837	6.761629
5	0.981397	86.89533	13.10467
6	1.001175	83.64686	16.35314
7	1.024132	80.57270	19.42730
8	1.036298	79.03863	20.96137

Source: Author's research

## 6. Conclusions

Aggregate foreign exchange inflows and outflows, both in the short and long run, which can stem from the large FDI projects, may generate a 'time profile' of these outflows (in the form of dividend payments or profits transaction) and inflows, which could be time inconsistent. So, it is argued that to avoid such financial fragility stemming from the 'unfettered FDI', which makes the economic structure prone to crises through CAD, the governments would need to monitor and regulate the amount and timing of FDI, since this time inconstancy can cause liquidity crises and even solvency crisis. Although there are short-term positive effects of FDI inflows in terms of current account financing, the causality results of the paper with regard to the Turkish case, consistent with the existing applied works, point to the long-term adverse effects of FDI inflows on profit remittance leading to CAD, and thus possibly to crisis economy. Previous FDI inflows are the driving force of current profit outflows. Considering the Impulse Responses of the profit outflows, namely, when there is shock to FDI inflows, it can be seen that after three months, profit outflows are always positive and growing. Since most of the FDI inflows to Turkey is in brownfield FDI formation, the three-month period for profit outflows makes sense and points to the fact which policy-makers should take into consideration. When considering the policies for current account deficit, attention should be paid to the fact that large capital inflows have the potential to turn into large profit outflows. In this regard,

China's incentives towards reinvestment of FDI profits can be inspiring for the Turkish case.

It is argued that if developing countries want to attract the right kind of FDI, in the right amounts, and to maximize the benefits from FDI, they must have an effective state, i.e. government structures (Singh, 2005: 12). In other words, this can only be done by effective states that manage the process, namely, get full information about the intention of profit remittance in advance and make timetables for such profit remittance of foreign companies in order to prevent time overlaps. When making this time arrangement, using incentives should be on the agenda again in order to turn the unfavourable transfer time for such companies into favourable ones. Of course, at the very beginning, such kind of states should be in cooperation with such foreign companies. In this regard, thanks to such cooperation, before the profit remittance such foreign companies, themselves, would like to reinvest their profits. OECD (2000) exemplified this with China "Many foreign companies invested in China have adopted a strategic plan, which requires reinvestment of profits for growth and expansion" (OECD, 2000: 15).

Last but not least, in order to avoid the financial fragility, stemming from the 'unfettered FDI', which makes the economic structure prone to crises, the governments would need to monitor and regulate the amount and timing of FDI, not just 'hot money'.

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## ENDNOTES

- 1 Petro-dollars were deposited to such lender banks in the developed countries by OPEC, and were recycled by such banks by having underwritten syndicated bank loans to the developing countries, which needed new capital inflows to be able to pay for oil imports (Dodd, 2002: 3).
- 2 UNCTAD (2009), "World Investment Report".
- 3 See the Turkish Republic Prime Ministry Undersecretariat of Treasury (1998) for Foreign Capital Legislation, which started to be gradually liberalized in the 1980s.
- 4 Hisarcikilar, M., Gultekin-Karakas, D., Asici, A.A. (2010) "Can FDI Be A Panacea For Unemployment?: The Turkish Case", available at: <http://www.esam.itu.edu.tr/NottinghamWorkshopPapers/Hisarcikilar-Karakas-Asici-NW.pdf> (Accessed on: January 2, 2012).
- 5 One of the indicators of the 'quality' of FDI is the 'mode of entry' into the host country (greenfield vs. brownfield investments), in order to have direct positive impact on economic development through investment, namely, increasing gross fixed capital formation. In this regard, it is maintained that when the FDI is realised by acquisition of existing assets in the host country and/or merger, it is called 'brownfield investment'. It does not create the required addition to the capital stock, output or employment if they only lead to a change of ownership without adding to productive capacity or productivity, especially compared to the 'greenfield investment'. Greenfield investment leads to a net addition to the host country's capital stock. Moreover, in brownfield investment, when there is no entirely new productive capacity, the technology spillover can also be seen as relevant (Milberg, 1999: 107). According to London

- Economics (2010), its impact on economic growth through increasing capital stock is problematic, it can be less certain and less accepted than the impact of greenfield investment, at least in the short-run (London Economics, 2010: 23).
- 6 When the monthly data is considered, it becomes clearer that in some months, for instance 1993m5, 1994m5, 1995m1, 1996m5, 1997m5, 1998m5, 2001m5, monthly FDI profit outflows exceeded the monthly FDI inflows.
  - 7 Hermes and Lensink (2003) argue that, in addition to the direct increase of capital formation of the host country, FDI also can help increasing growth by introducing new technologies, managerial skills, ideas, and new varieties of capital goods (Hermes and Lensink, 2003: 143). All these can create spillovers.
  - 8 The term '*spillover*' is defined as '*the beneficial effects of inward FDI are contagious in host countries, both within and across countries*' by Milberg (1999: 109). In theory, spillovers can be created by 'demonstration and/or imitation', which means new products or technologies of multinational companies (MNCs) are imitated by local firms. It can be by 'competition', which means local firms get under pressure to adopt new technologies after the entrance of MNCs to the markets. It can be by 'linkages', which means transactions between MNCs and local firms. It can also occur by 'training', which means that local firms invest in their human capital through developing the skills and knowledge of their employees to make them adapt to the new technologies that MNCs developed (Hermes and Lensink, 2003: 143). According to Chudnovsky and Lopez (1999), technology spillovers can be gained by developing countries from MNCs in four ways: "*through FDI; through joint ventures between domestic firms and MNCs (including what has been termed 'strategic partnerships');* by purchasing technology in contractual form (patents, licensing, turnkey contracts, etc.); and through reverse engineering, imitation, copying, etc. (in this case, without the consent of MNCs)" (Chudnovsky, Lopez, 1999: 7).
  - 9 OECD (2000) comments China's tax incentives as follows: "Tax incentives, which are among the most outstanding investment promotion policies, were also made available for FDI. From 1980 to 1993, China used extensively a wide range of tax incentives, including income tax exemption and reduction, tariff-free for imported equipment and construction materials. Although in 1994 the unified taxation system applying both domestic and FDI firms was introduced, a five-year tax refund scheme was granted for FDI firms, and tariff-free treatment was extended. In addition, preferential treatments were granted in some specific sectors and industries. Currently, the targeted economic sectors and industries in which FDI is encouraged include agriculture, resource exploitation, infrastructure, export-oriented and high-technology industries" (OECD, 2000: 15).
  - 10 Before the causality test, the Johansen test of cointegration is conducted since both series were found to be integrated of order one. Both the trace statistic and maximal eigenvalue statistic indicated that there is cointegration between variables by rejecting the null hypothesis of no cointegrating vector ( $r=0$ ) at the 1% significance level, whereas the null hypothesis of at most one cointegrating vector ( $r\leq 0$ ) cannot be rejected. So, the results support the hypothesis of cointegration between profit outflows and FDI inflows.
  - 11 If the data are integrated or cointegrated, the usual tests applied for exact linear restrictions on the parameters (e.g. the Wald test) do not exhibit usual asymptotic distributions. In order to handle this aspect, and not to get into the pre-testing distortions associated with prior tests for non-stationarity and cointegration, the procedure proposed by Toda and Yamamoto (1995) is chosen.

Ayca Sarialioglu Hayali

## ODNOS IZRAVNIH STRANIH ULAGANJA I TEKUĆEG RAČUNA PLATNE BILANCE: SLUČAJ TURSKE

### SAŽETAK

Zemlje u razvoju pokušavaju na sve načine privući izravna strana ulaganja kako bi ubrzale svoj razvoj, a ponekad ne postavljaju gotovo nikakve uvjete. Međutim, u literaturi se izražava zabrinutost zbog „neome-tanih izravnih stranih ulaganja” s obzirom na nekoliko čimbenika. Jedan od njih je odljev dobiti, čime se povećava deficit tekućeg računa platne bilance. U radu se analizira odnos izravnih stranih ulaganja i odljeva dobiti na primjeru Turske putem analize ekonomske uzročnosti, odnosno Grengorovim testom kauzalnosti uz upotrebu metode koju su razvili Toda i Yamamoto (1995) i analize impulsnog odgovora. Iako prema rezultatima izravna strana ulaganja imaju kratkoročan pozitivan učinak na financiranje tekućeg računa, rezultati kauzalnosti ukazuju na to da izravna strana ulaganja imaju dugoročne negativne posljedice na tokove dobiti i uzrokuju deficit tekućeg računa platne bilance, a na to bi donositelji odluka trebali obratiti posebnu pozornost.

**Ključne riječi:** izravna strana ulaganja, odljev dobiti, slučaj Turske



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# THE BUDGET ACCOUNTING MODEL AND PERFORMANCE MEASUREMENT: PERCEPTIONS OF PUBLIC EMPLOYEES IN BOSNIA AND HERZEGOVINA

## ABSTRACT

The aim of this paper is to analyze if the accounting system of Bosnia and Herzegovina (hereinafter B&H) budget is adequate and if it enables the measurement of public administration performance, as well as to give recommendations for future improvements. To achieve this, a survey was conducted among public employees working in the fields of finance, accounting and auditing at all levels of B&H government as well as among experts from the accounting and auditing field in B&H. The analysis of survey results revealed shortcomings in the accounting system in B&H budget evident in its inability to measure and report on the efficiency, effectiveness and economy of public spending, which reduces transparency and opens up an opportunity for misuse of public resources. According to the studies conducted thus far in this field, one of the most efficient ways to overcome this is to introduce specific cost and management accounting instruments into the accounting system of the budget, which would enable adequate measuring and reporting on the performance of public administration, thereby enhancing the transparency of public finances and accountability of public employees.

**Keywords:** Budget accounting, performance measurement, cost accounting, management accounting, transparency, accountability

## 1. Introduction

The traditional cash basis accounting systems are not able to document in detail the use of resources by a public sector entity, nor are they able to provide comprehensive information about its financial position. This complicates international comparisons based on financial and performance indicators.

Given the considerable effect of public sector on the functioning of the economy of any country, it

is necessary to work on the improvement of financial management in this sector in order to prevent possible financial crises in the future. B&H is faced with similar problems, where the lack of transparency is a consequence of an excessively complicated administrative organization regulated by multiple overlapping laws and by-laws.

According to the General Framework Agreement for Peace in B&H, the country is divided into two

entities, the Federation of Bosnia and Herzegovina (hereinafter FB&H) with 51% of the territory and the Republic of Srpska (hereinafter RS) with 49% of the territory. The Brcko area has been the subject of dispute and international arbitration and has been proclaimed a district, so that the state of B&H consists of two entities (FB&H and RS) and the Brcko District. The FB&H is an entity divided into 10 cantons (Una-Sana, Posavina, Tuzla, Zenica-Doboj, Bosnia-Podrinje, Central Bosnia, Herzegovina-Neretva, West Herzegovina, Canton Sarajevo, Livno), each with its own branches of government: legislative, executive and judicial. The cantons are divided into 74 municipalities and 5 cities, all representing local self-government units. The capital of the FB&H is Sarajevo. The RS is an entity that is divided into regions (Banja Luka, Doboj, Bijeljina, Pale and Trebinje), which are further divided into 55 municipalities and 2 cities. The de jure capital of the RS is East Sarajevo, and de facto capital, i.e. the administrative seat is Banja Luka.

As a result of the administrative structure of B&H and a very complex public administration a number of budget accounting subsystems have been developed. The differences between them are numerous and concern professional framework (degree of application of IPSAS, GFS, etc.), accounting bases used, forms and structures of financial statements (including budget execution reports), principles and scope of consolidation, modalities of organization of the treasury system and a number of other important assumptions.

The situation is further exasperated by the lack of a single system to inform the public about public administration performance. For the most part, budget reports include only financial information, without any details if there is compliance with all relevant regulations, if all necessary procedures were conducted etc., and this contributes to arbitrary spending of public resources and opens up opportunities for different types of misuse. Today, when most countries are financed through lending and development funds, mostly from the European Union, non-transparent financial reports and heterogeneous accounting systems are no longer acceptable.

Considering the above, the following hypothesis is proposed: *To be efficient, a budget accounting system should be compatible with the administrative organization of each individual country and modeled in such way as to ensure adequate and trans-*

*parent measurement of public administration performance.* To achieve the aims of this paper and to test the research hypothesis, a survey was conducted among public employees in the fields of finance, accounting and auditing at all levels of government as well as among experts from the accounting and auditing field in B&H.

The research results show that most of the surveyed individuals find that the model of budget accounting in B&H is not compatible with the administrative organization and particularities of B&H (in the sense of the current legislature and authority allocation between budget users, established accountability system and such). The respondents find that the current model of budget accounting in B&H does not enable the measurement of performance (efficiency, effectiveness and economy) of public administration, which opens up possibilities for misuse in public spending.

Correlation and regression analyses show that there is a strong relationship between efficiency, compatibility with administrative organization and adequate and transparent measurement of the performance of public administration in the case of B&H. Thus, we may conclude that the hypothesis of this paper is confirmed.

Establishment of an adequate system able to measure performance would have a critical role in providing support to all levels of government in B&H in decision-making and new policy implementation. It must be designed and implemented in such way as to optimize the relationship between strategic planning, public service delivery and the measurement of performance in terms of achieving comprehensive political goals from both financial and non-financial aspects. Such approach assists governments in achieving their strategic goals in regards to providing public services, thereby providing added value to the citizens.

## 2. Theoretical framework

Internationally, there are many papers that focus on identifying an optimal system for measuring the performance of public sector entities. One of the most frequently mentioned movements called "New Public Management – NPM" was created at the end of the last millennium. Some of the goals of this movement are to improve the performance of the public sector; stimulate accountability of government units to the users of their services, reduce

public expenditures and improve and strengthen accountability of public management (Barzelay, 2001). Some authors go even further and advocate the idea about a new movement called "New Public Service – NPS". This movement represents a group of ideas similar to NPM, which focus on citizens and their needs. The main role of public administration should be to satisfy citizens' needs in the best possible way (Denhardt, Denhardt, 2000). Finding the optimal system to measure public administration performance represents a challenge for researchers across the world. A great number of systems for measurement of public sector entity performance are created similarly to the 3E group of indicators (effectiveness, efficiency and economy). However, there are also multi-dimensional approaches to measuring performance, which emphasize the significance of interrelations between different stakeholders within the public sector. In their study, Brignall and Modell (2000) use a multi-dimension approach seek to identify adequate performance indicators, which budget organizations should disclose to satisfy information needs of three main groups of users, that is, the ones that provide the funds, professionals (companies) providing services and public service users. In their study, Smith and Street (2004) work on measuring the efficiency of budget organizations using two methods: Data Envelopment Analysis (DEA) and Stochastic Frontier Analysis (SFA). Using the DEA methodology in combination with other methods, Ray and Van de Sijpe (2007) measured the efficiency of public expenditure management in 52 developing countries. Their research results show that the efficiency of the public sector is primarily determined by a structural variable and management indicators, and that Asian countries have significantly greater efficiency in comparison to lower-income European countries. Performance measurement in the public sector is also possible using Balanced Scorecard (BSC), which is primarily developed for the private sector to measure results from the following perspectives: financial, customer, internal operational processes and learning and growth (Kaplan, Norton, 2001). The BSC is currently equally used in the public sector as in the private sector with certain modifications. The most significant difference, in comparison to the private sector, is that in the public sector, customer perspective is placed first, that is, customers must be clearly identified (donors, government, residents and such) so as to satisfy their needs, while the financial perspec-

tive is placed second (Kaplan, 2001). Detailed instructions about this are given by Niven, who transformed the concept of BSC into a tool, completely adapted to the public sector needs to improve the strategic and fiscal effectiveness and efficiency (Niven, 2008). Resource Accounting and Budgeting (RAB) is an approach to budget accounting founded on an accrual basis of accounting, which focuses on the results instead of inputs. The term *resource accounting* was devised by the IFAC<sup>1</sup> – Public Sector Committee in 2001 with an aim to emphasize that the changes recommended by the UK government imply more than the adoption of accrual accounting. The second key aspect is the connection between inputs, departmental goals and achieved results. Resource budgeting involves using accounting information about resources as the basis for planning and controlling public expenditures. Not all countries which have adopted accrual accounting, apply it in budgeting. The UK is one of those countries which find that it is better that government budgeting and accounting is determined on the same accounting basis. RAB translates the Government's policy and priorities into departmental strategies and budgets and then reports to Parliament on the efficiency and effectiveness of the provided services. The main goal is to improve the quality of public service delivery. Performance Management (PM) in public administration has a long history, and by all accounts, a long road ahead. However, its development was not without challenges. Practitioners, consultants and members of the academic community were searching for answers to the paradoxical and often problematic character of PM. Public administration reforms across the world have brought various approaches to performance management and measurement in the public sector. One of the newer trends is the correction of certain aspects of the NPM (Verbeeten, Speklé, 2015) and its expansion towards the New Public Governance (NPG). This is occurring at different rates in different European countries and public entities. Performance management is gradually becoming an integral part of all modern arrangements of governance. The part that was missing is a global, holistic approach that would integrate all aspects of the functioning of the public sector and guide them towards achieving excellence and the highest level of performance. Common Assessment Framework (CAF) represents such an approach. CAF is a Total Quality Management (TQM) tool specifically tailored for the public sector, which

is based on the self-assessment of organization performance. Since the launch of its first version in 2000, which was revised twice, in 2002 and 2006, approximately 3,000 organizations in many countries across and outside Europe have implemented it. The last version was published in 2013 and it presents a new standard. However, an ever newer version called CAF2020 is being developed. The question of measurement and improvement of public administration efficiency is a subject of continuing research of the academic communities in the neighboring countries as well. A great number of studies focus on the improvement of the budget accounting system as one of the key items within the public sector reform. Dražić Lutlisky and Vašiček (2007) emphasize the significance of external and internal financial reports in public sector governance and argue that the need for making public sector financial reporting in practice is very close and similar to that of the entrepreneurship sector. Public sector entities' financial reports are a source of data and information about public spending. They also provide information about events and business processes that occurred during the year and serve as a basis for decision-making since they enable the recognition of both strengths and weaknesses of the program that should be corrected. Using performance indicators, it is possible to compare budget users of the same size, considering the number of employees, number of people using their services, size of available funds, budget size, that is, income and expenditures. They increase transparency and enable a constructive dialogue with public administration (Crnković-Stumpf, 2008). By making public sector reporting similar to that of the private sector, trust in public administration grows, which creates possibilities for using modern methods of financing, such as the Public-Private Partnership model, which is increasingly used in European Union countries. Performance measurement and monitoring is necessary for government units in order for them to improve the decision-making and resource allocation processes. The introduction of program planning enables the integration of strategic and budget planning, which provides a possibility to measure the performance of individual programs, and thereby the total operations of government units (Vašiček, 2009). Performance measurement systems are, necessary, among other things, to prevent misuse of limited budget funds. There is no universal solution to setting up a budget accounting model. Therefore, it is necessary to take

into account that financial reporting depends mainly on the micro and macro environment, in particular the country-specific institutional environment (Mijoč et al., 2016).

In the following chapters, the authors examine if the B&H budget accounting system is compatible with the administrative organization of the country and determine if it enables performance measurement. Finally, we offer recommendations for improvements.

### 3. Methodology

To examine whether the B&H budget accounting system is compatible with its administrative organization and determine if it enables performance measurement, we have conducted a survey on a sample of two groups of respondents (a total of 208) from budget organizations in B&H: public employees in the finance, accounting and auditing positions in budget organizations across all levels of government (practitioners) and experts in the accounting and auditing profession from public universities in B&H (theorists), who belong to budget-funded organizations as well. The respondents from the first group are directly involved in the process of budget preparation, adoption and execution and are therefore in the best position to identify problems they face daily in their work. In the latter group, we have experts in the accounting and auditing profession, who are able to highlight the advantages and disadvantages of the current budgeting model from the academic and professional aspect and offer recommendations for improvement in accordance with international best practices. The survey was conducted at the end of 2017. The respondents were contacted via electronic mail and/or telephone and asked to participate in the survey for the purpose of research. Statistical processing of the data collected through questionnaires was conducted using the statistical program SPSS, version 16.0. Spearman's rank correlation coefficient was used due to the character of variables used to measure the respondents' opinions. The questions were formulated using the Likert scale. In addition, regression analysis was used, which is a justified approach in social studies.

#### 3.1 Sampling and data

The survey was conducted by mailing the questionnaire to the practitioners from budget organiza-

tions at the local level (79 municipalities in FB&H, 57 municipalities in RS and Brcko District), at the cantonal level (10 cantonal ministries for finance), at the entity level (16 ministries in FB&H and 16 ministries in RS) and at state level (9 state ministries). The survey was sent also to the theorists in

the field of finance, accounting and auditing from 7 public universities in B&H (a total of 50). Out of a total of 237 questionnaires sent, 208 were returned, which means that the response rate was 87.8%. The demographic characteristics of the respondents are shown in Table 1.

**Table 1 Demographic characteristics**

Characteristic of the surveyed respondents	Number of respondents (n=208)	Structure in %	Cumulative %
<b>Gender</b>			
Male	74	35.58	35.58
Female	134	64.42	100.00
<b>Age</b>			
Up to 25 years of age	2	0.96	0.96
26-35 years of age	52	25	25.96
36-45 years of age	42	20.19	46.15
46-55 years of age	73	35.10	81.25
56 and over	38	18.27	99.52
Not answered	1	0.48	100.00
<b>Level of education</b>			
Secondary school	7	3.37	3.37
College (pre-Bologna two-year study)	5	2.40	5.77
Undergraduate (pre-Bologna four-year study and Bologna three-year study)	168	80.77	86.54
Masters/PhD	27	12.98	99.52
Not answered	1	0.48	100.00
<b>Certificates relating to profession</b>			
Certified accounting technician	4	1.9	1.9
Certified accountant	107	51.4	53.4
Certified external auditor	20	9.6	63.0
Internal auditor	6	2.9	65.9
Certified accountant, Internal auditor	6	2.9	68.8
Certified external auditor, Internal auditor	4	1.9	70.7
Other certificates	9	4.3	75.0
No certificates	52	25.0	100.0

Source: Authors' research, December, 2017

From the data presented in Table 1, we may conclude that almost two thirds of the respondents are female (64.4%); more than half of the respondents are aged 36 to 55 (55.3%); almost all respondents have an undergraduate, masters or a doctorate degree (94.2%). The Table shows

that most of the respondents (75.0%) have one or more certificates relating to their profession. The majority of respondents are certified accountants (51.4%), followed by certified external and internal auditors (12.5%), while some of them even have more than one certificate (4.8%) We may

conclude that the respondents' profile confirms the credibility of their opinions on the research topic, thus contributing to the relevance and reliability of the research results and the validity of

the proposed measures for improvement of the budgeting model.

The institutional characteristics of the respondents are shown in Table 2.

**Table 2 Institutional characteristics**

Organization characteristics	Number of respondents (n=208)	Structure in %	Cumulative%
Affiliation to adequate segment of the public sector			
Other	76	36.54	36.54
Government administration	132	63.46	100.00
Number of employees			
Up to 50 employees	70	33.65	33.65
From 51 to 250 employees	113	54.33	87.98
More than 250 employees	25	12.02	100.00
Administrative level within B&H			
Government level	22	10.58	10.58
Entity level	62	29.81	40.39
Cantonal level	45	21.63	62.02
Municipal level	78	37.50	99.52
Other	1	0.48	100.00

Source: Authors' research, December, 2017

As evident from Table 2, budget organizations from the sample are divided depending on whether they are affiliated with the government administration at any level of governance in B&H (63.5%), or to other budget-funded organizations (36.5%). According to the IMF methodology, public enterprises are an integral part of the public sector; however, they were not included in the sample because their accounting system is not based on the principles of budget accounting. More than half of organizations from the sample (54.3%) fall into the group of medium-sized legal entities with 51 to 250 employees. The sample includes organizations from all levels of governance in B&H. The Table shows total number of organizations per individual level of governance. Most of the respondents from the organizations that are affiliated with government administration at municipal level reported that their organization deals with public administration, government administration and general work of the public or local administration (78 respondents). Most of the respondents from organizations affiliated with government administration at cantonal, entity or government level

specified the functions of their ministries (54 respondents). They include the following: foreign affairs; internal affairs (security and defense); finance and treasury; justice; traffic and communications; culture and sports; education, science and technology; human rights and refugees; veterans-disability protection; energy, mining and industry; trade; entrepreneurship and crafts; agriculture, water management and forestry.

### 3.2 Statistical methods

To assess their opinions on the characteristics of the current budget accounting system in B&H and the administrative context of the country, the respondents were asked to indicate, on a scale of 1 to 5 (1 – strongly disagree, 5 – strongly agree), their agreement with the following statements:

- 1) Current budget accounting system in B&H is adequate for measuring and reporting on the results and performance of public administration;

- 2) Current budget accounting system in B&H enables the measurement of efficiency, that is, the productivity of resource use;
- 3) Current budget accounting system in B&H enables the measurement of effectiveness, that is, the extent to which programs, projects and activities achieve their goals and purpose;
- 4) Current budget accounting system in B&H enables the measurement of economy, that is, control over costs;
- 5) Current budget accounting model in B&H is fully compatible with the administrative organization and particularities of B&H.

The statements were formulated with the view to assessing, from the theoretical and practical aspects, if the budget accounting system in B&H is adequate and compatible with the administrative organization, and if it enables the measurement of public administration performance (efficiency, ef-

fectiveness and economy). These are also the areas on which EU places a special focus during the public finances management reform.

#### 4. Results

The interpretation of the results will be conducted to test the hypothesis of the paper, which assumes that: *To be efficient, a budget accounting system should be compatible with the administrative organization of each individual country and modeled in such way as to ensure adequate and transparent measurement of public administration performance.*

##### 4.1 Perception of the ability to measure the performance of the budget model in B&H and compatibility with the administrative organization and particularities of B&H

The table below shows the respondents' opinions on the characteristics of the current budget accounting model in B&H and its compatibility with the administrative organization and particularities of B&H.

**Table 3** Descriptive statistics of the respondents' opinions on the characteristics of the current budget accounting system in B&H and administrative context of the country

	N	Min.	Max.	Average	St. Dev.
Current budget accounting system in B&H is adequate for measuring and reporting on the results and performance of public administration	208	1	5	2.600	1.050
Current budget accounting system in B&H enables measurement of efficiency, that is, the productivity of resource use	208	1	5	2.510	1.026
Current budget accounting system in B&H enables the measurement of effectiveness, that is, the extent to which programs, projects and activities achieve their goals and purpose	208	1	5	2.510	1.026
Current budget accounting system in B&H enables the measurement of economy, that is, control over costs	208	1	5	2.610	1.093
Current budget accounting model in B&H is fully compatible with the administrative organization and particularities of B&H	208	1	5	2.700	0.984

Source: Authors' research, December, 2017

The majority of respondents gave low ratings for all characteristics, which indicates that the current model of budget accounting in B&H is not adequate.

The main reason for this is the fact that it does not enable measuring and reporting on the results and performance of public administration. This also means that the current budget model in B&H does not enable the measurement of public adminis-

tration performance (efficiency, effectiveness and economy), which opens up opportunities for misuse of public funds.

As for the compatibility of the budget accounting model with the administrative organization and particularities of B&H, the respondents from the lowest levels of government reported having problems interpreting and complying with the relevant

legal regulations for years because they are often not sufficiently elaborated to meet the needs of local government organizations.

The situation is further complicated by a large number of laws and by-laws regulating the same area, which often overlap. Moreover, it takes long for practical guidelines on the implementation of new laws and by-laws to be implemented in practice.

One of the main reasons for this is the complexity of budget legislation in B&H. Public servants are burdened with a number of reports that they have to compile at very short intervals, so it is no wonder that they resist the introduction of new solutions imposed by public administration reform in the area of budget accounting, such as performance measurement.

4.2 Analysis of the relationship between the adequacy of the budget system in B&H and the perception of its efficiency

To assess the relationship between efficiency, compatibility with the administrative organi-

zation and adequacy for transparent measurement of public administration performance, we used the Spearman's rank correlation analysis. For the correlation analysis, we used variables to measure: (i) the respondents' perception of the compatibility of the current budget accounting model in B&H with the administrative organization and particularities of B&H (variable A3\_2), (ii) the respondents' perception of whether the current budgeting system in B&H enables efficiency measurement (variable A2\_1) and (iii) the respondents' perception of whether the current budgeting system in B&H is adequate for measuring and reporting on the results and performance of public administration (variable A1). Considering that we used all three variables from the Likert scale, we have chosen the Spearman's rank correlation analysis, which is adequate for the analysis of the mentioned variables.

**Table 4 Results of the Spearman's rank correlation analysis of the selected variables with the goal to assess the relationship between measurement of efficiency, compatibility with the administrative organization and adequate and transparent measurement of public administration performance in B&H**

		Compatibility with the administrative organization and particularities	Ability to measure efficiency	Adequacy for measuring and reporting on results and performance
Compatibility with the administrative organization and particularities (variable A3_1)	Correlation coefficient	1	0.579	0.394
	P-value		0.000***	0.000***
	Number of respondents		208	207
Ability to measure efficiency (variable A2_1)	Correlation coefficient		1	0.483
	P-value			0.000***
	Number of respondents			207
Adequacy for measuring and reporting on results and performance (variable A1)	Correlation coefficient			1
	P-value			
	Number of respondents			

Note: \*\*\* Significance at the 1% level

Source: Authors' research, December, 2017

Table 4 presents the results of the Spearman's rank correlation analysis using the selected variables to assess the relationship between efficiency measurement (variable A2\_1), compatibility with the administrative organization (variable A1) and adequate and

transparent measurement of public administration performance (variable A3\_1). The correlation analysis shows that there is a strong relationship between the selected variables. The relationship between the compatibility with the administrative organization



and particularities with efficiency measurement is high (the correlation coefficient is 0.579) and statistically significant with 1% probability. The relationship between the ability of the budget system to measure efficiency with the adequacy for measuring and reporting on results and performance is also very high (correlation coefficient is 0.483) and statistically significant at the 1% level.

The research results show that the current budget accounting system in B&H is used exclusively for recording of financial transactions and preparation of financial reports for external users. However, it does not satisfy the need for budget organizations to manage their finances efficiently.

Correlation analysis shows that the efficiency of the budget accounting model in B&H will increase as it becomes more compatible with the country's administrative organization. This means the higher the compatibility of the budget accounting model in B&H with the administrative organization of the country, the greater the ability to measure and report on the results and performance of public administration.

Therefore, the primary goal should be to improve the existing budget accounting model so as to en-

able the monitoring of arbitrary public spending and measurement of public sector performance in terms of satisfying public needs. One of the main preconditions for that is the application of the selected instrument of cost and management accounting in the public sector, which would enable the measurement of budget organizations' performance and improve, in particular, the control function of accounting.

In addition to the correlation analysis, the multiple regression method was used. As a dependent variable, we used the respondents' assessment of the compatibility of the current budgeting model in B&H with the administrative organization and particularities of B&H (variable A3\_2). We used four independent variables. The first independent variable includes the respondents' opinions as to whether the current budgeting system in B&H is adequate for measuring and reporting on the results and performance of public administration (variable A1). The remaining three independent variables include opinions as to whether the current budget accounting system in B&H enables the measurement of efficiency (variable A2\_1), effectiveness (variable A2\_2) and economy (A2\_3).

**Table 5 Regression analysis: Dependent variable: Respondents' assessment of compatibility of the current budget accounting model in B&H with the administrative organization and particularities of B&H**

	Regression coefficient estimates	Standard deviation	P-value
Constant	1.226	.179	.000
A1	.180	.070	.010*
A2_1	.244	.110	.027*
A2_2	.074	.116	.526
A2_3	.081	.081	.317
Determination coefficient			0.280
Corrected determination coefficient			0.266

Source: Authors' research, December, 2017

The regression analysis shows that the variations in responses about the adequacy of the model for measuring and reporting on budget organization results and performance, as well as responses about efficiency measurement indicate there is a 28.0% variation in responses about the compatibility of the current budgeting model in B&H with the administrative organization and particularities of

B&H. If we apply the corrected determination coefficient, which has been corrected for the number of independent variables, the percentage of interpreted variations is somewhat lower - at 26.6%. The relationship between the compatibility of the current budgeting model in B&H with the administrative organization and particularities of B&H and adequacy for measuring and reporting on performance

results is positive and statistically significant at a 1% significance level ( $p$ -value=0.010). The relationship between the compatibility of the current budget accounting model in B&H with the administrative organization and particularities of B&H and its ability to measure efficiency is also positive and statistically significant with 1% probability ( $p$ -value=0.027).

Correlation and regression analyses show that there is a strong relationship between efficiency, compatibility with administrative organization and adequate and transparent measurement of the performance of public administration in the example of B&H. Thus, we may conclude that the hypothesis of this paper is confirmed.

## 5. Discussion and conclusion

The requirements for joining the European Union include, among others, the need for candidate countries, such as B&H, to evaluate their public expenditure control mechanisms and to assess the extent to which they abide by the principles of good budgetary management, first and foremost: economy, efficiency and effectiveness. Accountability in public expenditure management means that there are clearly defined lines of responsibility so that public employees can be accountable for their actions. It would be desirable to establish an adequate system of rewards and sanctions within each budget organization so as to promote accountability among public.

Accountability is necessary in all segments of the public sector, from promises given by politicians during their election campaigns, to their performance during their term in office. There are different types of accountability: some are 'internal' i.e. within the executive branch of government, others pertain to the relationship between the executive government and other levels of government or with the public. Accountability to parliament is essential and it is one of the fundamental conditions for a sound budget. In this context one should also mention accountability to citizens, which could be strengthened by introducing mechanisms that ensure that campaign promises on publishing reports on government activities and the results achieved are honored. Transparency increases accountability. It implies regular, timely and complete sharing of information with all interested parties, from actors in the legislative and executive branch of govern-

ment, to the public, about the results achieved by budget organizations.

An adequate and functioning budget accounting information system, based on adequate instruments of cost and management accounting, would greatly contribute to the achievement of previously identified goals and would improve all aspects of governance in B&H. However, it is necessary to keep in mind that the reform of any part of public administration, budget accounting information system included, is a continuous process and, as such, it is an opportunity to learn as the necessary changes are being implemented. In each of the phases of this process, unexpected events may occur, potentially halting progress. Therefore, continuous assessment of performance is necessary to ensure that adequate changes are implemented. A comprehensive budgeting system with added elements of cost and management accounting represents a quality basis for enhancing internal financial control and enabling internal audit and various forms of external supervision of government units.

Performance measurement increases the level of performance, that is, the economy, efficiency and effectiveness of resource use in the operation of the body whose performance is being measured. Consequently, the research results presented in this paper may be used as a basis for future studies and development of good practices in the mentioned field.

One of the limitations of this paper is that the focus of interest is on budget organizations, which represent the greatest but not the only component of the public sector. Public enterprises, as a very important factor within the public sector, have not been included in this analysis because of their special nature. Specifically, public enterprises are business entities in which the state has majority ownership and which operate in the same accounting framework as private enterprises. This means that they are mainly established as profit-oriented enterprises. Nevertheless, it does not mean that they do not have to deal with problems in the delivery of goods and services similar to those faced by budget organizations. In that context, there is a possibility to conduct a similar research that would focus on this segment of the public sector. Such research would provide a more comprehensive insight into the advantages and disadvantages of the accounting information system of the entire public sector in B&H.

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## **MODEL PRORAČUNSKOG RAČUNOVODSTVA I MJERENJE PERFORMANSI: PERCEPCIJA JAVNIH ZAPOSLENIKA U BOSNI I HERCEGOVINI**

### **SAŽETAK**

Cilj je rada ispitati je li računovodstveni sustav proračuna u BiH primjeren, omogućava li mjerenje performansi javne uprave te dati prijedloge za njegovo unaprjeđenje. U tu je svrhu provedeno istraživanje među javnim službenicima zaposlenima na poslovima iz područja financija, računovodstva i revizije na svim razinama vlasti u BiH, kao i među stručnjacima za računovodstvenu i revizorsku struku u BiH. Rezultati istraživanja ukazuju na nepotpunost računovodstvenog sustava proračuna u BiH zbog njegove nemogućnosti da mjeri i izvještava o učinkovitosti, djelotvornosti i ekonomičnosti javne potrošnje, što smanjuje transparentnost i stvara pogodno tlo za zlouporabu javnih dobara i usluga. Sudeći prema dosadašnjim istraživanjima iz ovoga područja, jedan od najučinkovitijih načina za prevladavanje ovakvoga stanja je uvođenje odabranih instrumenata troškovnog i menadžerskog računovodstva u računovodstveni sustav proračuna, čime bi se omogućilo mjerenje i izvještavanje o performansama javne uprave i samim time unaprijedila transparentnost i odgovornost javnih zaposlenika.

**Ključne riječi:** računovodstvo proračuna, mjerenje performansi, troškovno računovodstvo, menadžersko računovodstvo, transparentnost, odgovornost

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# MICRO-DETERMINANTS OF THE INDIVIDUALS WILLING TO SUPPORT PROJECTS RELATED TO RENEWABLE ENERGY SOURCES

## ABSTRACT

As the 21<sup>st</sup>-century paradigm, sustainable development implies, among other things, the need to ensure environmental sustainability through replacement of traditional energy sources with environmentally acceptable renewable ones. Economic literature identifies a number of prerequisites and determinants needed for the successful use of renewable energy sources. The purpose of this study is to deepen our understanding of the determinants of an individual's willingness to support the implementation of energy-saving measures. A nation-wide citizen perception survey of 3,024 respondents was carried out in Bosnia and Herzegovina in 2018 to collect data for this study. The paper takes a micro-level approach focusing on the behaviour of an individual. The respondents were found to have a positive attitude toward renewable energy projects. Most of them (72.78%) support such projects. Logistic regression (maximum-likelihood estimation) was employed to test the proposed hypotheses. The results of the study show that there are several important predictors of an individual's support for projects related to renewable energy sources, including age, gender, income, satisfaction with the standard of living, religiousness, living in a male-dominated household, and ethnicity. The results of the study can help policymakers to design and adopt adequate policy measures for promoting financial investments in renewable energy sources, and project developers to tailor their communication and promotion strategies to the needs of specific population segments to better achieve the goals and benefits of such projects.

**Keywords:** Renewable energy sources, social acceptance, Bosnia-Herzegovina, logistic regression

## 1. Introduction

The energy intensity (a measure of the energy inefficiency of an economy) in Bosnia and Herzegovina (B&H) is the highest in the Western Balkan region

(World Bank, 2018)<sup>1</sup>. It is also 37 percent higher than the average in Europe and Central Asia (ECA) and more than double the average in the European Union (EU). Unlike other ECA countries, energy intensity in B&H has increased by around 30 per-

cent since 2005. Partly mirroring the high energy intensity and reliance on coal, the country emits about six times more CO<sub>2</sub> per US\$ GDP compared to the EU and almost 60 percent more than the average in ECA. The high energy and carbon intensity adversely affects the country's economic competitiveness, represents an important environmental challenge, constrains the ability to efficiently meet growing energy demand in a sustainable way and impacts the potential for optimising revenues from energy exports. In order to improve energy intensity, there is a growing need for projects supporting renewable energy sources. Such projects demonstrate strong energy savings, associated benefits such as economic and financial viability of projects, and environmental and social co-benefits. For example, if the average normative energy consumption is reduced by up to 50 percent, the average payback period of investment is less than ten years, and the comfort levels, measured by indoor temperature levels and lighting conditions, are significantly improved. The number of projects related to renewable energy initiatives, which are primarily financed by different governmental levels, is increasing. Initiative for the implementation of such projects should also come from individuals. However, not much is known about public perception and willingness to support projects related to renewable energy sources in the context of such a high level of energy intensity. Understanding which micro-level determinants influence willingness to support projects related to renewable energy sources can provide valuable inputs for policy decision making.

As the 21<sup>st</sup> century paradigm sustainable development implies, among other things, the need to ensure environmental sustainability through replacement of traditional energy sources with environmentally acceptable renewable ones. Successful transition to renewable sources requires comprehensive legal, social, and technical changes, i.e., "requires re-engineering technologies and changing the ways people interact with energy" (Peterson et al., 2015). Contemporary economic literature describes a number of prerequisites and determinants needed for the successful use of renewable energy sources. Financial, technical, and legislative prerequisites must be in place. However, the aim of this paper is to test whether age, gender, marital status, household income, education, satisfaction with the standard of living, perception of an opportunity, religiousness, and ethnicity are associated with the willingness to support projects related to renewable energy sources. Instead of focusing on the condi-

tions that must exist within the country, our study aims at understanding the micro-level behavioural economics. In other words, the purpose of this study is to deepen the understanding of micro-determinants shaping public perception of renewable energy sources and investigate their willingness to support the implementation of energy-saving measures.

## 2. Literature Review

Motivational factors can be viewed from the "macro" and "micro" level. "Macro" level implies "external" motivational factors that affect willingness to deploy renewable energy sources at a country level. Thus, the existing literature identifies political factors, socio-economic factors, and country-specific factors (Marques et al., 2010).

Political factors include the creation of political climate and conditions for the successful deployment of renewable energy sources, which in turn implies creating appropriate public policies and providing various incentives and benefits for investing in renewable sources (Wang, 2006; Johnstone et al., 2010; Lasco, Chernyakhovskiy, 2017; Schelly, Letzelter, 2019; Moghadam et al., 2020).

Socio-economic factors pertain to prices of renewable energy sources, the effects of carbon dioxide emission, total energy balance, history of using traditional energy sources, and the correlation between GDP and the use of renewable energy sources (Marques et al., 2010; Valadkhani et al., 2019).

Country-specific factors include the production potential of the given region/country, continuity of using renewable energy sources, and culture/customs (Marques et al., 2010; Ruiz-Fuensanta et al., 2019). Renewable energy sources require significant investments, and therefore countries with a higher GDP that give financial benefits and promote renewable energy sources have significant electrical energy consumption, are dependent on power import, are highly aware of the need to reduce CO<sub>2</sub> emissions, and produce a smaller share of energy from traditional energy sources that pollute the environment (thermal power stations, etc.) are more inclined to deploy renewable energy sources (Wang, 2006; Menz, Vachon, 2006; Sadorsky, 2009; Marques, 2010; Frazer, 2020). Furthermore, countries that have a greater potential for using renewable energy sources and the continuity of taking measures for promoting and using renewable sources tend to use them more (Menz, Vachon, 2006; Marques, 2010).

Factors at the micro-level include personal factors that affect individuals' motivation for deploying renewable energy sources. The literature identifies demographic factors: age, gender, level of education, place of residence, income level (Shallo et al., 2020; Frazer, 2020), as well as psychological factors that find their expression in behaviour, beliefs and values (Gustafson et al., 2020). Behaviour, values, and beliefs are significantly affected by media and individuals' previous experiences.

Shallo et al. (2020) found that the level of education, level of income and access to credit have a significantly positive influence on the motivation and adoption of renewable sources (biogas technology). Frazer (2020) evidences the link between income level (and unemployment rate), the strength of social ties and motivation for employing renewable different energy sources. The results of Gustafson et al. (2020) show that political beliefs influence motivation for deploying renewable energy sources: Republicans' support for renewable energy is driven more by economic costs, whereas Democrats' support is driven more by concern about global warming.

It is believed that younger people, women, individuals with a higher level of education and higher income, as well as those that had previous positive experiences with renewable energy sources are more inclined to use them (Black et al., 1985; Zimmer et al., 1994; Getzner, Grabner-Kräuter, 2004; Cleveland et al., 2005; Paço, Varejao, 2014; Ameli, Brandt, 2015; Parrish et al., 2020).

Parrish et al. (2020) identified motivations and barriers to implementation of renewable energy sources – familiarity and trust, perceived risk and control, complexity and effort, and consumer characteristics and routines.

Ameli and Brandt (2015) classify factors that can affect the deployment of renewable energy sources into four groups: socio-economic characteristics of the household, the characteristics of their dwelling, household's attitudes, knowledge and behaviour regarding the environment and households, knowledge about their energy spending and use. Socio-economic characteristics of household pertain to demographic characteristics, i.e., the above-listed personal factors. The characteristics of dwelling supplement personal factors and observe the view on the deployment of renewable energy sources by house owners versus renters, the significance of the type of dwelling (apartment or house), household size, years lived in the residence, and location of household (village or city). Household's attitudes pertain to psychological factors which are

expressed through attitudes, beliefs, and behaviour, in this case, related to renewable energy sources. Households' knowledge about their energy spending and use pertains to whether house owners know the amount of their energy bills. The results of the study show that younger and middle-aged individuals are likely to invest more in renewable sources, while older individuals are likely to invest less. In addition, households with a larger number of members were more likely to invest, and the same is true of apartment and house owners, as opposed to renters, which is expected. These authors proved that individuals who have moved into their house/apartment recently were more likely to invest in renewable energy sources. The same was found for individuals who knew the amount of their energy bills and used the energy sparingly. Psychological factors were also found to be important – individuals who were active in non-governmental organizations were more willing to invest. The socio-psychological context proved to be a significant factor when deciding about the use of renewable energy sources.

The described endogenous and exogenous motivators cannot be viewed as isolated categories. They have a synergetic effect on individuals' motivation and intention to use renewable energy sources. Peterson et al. (2015) give a significant contribution to the synthetisation of motives and factors that affect acceptance and deployment of renewable energy projects by linking endogenous and exogenous motivators. They argue that place in spatial, social and historical contexts and formal and informal processes influence people's willingness to introduce and accept renewable energy sources. "The context of place, including cultural, economic, environmental, historical, political, social and technological characteristics of a place, all have the potential to influence how individuals and communities perceive low-carbon energy technologies and how they engage in their development" (Peterson et al., 2015: 2-3). The authors relate place to aesthetics, proximity, demographics and history. Relating perception to an actual project, the authors believe that personal experience of the place where people live ("aesthetics") affects their willingness to accept renewable energy sources. Projects which have negative aesthetic effects on the landscape, cause noise pollution, endanger wildlife or are potentially dangerous for people, or are only perceived as such, have a negative effect on the individual and public perception of such projects and their willingness to support them. The proximity implies that people are familiar with the actual project, i.e., that it is im-

plemented in their local community. Proximity of an actual renewable energy source can be the cause of its acceptance or opposition, again depending on the community perception. Demographics pertains to individuals' demographic characteristics (gender, age, race, income, level of awareness of the project, etc.), while history pertains to historical and cultural significance the location has for (local) population. If the location has a special historical and cultural significance, the willingness to deploy renewable energy sources in this location decreases. With respect to processes, the authors argue that "those who wish to develop, deploy and site low-carbon energy technologies need to develop appropriate social processes for engaging host communities and other individuals who live in or care about the place" (Peterson et al., 2015: 5). Deployer's specific action toward the public and the local community is necessary for the successful deployment of projects. This action implies the creation of a positive climate for project deployment, which in turn includes stakeholders' participation in the process (Endres et al., 2009; Davis, Selin, 2012; Karjalainen, Ahvenniemi, 2019), proper informing of stakeholders on the nature and benefits of renewable energy sources (and the actual project), and media support to the deployment process (Chewning, 2014).

Karjalainen and Ahvenniemi (2019) found that people have overcome the barriers to the adoption of renewable energy sources with the help of trustworthy information and advice from experts and from other adopters.

Even the positive view on renewable energy sources and actual projects – awareness of the significance of using renewable energy sources, need to protect the environment and reduce earth and air pollution – does not necessarily result in individuals' willingness to behave environmentally friendly (Ameli, Brandt, 2015). "Consumers do not always translate their concerns into effective purchasing behaviour. The levels of concern displayed by individuals are not reflected in their environmental purchasing habits, or even in other environmental behaviours" (Yam-Tang, Chan, 1998, in Paço, Varejao, 2014). Economic reasons and high costs of deploying and using renewable energy sources are some of the reasons for non-deployment of renewable sources, despite the motivation and willingness to have them (Paço et al., 2009; Rowlands et al., 2002). The intention to deploy renewable energy sources in households decreases with the size of investment – willingness to invest in energy-saving light bulbs, thermal insulation, and energy-efficient windows was greater than willingness for higher investments

in solar panels and heat pumps (Ameli, Brandt, 2015; Zander, 2020).

Zander (2020) concluded that economic motivations for the adoption of renewable energy sources are predominant.

Subsidies for the deployment and use of renewable energy sources and granting favourable loans are some of the solutions.

Inclusion of participants in all stages of the project of the renewable energy sources deployment, information on characteristics, advantages, and drawbacks of the actual project and on long-term benefits of investing in renewable energy sources are significant factors of influence on people's existing attitudes, beliefs and behaviour.

Therefore, it is necessary to support the overall processes – build trust both in authorities and in investors, i.e., in all major actors in the entire process of deploying renewable energy sources (Devine-Wright, Howes, 2010).

### 3. Methods and Sample

A nation-wide citizen perception survey was carried out in Bosnia and Herzegovina in 2018 to collect data for this study. A total of 3,024 respondents (stratified random sample) were interviewed. Face-to-face computer-assisted personal interviews were conducted in 2018 by MEASURE-BiH (USAID project). The paper takes a micro-level approach focusing on the behaviour of an individual. Table 1 summarizes sample characteristics and shows the total number and percentage of individuals supporting projects related to renewable energy sources. Male individuals are more represented in the sample (52.6%), as well as among individuals supporting projects related to renewable energy sources (38.3%). The largest proportion of individuals in the sample belong to the 55+ age group (38.1%), and the largest proportion of individuals supporting projects related to renewable energy sources are in this group (26.8%). The most represented level of education in the sample is secondary education (63.9%), as well as among individuals supporting projects related to renewable energy sources (46.7%). Service and sales workers are the most common occupation in the sample and among individuals supporting projects related to renewable energy sources (15.9% and 4.7%, respectively). Finally, the middle income is the most frequent income level in both categories. We should also note a large percentage of missing data on the occupation and monthly net income of respondents.



Table 1 Sample characteristics

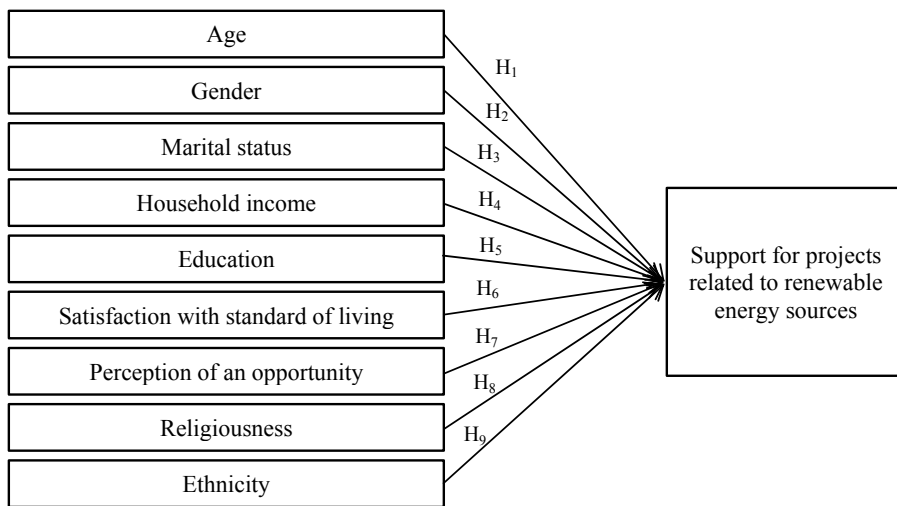
		Total Sample		Individuals supporting projects related to renewable energy sources	
		Frequency	Percentage	Frequency	Percentage
<b>Total</b>	<b>Total sample size</b>	<b>3,024</b>	<b>100%</b>	<b>2,201</b>	<b>72.8%</b>
<b>Gender</b>	Male	1,589	52.6%	1,158	38.3%
	Female	1,433	47.4%	1,042	34.5%
<b>Age</b>	18–24	408	13.5%	282	9.3%
	25–34	488	16.1%	359	11.9%
	35–44	469	15.5%	368	12.2%
	45–54	506	16.7%	381	12.6%
	55+	1,153	38.1%	811	26.8%
<b>Marital status</b>	Single, divorced or widowed	1,246	41.2%	923	30.5%
	Married or in a cohabiting partnership	1,778	58.8%	1,278	42.3%
<b>The highest level of education completed</b>	No or uncompleted primary education	145	4.8%	97	3.2%
	Primary education	508	16.8%	339	11.2%
	Secondary education	1,931	63.9%	1,411	46.7%
	Postsecondary education	440	14.6%	354	11.7%
<b>Ethnicity</b>	Bosniak	1,589	52.6%	1,143	37.8%
	Croat	313	10.4%	202	6.7%
	Serb	1,034	34.2%	791	26.2%
	Other, Did not declare, or Missing	88	2.9%	65	2.2%
<b>Current occupation</b>	Legislators, senior officials, chief executives	22	2.0%	15	0.5%
	Scientists, engineers, and other professionals	76	6.9%	58	1.9%
	Technicians and associate professionals	133	12.0%	94	3.1%
	Clerical support workers	119	10.7%	81	2.7%
	Service and sales workers	176	15.9%	141	4.7%
	Skilled agricultural, forestry and fishery workers	14	1.3%	7	0.2%
	Craft and related trades workers	71	6.4%	48	1.6%
	Plant and machine operators and assemblers	53	4.8%	41	1.4%
	Elementary occupations	143	12.9%	117	3.9%
	Armed forces occupations	9	0.8%	6	0.2%
	Does not know/Refuses to answer	63	5.7%	53	1.8%
Missing	231	20.8%	141	4.7%	
<b>Monthly net income of household</b>	No income in this month	127	4.2%	69	2.3%
	1–500 BAM	563	18.6%	484	16.0%
	501–1,000 BAM	671	22.2%	490	16.2%
	>1,000 BAM	512	16.9%	383	12.7%
	Does not know/Refuses to answer	1,151	38.1%	844	27.9%

Source: Authors' calculations

Logistic regression (maximum-likelihood estimation) was employed to test the proposed hypotheses (see Figure 1). Logistic regression models allowed us to make predictions about the likelihood of an individual to support projects related to renewable energy sources. The analysis was conducted in Stata. We reported Exp(B), i.e., the odds ratio, in order to provide a more intuitive way of result interpretation. We performed collinearity diagnostics (VIF) and Hosmer–Lemeshow goodness of fit test before running regression, which showed no problems. The dependent variable measures whether individuals support projects related to renewable energy sources on a Likert scale from 1 (strongly agree) to 7 (strongly disagree). However, we recoded this variable

into binary: only those individuals who selected 7 (strongly agree) and 6 (agree) were considered to support projects related to renewable energy sources entirely. Based on the literature review and available data, we used several predictors: age, gender, level of education, income, marital status, religiousness, satisfaction with the standard of living, and ethnicity. The dependent variable was recoded into binary questions to provide a more intuitive way of result interpretation: individuals that strongly agreed (1) and agreed (2) were considered to be supportive of renewable energy projects. Continuous variable ‘age’ was recoded into categorical (five age groups), and monthly net income was reduced to four categories, as presented in Table 1.

Figure 1 Model and hypotheses



Source: Authors

The following hypotheses were developed based on the discussion above (Figure 1):

H<sub>1</sub>: Age is associated with the willingness to support projects related to renewable energy sources

H<sub>2</sub>: Gender is associated with the willingness to support projects related to renewable energy sources

H<sub>3</sub>: Marital status is associated with the willingness to support projects related to renewable energy sources

H<sub>4</sub>: Household income is associated with the willingness to support projects related to renewable energy sources

H<sub>5</sub>: Education is associated with the willingness to support projects related to renewable energy sources

H<sub>6</sub>: Satisfaction with the standard of living is associated with the willingness to support projects related to renewable energy sources

H<sub>7</sub>: Perception of an opportunity is associated with the willingness to support projects related to renewable energy sources

H<sub>8</sub>: Religiousness is associated with the willingness to support projects related to renewable energy sources

H<sub>9</sub>: Ethnicity is associated with the willingness to support projects related to renewable energy sources

The selection of predictors was limited by the survey design created by the MEASURE-BiH project team. As such, the main limitation is the unavailability of all predictors that might play an important role in predicting the dependent variable. However, in some cases, even when the variable was available, it was omitted because of the missing data. For example, the current occupation was not considered as it would have generated many missing cases. For future studies, the design of the surveys should be designed in such a way as to avoid such problems.

#### 4. Results and Discussion

In this section, we present the results of the study and interpret them. Overall, the respondents have a positive attitude toward renewable energy projects (Table 2). Most respondents (72.8%) support such projects; 13.9% somewhat agree; 8.1% neither agree nor disagree; 3.7% disagree with such projects, and 1.5% of respondents refuse to answer or do not know the answer. As renewable energy sources are a better solution for the environment and sustainable development, we further examined the cross-tabulation of this variable and the variable that measures various meanings of energy efficiency. Most respondents (43.8% overall and 35.1% of individuals supporting renewable energy projects) identify energy efficiency as ways to save energy, money, and reduce emissions. Interestingly, only 9.6% overall and 4.2% of individuals supporting renewable projects indicated only emission reduction as the meaning of energy efficiency.

**Table 2** Cross-tabulation of two variables: (1) energy efficiency meaning and (2) support for projects related to renewable energy sources

“Energy efficiency means:”	“I support projects related to renewable energy sources.”						
	Somewhat agree or disagree		Strongly agree and agree		Does not know/ refuses to answer	Total	
	Frequency	Percentage	Frequency	Percentage		Frequency	Percentage
Energy-saving	109	3.6%	314	10.4%	10	433	14.3%
Money-saving	95	3.1%	193	6.4%	2	290	9.6%
Emission reduction	162	5.4%	128	4.2%	2	292	9.7%
All of the above	256	8.5%	1061	35.1%	9	1326	43.8%
I do not know what it means	156	5.2%	505	16.7%	22	683	22.6%
<b>Total</b>	<b>778</b>	<b>25.7%</b>	<b>2201</b>	<b>72.8%</b>	<b>45</b>	<b>3024</b>	<b>100%</b>

Source: Authors' calculations

Table 3 presents the results of the model. The following variables were found to be statistically significant predictors: age (35-44, 45-54), gender,

marital status, household income, satisfaction, perception of an opportunity, religiousness and ethnicity.

**Table 3 Logistic regression results**

Variable	Levels and/or explanation	B (S.E.)	EXP (B)
<b>Age</b> Reference group 18–24	25–34	0.05 (0.23)	1.05
	35–44	0.58 (0.24**)	1.79
	45–54	0.49 (0.23**)	1.63
	55+	0.25 (0.21)	1.28
<b>Gender</b>	Male	0.30 (0.12**)	1.35
<b>Marital status</b> Reference category: Single, divorced or widowed	Married or in a cohabiting partnership	-0.28 (0.13**)	0.76
<b>Household Income</b> Reference category: No income	Low income (0–500)	0.69 (0.22***)	1.99
	Middle income (501–1000)	0.60 (0.22***)	1.82
	High income (>1000)	0.59 (0.23***)	1.80
<b>Education</b> Reference category: No education or uncompleted education	Primary education	-0.01 (0.26)	0.99
	Secondary education	0.29 (0.25)	1.34
	Postsecondary education	0.77 (0.31**)	2.16
<b>Satisfaction</b>	To what degree are you satisfied with your standard of living?	0.3 (0.17*)	1.35
<b>Perception of an opportunity</b>	Economic conditions in the country are getting better	-0.32 (0.15**)	0.73
<b>Religiousness</b>	How important is religion in your life?	0.55 (0.12***)	1.73
<b>Male dominance</b>	=1 if the person who makes most of the deci- sions regarding finances and expenditures is a man	-0.39 (0.35***)	0.68
<b>Ethnicity</b>	Croats	-0.29 (0.17*)	0.75
	Serbs	0.5 (0.14***)	1.65
	Others	0.4 (0.44)	1.49
<b>Constant</b>		-0.39 (0.12***)	0.68
<b>N</b>		<b>1,770</b>	

\*\*\* Significant at 0.01 level, \*\* Significant at 0.05 level, \* Significant at 0.10 level.

Source: Authors' calculations

Our model shows that age is a statistically significant predictor (except for 25–34 and 55+ age categories). The odds that respondents in 35–44, 45–54 and 55+ age groups will support projects related to renewable energy sources are 79% (significant at 5%), 63% (significant at 5%) and 28% (not significant) higher than those for reference category (18–24), respectively. The odds are slightly decreasing as we move from one age category (younger) to another (older); but overall, individuals above 25 years of age are more likely to support projects related to renewable energy sources than the youngest (18–24) group. Younger individuals are more likely to

use renewable energy sources (Kinnera et al., 1974; Getzner, Grabner-Kräuter, 2004; Mills, Schleich, 2012; Paço, Varejao, 2014). However, Roberts (1996) obtained results that suggest the opposite: older respondents were more willing to invest and support projects in renewable energy than younger individuals. Mills and Schleich (2010) concluded that middle-aged people were more likely to prefer renewable energy sources than younger individuals. The explanation for contradicting results might lie in the following: young people are more aware of environmental issues (Paço, Varejao, 2014) and are more likely to make riskier and larger investments

(Samdahl, Robertson 1989, as cited in Getzner, Grabner-Kräuter 2004; Ameli, Brandt, 2015). On the other hand, middle-aged people are more likely to have a family and are thus more inclined to use renewable energy as that allows them to make savings. Older (middle-aged) individuals, people who have a family (implies more household members), and people who own property (the home in which they live) are willing to invest more in household energy-saving sources (Mills, Schleich, 2010, 2012; Ameli, Brandt, 2015).

The odds that males will support projects related to renewable energy sources are 35% higher than for females. However, if an individual lives in a household where the person who makes most of the decisions regarding finances and expenditures is male, the odds are 32% lower than for individuals in households dominated by a woman. Numerous studies have shown that gender influences people's preferences for renewable energy. Women are thought to be more inclined to accept and promote renewable energy and adopt environmentally friendly behaviour (Black et al., 1985; Mainieri, Barnett, 1997; Laroche et al., 2001; Devine-Wright, 2010). However, research has shown that women, very often, support the use of renewable energy in principle, but are against specific projects. The reason lies in the greater tendency of women to avoid the risk of investing in renewable resources (Finucane, 2000), or in the lack of technological knowledge (Devine-Wright, 2010). Some studies, by contrast, have shown a greater tendency for men to use renewable energy (MacDonald, Hara, 1994), or have shown that there is no statistically significant gender difference (Samdahl, Robertson, 1989; Growth, Vogt, 2004). Preference also depends on the type of renewable energy. Devine-Wright (2009; 2010) has shown that women are less likely to prefer nuclear energy than men, while Groth and Vogt (2004) have shown that when it comes to using wind energy, there is no gender difference. Our results confirm that being a male increases the likelihood of supporting renewable energy sources, probably because of the higher technical knowledge. However, living in a traditional household (male-dominated) will reduce the odds of supporting such projects.

The odds that married individuals or individuals in a cohabiting partnership will support projects related to renewable energy sources are 24% lower than for single, divorced, or widowed ones. These results are not in line with the findings that people

living in multi-member households are more likely to use renewable energy and show environmentally-friendly behaviour (Ameli, Brandt, 2015).

Our model shows that household income is a statistically significant predictor. The odds that respondents will support projects related to renewable energy sources are higher than those for the reference group (individuals with no income): 99% (low income), 82% (middle income and 80% (high income). These results are in line with existing literature: individuals with higher income are more inclined to use renewable energy sources (Black et al., 1985; Zimmer et al., 1994; Getzner, Grabner-Kräuter, 2004; Cleveland et al., 2005; Paço, Varejao, 2014; Ameli, Brandt, 2015). However, as our results show, individuals with an income are more inclined to use renewable energy sources, but this tendency toward such energy sources slightly differs between income categories.

The level of education is not a significant predictor in our model, except for the levels above secondary education. The odds that such respondents will support projects related to renewable energy sources are 116% (significant at 5%) higher than for respondents with no education or with uncompleted primary education. Although not significant, the coefficient for secondary education level indicates a higher support level for renewable projects than for individuals with a lower level of education. Existing research has confirmed that people with higher levels of education also have a greater propensity for renewable energy and environmentally-friendly behaviour (Zimmer et al., 1994; Roberts, 1996). The assumption is that more educated people also have a higher level of knowledge and awareness of environmental issues. Similarly, people with a higher level of education, on average, have higher incomes and thus a greater willingness to invest in (more expensive) organic products and to invest in renewable energy sources in addition. However, some other studies (Laroche et al., 2001; Getzner, Grabner-Kräuter, 2004) found that neither educational attainment, employment status, nor income level affect environmentally-friendly behaviour.

The odds are higher for individuals that are satisfied with their standard of living (35% higher) than for individuals that are not satisfied. Moreover, the odds that individuals holding a perception of a better future in terms of improvement in economic conditions of the country will support projects related to renewable energy sources are 27%

lower than the odds for respondents who expect the economic situation in the country to deteriorate. As Getzner and Grabner-Kräuter (2004: 264) note, "many authors agree that demographics are less important in explaining ecologically friendly consumer behaviour than psychographic variables, such as values, attitudes, and knowledge, and behavioural variables. A number of studies combine demographic characteristics with psychographic or behavioural variables". In that context, these two measure the level of satisfaction and perception of an opportunity in the future.

Religiousness is also a significant predictor. The odds that religious individuals will show greater support for projects related to renewable energy sources are 73% higher than the odds for non-religious individuals. Finally, the odds that Croats will support projects related to renewable energy sources are 25% lower; whereas for Serbs and others, the odds are 65% and 49% higher than for Bosniaks, respectively. Existing literature identifies religious beliefs as a variable that might help explain economic attitudes (Guiso et al., 2003). In the context of B&H, ethnicity is closely related to religion (every ethnic group represents one religion, although there are exceptions). Therefore, these two variables measure religion affiliation and religiousness within associated religion. As the results of this study show, religious people are more inclined to support renewable energy sources. This might be because of the values that religiousness promotes, which are manifested through attitude and behaviour.

## 5. Conclusion

Energy intensity is a measure of an economy's energy efficiency, in which a higher intensity indicates lower efficiency. The energy intensity of Bosnia and Herzegovina (B&H) is the highest in the Western Balkan region. The country's high energy and carbon intensity adversely affects its economic competitiveness, constrains its ability to meet the growing energy demand efficiently and sustainably, impacts the potential for optimizing revenues from energy exports, and presents a significant environmental challenge. To improve Bosnia and Herzegovina's energy intensity, there is a growing need for projects that support renewable energy sources. Although the number of renewable energy initiatives in the country is increasing, not much is known about the public perception of such projects, or the

willingness to support them, in the context of such high per capita energy consumption. Understanding which micro-level determinants influence individuals' willingness to support renewable energy projects can provide a valuable input for policy and decision making.

The purpose of this study is to enhance the understanding of micro-determinants and ways in which they shape the public perception of renewable energy sources, and to investigate to what extent the public is willing to support the implementation of energy-saving measures. To this end, the study identified the characteristics of individuals that can increase their inclination to support such projects. This research included the statistical processing and analysis of a comprehensive base of questions answered by 3,024 respondents from all over Bosnia and Herzegovina, with a focus on the analysis of individual-level determinants. In addition to the identification of the relevant micro-level determinants, this research is the first of its kind in the country.

Available articles about energy efficiency in Bosnia and Herzegovina, as in other Western Balkan countries, focus primarily on providing an overview of renewable energy source usage, and analyse macroeconomic determinants and barriers to their use. This study focuses on individual determinants and the analysis of respondents' general willingness to support the use of renewable energy sources. Respondents in our study had a positive attitude toward renewable energy projects, with 72.8 percent supporting them. Several important predictors were included: age, gender, income, religiousness, and satisfaction with the standard of living. The results of the paper can help policymakers adopt adequate policy measures for promoting investments in renewable energy sources, as well as project developers to tailor their communication and promotional strategies to the needs of specific population segments with the aim of achieving the set goals and gaining benefits from such projects.

The main limitation of this research is that it should have included a larger number of psychographic and behavioural variables alongside the dominantly demographical ones presented. This should be taken into account in future research.

We know that behaviours, beliefs and values affect attitudes to the implementation of renewable energy sources, but it would be interesting to examine

the influence of a respondent's experiences on his/her willingness to use renewable energy sources: e.g. the influence of daily habits, routine, risk appetite or aversion, and his/her perception of the costs and benefits of implementation.

The link between an individual's social responsibility and his/her attitude to environmental protection and activism in non-governmental organisations is clear. We also found a link between political activism and attitudes and the use of renewable sources. In future research, it would be useful to add macro determinants (such as political and socioeconomic factors as country- and location-specific elements) to the analysis. The analysis of these additional fac-

tors, along with that of micro-level determinants, would provide a unique picture of factors that significantly contribute to the acceptance and implementation of renewable energy projects and contribute to the comprehensiveness of the presented analysis.

It would also be valuable to conduct a comparative study of this research problem in other Western Balkan countries. This would enable common determinants to be identified, and consequently contribute to the development of public policy and more efficient implementation of renewable energy sources in the Balkans.

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## MIKRODETERMINANTE POJEDINACA KOJI SU VOLJNI PODRŽATI PROJEKTE U VEZI S OBNOVLJIVIM IZVORIMA ENERGIJE

### SAŽETAK

Održivi razvoj kao paradigma 21. stoljeća implicira, između ostalog, potrebu ostvarenja okolišne održivosti i zamjenu tradicionalnih izvora energije ekološki prihvatljivim, obnovljivim izvorima energije. Ekonomska literatura identificira cijeli niz pretpostavki i odrednica neophodnih za uspješnu primjenu obnovljivih izvora energije. Svrha je ovoga istraživanja pružiti dodatno razumijevanje odrednica individualne spremnosti u davanju podrške implementaciji mjera energetske učinkovitosti. Podatci o percepciji građana Bosne i Hercegovine prikupljeni su putem anketnog upitnika. Anketiranje je obuhvatilo 3.024 ispitanika iz cijele Bosne i Hercegovine i provedeno je tijekom 2018. godine. U fokusu je bilo istraživanje na individualnom, mikro-nivou. Ispitanici su imali pozitivan stav prema projektima vezanim za primjene obnovljivih izvora energije. Većina ispitanika (72,78 %) podržava takve projekte. Istraživanje je pokazalo da postoji nekoliko značajnih čimbenika koji utječu na percepciju ispitanika: dob, spol, primanja, zadovoljstvo životnim standardom, religioznost, život u kućanstvu s dominacijom muškarca i etnička pripadnost. Ovi rezultati mogu poslužiti donositeljima odluka u dizajniranju primjerenih ekonomskih i političkih mjera koje bi ubrzale investicije u obnovljive izvore energije, a implementatorima projekata u primjeni segmentirane komunikacije i promotivnih strategija usmjerenih prema ostvarenju ciljeva i koristi od navedenih projekata.

**Ključne riječi:** obnovljivi izvori energije, društvena prihvatljivost, Bosna i Hercegovina, logistička regresija

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# IMPACT OF INNOVATIVENESS ON BUSINESS PERFORMANCE IN CROATIAN COMPANIES

## ABSTRACT

The purpose of the research was to examine the relationship between innovativeness and business performance in Croatian export companies. The research involved 303 Croatian companies from the fields of manufacturing industry and information and communication technology. The research was conducted through a survey method during the last three months of 2016. The sampling method used for the purpose of this research was stratified random sampling, while regression analysis was used for data analysis. The structure of correlation between individual responses and individual groups of responses was analysed by canonical analysis and cluster analysis. The results show that there is a positive relationship between innovativeness and business performance in Croatian companies. The research has practical implications for Croatian companies in the ability to increase their efficiency and innovativeness. The empirical contribution was achieved by defining the direction and impact of innovativeness on business performance. The results offer theoretical and managerial implications. In the context of this research, it is likely that innovativeness and business performance influence a company's innovative activities, which can be positively reflected in creating and maintaining the competitive advantage on the market.

**Keywords:** Innovativeness, product innovation, process innovativeness, business performance, Croatian companies

## 1. Introduction

The paper raises the following research question: How does innovativeness influence business performance in companies? This problem has been recognized by many authors (Hult et al., 2004; Nybakk, 2012). Research results confirm the importance of a positive link between innovativeness and business performance. Many scientists believe that business performance and innovation are closely related (Calantone et al., 2002; Hult et al., 2004; Nybakk, 2012). Due to the complex economic situation and the need for faster economic growth and development of Croatian companies, an interest in

exploring the connection between innovation and business performance has emerged.

Although many researchers have explored the effect of innovativeness on a company's performance, research literature seems to be lacking applicable studies with regard to observing their relationship in different countries. Therefore, this study attempts to fill this gap, to evaluate the relationship between business performance and innovativeness in Croatian companies, and to develop and test the following research hypothesis: *There is a positive relationship between innovativeness and business performance in Croatian companies.* Research is

organized in the following way: firstly, the literature review on business performance is introduced, including various indicators that measure business performance and innovativeness. Then a hypothesis is proposed, followed by the description of the method and then the results of the research are presented. Finally, there is the conclusion that leads to theoretical and practical implications.

## 2. Literature review

### 2.1 Innovativeness

In times of globalization, economic and social changes, and technological achievements, innovation is essential to the development of business and the entire economy. Positive effects of innovation on the economy are numerous and are reflected in the increase in employment, gross domestic product, export, foreign exchange inflows, the exchange of new technologies, and increasing competitiveness. Some contributing factors are structural institutional changes in promoting entrepreneurship, liberalization of international trade and the change of the external environment, as well as rapid development of modern technologies that opened up numerous opportunities for companies. Innovation development is a set, risky, and long-lasting business process, however, all these complex efforts cannot guarantee market success (Šlogar, 2018).

Economic innovativeness is usually defined as “the ability of a given economy to create innovation, where *ex ante* is the potential to create innovations and *ex post* is the total effect of innovative activities of enterprises functioning in the economy in a given period of time” (Weresa, 2014: 74). Innovativeness can be present in the company in various forms – from simple readiness to try out a new product line or form of advertising, to the commitment to constantly upgrade existing products and technology. Different criteria are set as a measure of applied innovation in companies. Innovation refers to the company’s efforts to develop and support new ideas, experiments, and creative processes that could result in new products, services, or technological processes (Lumpkin, Dess, 1996).

In this paper, company innovativeness is defined as a company’s propensity to create and/or adopt new products, production processes, and business systems. Product innovation includes the development or adoption of new products as well as improvements to existing products and is widely rec-

ognised as an important factor for manufacturing firms. Process innovativeness is defined as an action that leads to process innovation and as the process itself (i.e. the technology and improvements used in production) that constitutes the innovation. Business system innovativeness can be applied to every aspect of the firm that is necessary for the management, structure, operation, and administration of business and its internal and external environments (Nybakk, 2012: 5). The research conducted by Hult et al. (2004) confirmed that innovation is an important determinant of business performance, regardless of market turbulence in which the company operates.

This means that innovative activities generally contribute a lot to the company’s success. Consequently, managers should drive the innovation in their firms to achieve superior business performance. Product innovation without the support from management or the sales department will result in minimal profit. Product innovation without corresponding innovation in manufacturing will reduce the potential maximum profit. Product innovation without innovative ways to address consumer demands will erode the credibility of the company (Gaynor, 2009: 14). Nybakk (2012) examines the relationship between learning orientation, innovation, and financial performance among Norwegian manufacturing companies’ directors. The results have shown that learning orientation has a positive impact on financial performance through the full impact of innovation on the company. It was concluded that a company’s innovation has an independent positive impact on the financial result. No direct impact of learning orientation on financial performance was found (Nybakk, 2012). Soininen et al. (2015) state that companies exposed to higher levels of innovation and proactivity have better business outcomes during crises. Šlogar et al. (2018) indicated a positive and statistically significant correlation between innovativeness, proactivity, competitiveness and company’s business performance. Šlogar and Bezić (2019a) found that there is no positive relationship between the number of employees and innovation, age and innovation of the company, or the level of education and innovation, which can affect business performance. Furthermore, Šlogar and Bezić (2019b) show a statistically significant positive relationship between innovativeness and exports in Croatian companies, which can positively affect the company’s operations.

Table 1 Deloitte – Technology Fast 50, Croatian companies 2014 - 2019

Year	Rang	Companies	Sectors	Growth
2014	9	Infinum d.o.o.	Software	1168%
	13	Nanobit d.o.o.	Software	876%
	21	Europa Digital d.o.o.	Media & Entertainment	536%
	43	Lemax d.o.o.	Software	359%
2015	9	Serengeti d.o.o.	Software	843%
	11	Nanobit d.o.o.	Software	754%
	18	Integracija od-do d.o.o.	Software	539%
	24	Sedmi odjel d.o.o.	Software	476%
	30	Infinum d.o.o.	Software	397%
	42	InfoCumulus d.o.o.	Software	277%
	46	Acceleratio d.o.o.	Software	256%
47	Degordian d.o.o.	Media	251%	
2016	19	Gauss LTD d.o.o.	IT & Digital Solutions	736%
	20	Rimac Automobili d.o.o.	Clean Tech & Energy	702%
	22	Axilis d.o.o.	IT & Digital Solutions	613%
	23	Telum d.o.o.	Internet, Media & Telecom	607%
	28	Hangar 18 d.o.o.	IT & Digital Solutions	527%
	39	Serengeti d.o.o.	IT & Digital Solutions	385%
2017	10	Rimac Automobili d.o.o.	Clean Tech & Energy	1059%
	23	Code Consulting d.o.o.	IT & Digital Solutions	545%
	25	Telum d.o.o.	Internet, Media & Telecom	520%
	28	Profico	IT & Digital Solutions	466%
	35	Undabot d.o.o.	IT & Digital Solutions	421%
	40	Hangar 18 d.o.o.	IT & Digital Solutions	368%
	45	Gauss LTD d.o.o.	IT & Digital Solutions	347%
	49	Infinum d.o.o.	IT & Digital Solutions	315%
2018	3	Q Software	Software	3 894%
	10	Ars Futura d.o.o.	Software	914%
	14	Microblink d.o.o.	Software	702%
	36	Rimac Automobili d.o.o.	Hardware	361%
	40	Infinum d.o.o.	Software	315%
	41	Telum d.o.o.	Media & Entertainment	313%
	47	Profico (Innovatio Proficit d.o.o.)	Software	272%
2019	5	BAZZAR.HR	Media & Entertainment	2 821%
	16	Q Ltd	Software	927%
	27	Ars Futura d.o.o	Software	685%
	35	AG04 Innovative Solutions d.o.o. / AGENCY04	Software	551%
	47	Delta Reality	Software	449%
	50	Agrivi d.o.o.	Software	432%

Source: Deloitte Technology Fast 50 Central Europe (2014-2019)<sup>1</sup>, available at: <http://www.deloitte.com/cef50>, (Accessed on: April 5, 2020)

Table 1 with the comparison of the results of Deloitte's research "50 Fastest Growing Technology Companies in Central Europe" shows that in 2019 six Croatian companies were listed among those 50 companies. In 2019, the highest ranked Croatian technology company was Bazaar.hr at 5<sup>th</sup> place, with an increase of 2821% over the last four years. Following is Q d.o.o. at 16<sup>th</sup> place, with growth of 927%; Ars Futura d.o.o. at 27<sup>th</sup> place with growth of 685%; AG04 Innovative Solutions d.o.o. at 35<sup>th</sup> place with 551% growth; Delta Reality ranked 47<sup>th</sup> with 449% growth; and Agrivi d.o.o. was in the 50<sup>th</sup> place with 432% growth. The survey provided an overview of the state of innovation development in companies and pointed to certain problems, but most importantly, emphasized the importance of innovation in achieving growth and competitive advantage on the market.

## 2.2 Business performance

There is no consensus among scholars regarding the appropriate measures of performance indicators. This has led to the use of a wide range of objective and subjective measures of success (Vij, Bedi, 2012). Several studies (Lumpkin, Dess, 2001; Kraus et al., 2012; Messersmith, Wales, 2013) have used perceived performance indicators to assess company performance. However, since the indicators were typically based on manager's subjective views about the company's profitability, growth, market share etc. and subjective proxies, the reported data may be prone to bias (Kraus et al., 2012).

On the other hand, studies have shown that there is a strong positive relationship between subjective and objective performance measures (Stam, Elfring, 2008; Messersmith, Wales, 2013) and thus it is justified to support the validity of subjective performance measures (e.g. Stam, Elfring, 2008; Harms et al., 2010; Cassia, Minola, 2012). Nevertheless, the link between company's innovativeness and performance has not been sufficiently tested (Calantone et al., 2002). In their meta-analysis of the entrepreneurial orientation study, Rauch et al. (2009) found that the concept of business performance was measured by archival financial measures in only seven studies. There are studies in which the relationship between entrepreneurial orientation and financial results has not been found (Stam, Elfring, 2008; Baker, Sinkula, 2009), but there are several studies that prove a positive relationship between the two variables (Wiklund, Shepherd, 2005; Rauch

et al. 2009). This confirms that archival measures of financial indicators are rarely used compared to different non-financial measures of subjective performance (Covin et al., 2006). The reasons for the use of subjective performance measures are usually lack of publicly available financial data (Kraus et al., 2012) or fear that there would not be a sufficient number of respondents because the companies are reluctant to share their financial data (Messersmith, Wales, 2013).

This led to the development of a range of objective and subjective performance measures widely accepted among researchers (Baker, Sinkula, 2009; Kraus et al., 2012; Messersmith, Wales, 2013). Studies show that there is a strong positive relationship between subjective and objective performance measures (Stam, Elfring, 2008; Messersmith, Wales, 2013), which supports the validity of subjective performance measures and emphasizes that there is no consensus on appropriate performance measures (Covin et al., 2006; Stam, Elfring, 2008).

Research finds that the value of innovation is only visible if companies link innovation with utility, price and cost condition (Chan Kim, Mauborgne, 2007: 26). Failing to maintain a secure position of innovation and value as described above, technology innovators and market leaders often lay the foundations for the business success of other companies (Chan Kim, Mauborgne, 2007: 26). According to Covin and Slevin (1991), company performance is most often expressed through the dimensions of growth and profitability. Growth is measured as the average annual growth in the number of employees and the average annual growth in sales. Market share is also used as a growth indicator (Wiklund, 1999).

The biggest drivers of success are market orientation, entrepreneurial orientation, and innovativeness. This indicates that innovativeness partly mediates between market orientation and business performance on one hand and entrepreneurial orientation and business performance on the other (Hult et al., 2004). Nybakk (2012) claims that a company's innovation has an independent positive impact on financial results.

In the study Shouyu, (2017) reviewed the related literature from three aspects: the mediating effects between enterprise performance and innovation (Gunday et al., 2011), the moderating effect of firm performance and innovation (Huang, Rice,

2009; Otero-Neira et al., 2009), the direct impact of enterprise performance on innovation (Prajogo, 2006). Mamun (2017) emphasized that micro-entrepreneurs' absorptive capacity and innovativeness have a significant positive effect on business performance. Similarly, Arshad (2018) proved that innovativeness of technology-based SMEs has a significant and positive impact towards business performance. Canh (2019) observed that investment in product innovations and processes are beneficial to business performance in terms of market share. According to Gatautis (2019), the implementation of business model innovations has a positive impact on innovativeness and SMEs performance. Ng et al. (2019) noted that product innovativeness and process innovativeness mediates the relationships among technical competence, entrepreneurial competence and financial performance.

### 3. Research methods

Based on the defined objective, the research tested the following hypothesis: *There is a positive relationship between innovativeness and business performance in Croatian companies.* The research was conducted on the basis of the survey method and these are subjectively measured variables. Regression analysis was used to demonstrate the hypothesis, with innovativeness, product innovation, process innovativeness, business system innovativeness as independent variables and business performance as the dependent variable. Spearman rank correlation was performed for data analysis, along with canonical analysis. Cluster analysis graphically depicts the structure of interrelationships of innovativeness and business performance. Statistical testing is performed at a significance level of 95% ( $\alpha = 0.05$ ). Statistical analysis and data analysis were carried out by STATISTICA 6.1 Stat-Soft inc. 1983-2003.

The originally developed questionnaire was piloted and sent to 10 randomly selected companies from the defined database. The aim was to check the user-friendliness of individual claims from previous studies and to identify potential uncertainties regarding some questions. Afterwards, the questionnaire was modified and revised. Business performance was measured through an enterprise quantitative impact (7 items) by self-assessment of subjective measures, including: product and/or sales/service growth, market share, productivity, overall liquidity, degree of total indebtedness, em-

ployee growth, and flexibility expressed as the company's ability to react to new developments in the environment. 5-point Likert scale was used, ranging from 1 – "very low" to 5 – "very high". Similarly, the qualitative effects (9 items) within the company were measured: employees' self-assessment of fluctuation, absenteeism, commitment, adaptability, number of new customers, number of lost customers, product quality, number of new products, and company image. Again, a 5-point Likert scale was used, ranging from 1 – "strongly disagree" to 5 – "strongly agree". To measure innovativeness, the scale adapted from Nybbak (2012) was used. It consists of 15 items and assesses the subfactors of product innovation, process innovativeness, and business system innovativeness. For this another 5-point Likert scale was used, ranging from 1 – "the claim does not even refer to my company" to 5 – "the claim is completely related to my company". The research was conducted over the last three months of 2016. In the process of data collection, an email was sent to 900 Croatian companies that were actively doing business on the domestic or international market (Šlogar, 2018). The companies were selected from the Register of Business Entities of the Croatian Chamber of Commerce and the Croatian Exporters Register of the Croatian Chamber of Commerce.

The questionnaires were sent in October 2016 to the email addresses of CEOs and executive managers of companies that were included in the sample. In November, a reminder was sent as well as another questionnaire to those who have not previously responded. Within the first three months, 303 (out of 900) questionnaires were properly filled out and sent back, resulting in the response rate of 35.31%. Of 345 collected questionnaires, only 303 were used in the final analysis, while the rest were excluded due to significant amounts of data missing. It should be noted that a huge number of leading Croatian companies returned filled out questionnaires.

#### 3.1 Sample

The basic set from which the sample was chosen consists of registered companies that actively carried out their activities in 2016 on the entire territory of the Republic of Croatia. It is a three-stage stratified random sample that consists of 900 companies (Šlogar, 2018). For the first stratification level, the differential criterion is the divi-

sion of counties in three regions: 1. Northwestern Croatia 2. Central and Eastern (Pannonian) Croatia, and 3. Adriatic Croatia. For the second level of stratification, the differential criterion was the size of the company. The provisions of the Accounting Act<sup>2</sup> (Official Gazette No. 78/15), which prescribes the conditions to be met by the company, were applied: the number of employees, the amount of revenue and the amount of total assets. For the third level of stratification, NKD 2007 (National Classification of Activities<sup>3</sup>) categories were used: target companies belonged to the following areas: C - Processing industry, Section 10-33, and J - Information and Communication, Section 62 - Computer programming, consultancy, and related activities.

**4. Research results**

The results show that the majority of companies fall under The National Classification of Territorial Units for Statistics<sup>4</sup>, NKPJS – 52.1% are from North-Western Croatia (HR01); 33% are located in Central and Eastern (Pannonian) Croatia (HR02); and the smallest number of companies, 14.7%, are

located in the region of Adriatic Croatia (HR03). The distribution of companies throughout the industrial sector shows that the largest number of companies, 22%, is engaged in the production of metals and metal products, machinery, and equipment; 18% in the production and processing of wood, pulp, and paper; 17% in the production of chemical products, synthetic fibres, rubber, mineral products; 16% in the production of food, beverages, and tobacco products; 11% in financial and other services; 9% in the production of textiles and textile products; and 7% in computer programming.

The results show that in 2015, 44.6% of the surveyed companies generated revenue of less than HRK 60 million, 28% between HRK 60 million and 300 million, and 27.4% of the companies generated revenue of more than HRK 300 million. The results show that in 2015, the total assets of 44.6% of the surveyed companies were less than HRK 30 million, 27.7% of those companies had assets from HRK 30 million to 150 million, and 27.7% had assets of more than HRK 150 million.

**Table 2 Univariate results for the dependent variable business performance, obtained by the multivariate regression analysis**

Effect	df	Business performance SS	Business performance MS	Business performance F	Business performance p
Intercept	1	2897.44	2897.435	81.419	<0.000001
Product innovation	1	300.41	300.407	8.442	0.003941
Process innovativeness	1	2044.97	2044.974	57.464	<0.000001
Business systems innovativeness	1	552.45	552.453	15.524	0.000101
Error	299	10640.46	35.587		

Source: Author's research

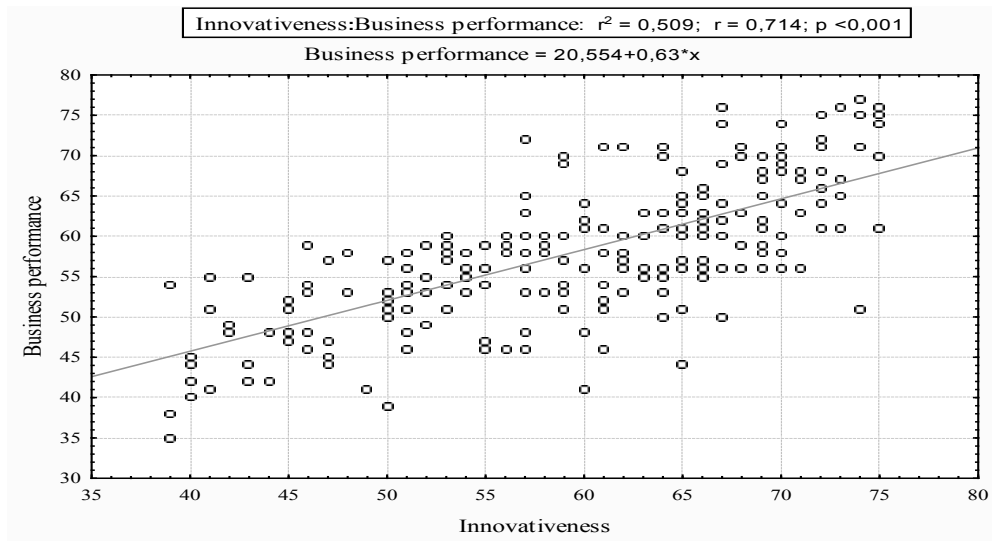
In Table 2, univariate results in the multivariate regression analysis show a statistically significant effect of product innovation, process innovativeness and business systems innovativeness ( $p < 0.05$ ).

A statistically significant intercept indicates the existence of other factors that affect the business

performance and innovativeness that are not included in this research. Therefore, it cannot be said that there is a causal link between the observed independent and dependent variables, since the cause may lie in factors not included in this research.



**Figure 1 The impact of innovativeness on business performance**

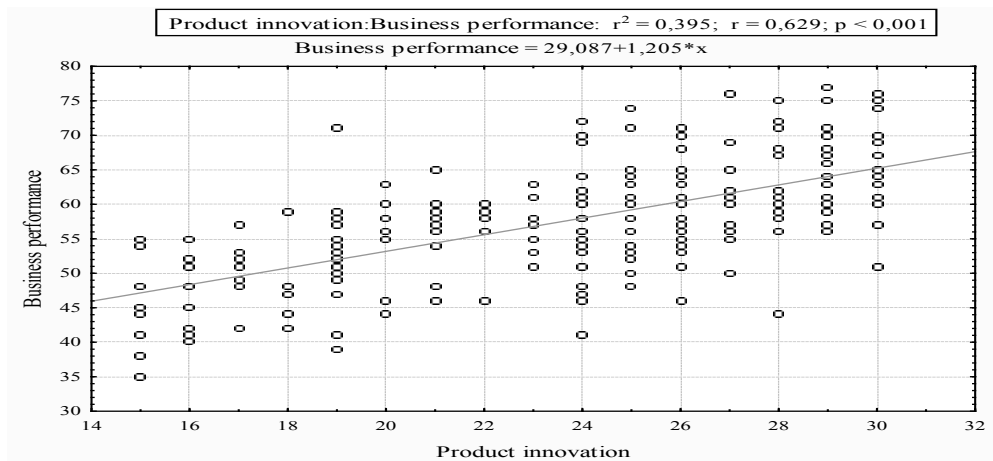


Source: Author's research

Figure 1 shows a regression line with equation, correlation coefficient ( $r = 0.714$ ), coefficient of determination ( $r^2 = 0.509$ ), and associated p-values ( $p < 0.001$ ). The slope of the regression line shows a

positive impact of innovation on business performance and p-value shows that the effect is statistically significant.

**Figure 2 The impact of product innovation on business performance**

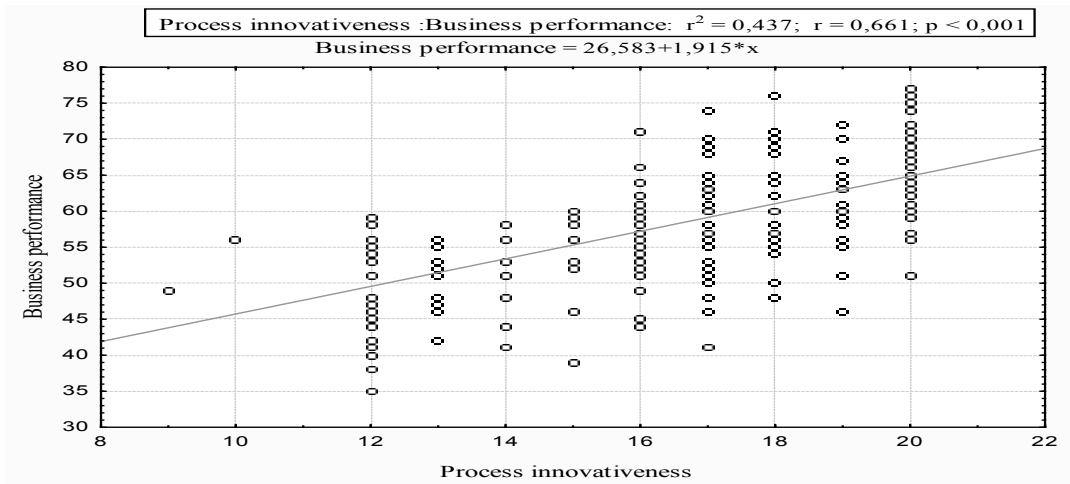


Source: Author's research

Figure 2 shows a regression line with equation, correlation coefficient ( $r = 0.629$ ), coefficient of determination ( $r^2 = 0.395$ ), and associated p-values ( $p < 0.001$ ). The slope of the regression line shows a

positive impact of product innovation on business performance and p-value shows that the effect is statistically significant.

Figure 3 The impact of process innovativeness on business performance

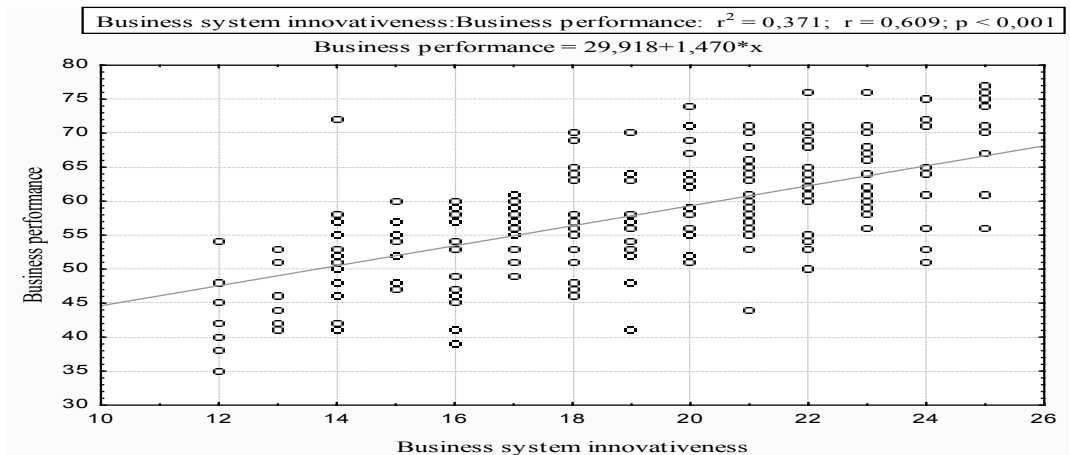


Source: Author's research

Figure 3 shows a regression line with equation, correlation coefficient ( $r = 0.661$ ), coefficient of determination ( $r^2 = 0.437$ ), and associated p-values ( $p < 0.01$ ). The slope of the regression line shows a

positive impact of processes innovation on business performance and p-value shows that the effect is statistically significant.

Figure 4 The effect of business system innovativeness on business performance



Source: Author's research

Figure 4 shows a regression line with equation, correlation coefficient ( $r = 0.609$ ), coefficient of determination ( $r^2 = 0.371$ ), and associated p-values ( $p < 0.001$ ). The slope of the regression line shows

a positive effect of business system innovation on business performance and p-value shows that the effect is statistically significant.

**Table 3 Spearman rank order correlations**

All correlations are significant at $p < 0.05$			
	Business Performance	Quantitative effects	Qualitative effects
Innovativeness	0.724	0.624	0.687
Product innovation	0.633	0.513	0.633
Process innovativeness	0.700	0.608	0.641
Business systems innovativeness	0.599	0.534	0.560

Source: Author's research

Table 3 shows the Spearman rank correlation, which has established that there is a statistically significant positive relationship between innovativeness and business performance ( $p < 0.05$ ).

It is shown that growth in sales of products and/or services is in a statistically significant positive relationship with product innovation, process innovativeness, and business system innovativeness. Product and/or service sales growth is expected to stimulate innovation. Equally, an increase in market share is in a statistically significant positive relationship with product innovation, process innovativeness, and business system innovativeness. Productivity is also in a statistically positive relationship with product innovation, process innovativeness and business system innovativeness.

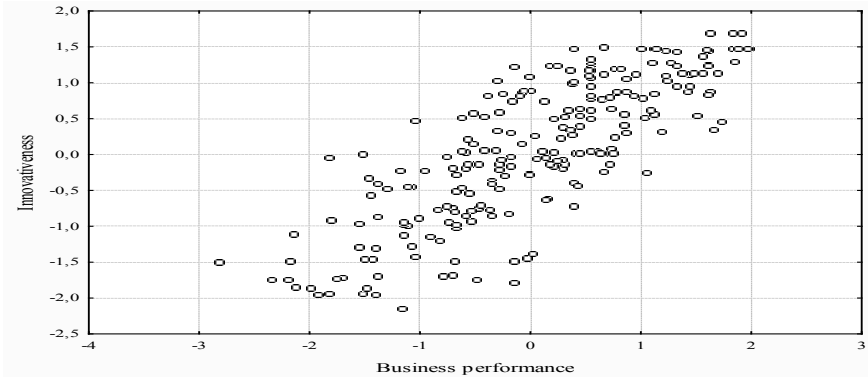
As for a company's general liquidity, there is statistically significant correlation between product innovation, process innovativeness, and business system innovativeness, i.e. with the growth of liquidity, innovativeness is expected to grow. Similarly, in terms of growth in the number of employees in companies there is statistically significant correlation between product innovation, process innovativeness, and business system innovativeness. In line with this growth in the number of employees, growth of all dimensions of innovativeness is expected. As for flexibility (the ability of the company to react to new developments in the environment), there is statistically significant correlation between product innovation, process innovativeness, and business system innovativeness, i.e. growth of flexibility is expected to result in growth of all dimensions of innovativeness.

The results of qualitative indicators of business performance show that in terms of an increase in employee adaptability skills there is statistically significant correlation between product innovation, process innovativeness, and business system innovativeness. Furthermore, in terms of product quality improvement there is statistically significant correlation between dimensions of innovation, i.e. growth of product quality is expected to result in growth of innovativeness, process innovation, and business system innovation. Equally, qualitative indicators of business performance show that in terms of the number of new and improved products there is statistically significant correlation between growth in product innovation, process innovativeness, and business system innovativeness.

Based on the data presented, it can be concluded that the respondents identified particularly important indicators for a positive connection between innovativeness and business performance. Spearman rank correlation has established that there is a statistically significant positive relationship between these two aspects, or in other words – enterprises that are business-oriented are also more innovative.

Canonical analysis shows (Canonical R: 0.808,  $\text{Chi}^2(240)=989.86$ ,  $p < 0.01$ ) statistically significant positive relationship between innovativeness and business performance. Canonical correlation coefficient (R Canonical) is 0.808, which confirms a positive relationship. Statistical significance was tested by Chi-square test ( $\text{Chi}^2$ ) that shows a statistically significant correlation ( $p < 0.01$ ).

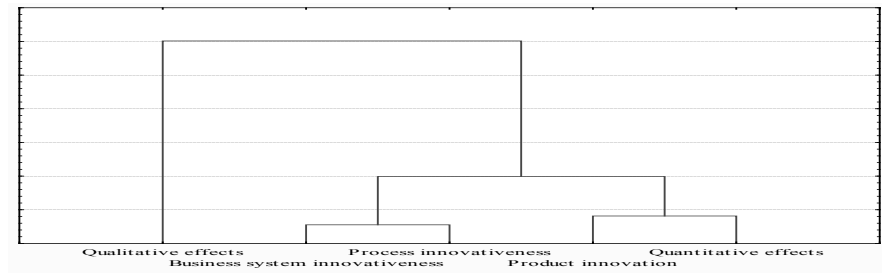
**Figure 5** The link between innovativeness and business performance based on canonical analysis



Source: Author's research

Figure 5 shows a positive relationship between innovativeness and business performance obtained by canonical analysis.

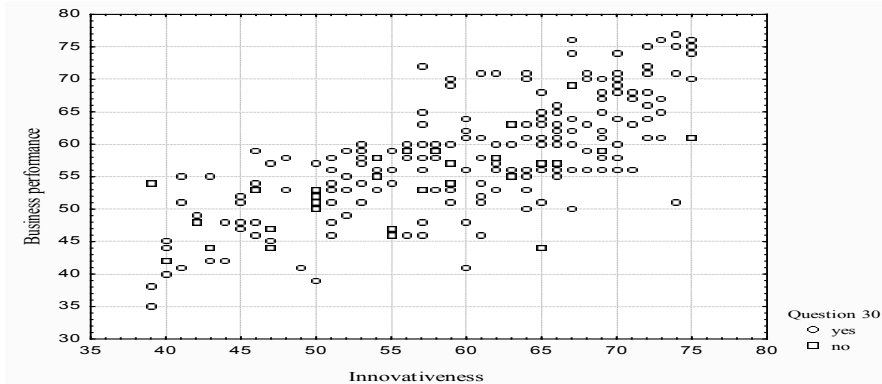
**Figure 6** Dendrogram of relationship between innovativeness and business performance



Source: Author's research

Cluster analysis graphically depicts the structure of connectivity between innovativeness and business performance. Figure 6 shows the connection between individual dimensions of innovativeness and business performance, obtained using the cluster analysis.

**Figure 7** Respondents' answers to innovativeness and business performance



Source: Author's research

Based on the presented results (Figure 7), it can be concluded that the respondents identified particularly important indicators for a positive connection between innovativeness and business performance.

## 5. Discussion and conclusion

Companies need to constantly adapt to changes in the environment and, under the influence of globalization, changes caused by the development of ICT and increasing economic inequalities between innovative and non-innovative companies. The results of this study show there is a positive relationship between innovativeness and business performance. This is consistent with previous studies (Covin et al., 2006; Calantone et al., 2002; Hult et al., 2004; Nybakk, 2012). It can be concluded that the long-term crisis in the Republic of Croatia has been a factor in the weaker business performance of companies both domestically and internationally. The business environment should encourage companies to develop entrepreneurial orientation and thus raise the level of innovativeness and business performance. Although the selection is based on the principle of impartiality in sample making, this sample does not meet the principle of representativeness, so the results of this research may only be considered relevant for companies in the C and J NKD 2007 sectors that are involved in the research and cannot be generalized for all companies. The limitation of the research results stems from the specificity of the selected sample of Croatian companies.

This research has also some limitations that should be discussed. First, it might be important to consider adding relevant mediating or moderating var-

iables such as those related to cultural factors and environment into the analyses. Furthermore, the applied research methodology can also be considered as a research limitation since not all possible determinants are included: e.g. research and development factors, quality factors etc. Even though certain aspects have not been examined, it would seem that a fairly clear picture of the current situation in Croatian companies was attained. That is why companies need to be encouraged to use a proactive approach and raise the level of innovativeness by using all the available resources to search for business opportunities in the market with the aim of increasing company profits. Secondly, all of the data was collected at a specific time, so variables and results are limited to that point in time. At the moment, this is a retrospective research because it was conducted four years ago and based on the results presented in this paper it is not possible to draw conclusions about the current implications of the research.

In conceptual terms, the contribution has been manifested in the development of scientific thinking about the existence of a positive relationship between innovativeness and business performance. Scientific contribution is reflected in the fact that the research was conducted in the Republic of Croatia where there is a lack of such research. This research is important for entrepreneurs as a guideline on whether to invest more in product innovation, process innovativeness, or business system innovativeness with the higher goal of achieving business success. It is suggested that future studies should explore other business sectors to evaluate the results of this research, as well as compare the differences between individual business segments.

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Helena Šlogar

## UTJECAJ INOVATIVNOSTI NA USPJEŠNOST POSLOVANJA U HRVATSKIM PODUZEĆIMA

### SAŽETAK

Svrha istraživanja je ispitati odnos između inovativnosti i uspješnosti poslovanja u hrvatskim izvoznim poduzećima. U istraživanju je sudjelovalo 303 hrvatska poduzeća u području prerađivačke industrije te informacijske i komunikacijske tehnologije. Istraživanje je provedeno metodom istraživanja tijekom posljednja tri mjeseca 2016. godine. Za potrebe istraživanja koristi se trostupanjski stratificirani slučajni uzorak, a za analizu podataka regresijska analiza. Struktura korelacije između pojedinačnih odgovora i pojedinih skupina odgovora analizirana je kanonskom analizom i klaster analizom. Rezultati pokazuju da postoji pozitivan odnos između inovativnosti i poslovne uspješnosti. Ovo istraživanje ima praktične implikacije za hrvatska poduzeća da povećaju svoju učinkovitost i inovativnost. Empirijski doprinos postignut je definiranjem smjera i utjecaja inovativnosti na poslovne rezultate. Rezultati nude teorijske i upravljačke implikacije. U kontekstu ovoga istraživanja, vjerojatno je da inovativnost i poslovni učinak utječu na inovativne aktivnosti poduzeća, što se može pozitivno odraziti na stvaranje i održavanje konkurentne prednosti na tržištu.

**Ključne riječi:** inovativnost, inovativnost proizvoda, inovativnost procesa, uspješnost poslovanja, hrvatska poduzeća



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# ACQUISITION OF REAL ESTATE AS INVESTMENT PROPERTY ACCORDING TO NATIONAL AND INTERNATIONAL ACCOUNTING STANDARDS – CASE OF CROATIA

## Abstract

The accounting treatment of real estate varies depending on the intended purpose of the acquired property. This paper discusses the theoretical and practical aspects of the accounting standards for treatment of the item investment property according to the International Financial Reporting Standards (IFRS), the Croatian Financial Reporting Standards (CFRS) and the International Financial Reporting Standards for Small and Medium Sized Enterprises (IFRS for SMEs). The theoretical part of the paper analyzes different models for measuring and accounting for investments in real estate according to different accounting standards. Particular attention is paid to the notes to the financial statements. The empirical part of the paper is an extension of the research conducted in 2013 on a sample of quoted companies in Croatia. The analysis of the financial statements of quoted companies shows that they did not disclose all relevant information on investments in real estate in the notes to the financial statements. To determine whether there were any improvements in financial reporting on investments in real estate, we have compared the results for 2017 with the results for 2013.

**Keywords:** Investment property, notes to financial statements, quoted companies, national accounting standards, IFRS, IFRS for SMEs

## 1. Introduction

IFRS are internationally recognized and accepted standards for financial reporting used by more than 140 jurisdictions (countries) as a basis for preparing

and publishing financial statements. Considering that they were too extensive and complex to apply for small and medium-sized entities, in 2009, the International Accounting Standards Board issued a

“shortened” version tailored to the needs of SMEs. Croatian Financial Reporting Standards (CFRS) are national accounting standards based on full International Accounting Standards (IAS).

In this paper, the focus of attention is on one financial statement item – investment property (real estate). More specifically, the criteria for classification of a property as investment are analyzed, as well as the relevant IAS/IFRS for the accounting treatment of such investments. The aim of the paper is to present the methods for initial recognition and subsequent measurement of investment in real estate. Information on a particular item should be presented in more detail in the notes to the financial statements. This paper analyzes disclosure requirements for investments in real estate according to national and international accounting standards. The empirical part of the paper explores the extent to which the quoted companies in Croatia comply with the disclosure requirements regarding investments in real estate. The analysis is based on research conducted in 2013 by the present authors. The main goal of this paper is to explore if quoted companies in Croatia satisfy IAS 40 disclosure requirements.

## 2. Valuation of investment in real estate as investment property

### 2.1 Features of accounting standards

The International Financial Reporting Standards (IFRS) are the most widely used set of standards that originated in 1970s. The EU Regulation 1606/2002 has significantly contributed to the number of jurisdictions that use these standards. According to the Regulation, the consolidated financial statements of the companies whose securities are admitted to trading on a regulated market of any European Union Member State should be prepared under the IFRS<sup>1</sup>. Mamić Sačer (2015) indicates that in some Member States the application of the IFRS is required by the law. However, there are some countries in which the use of the IFRS is permitted but not required.

The IASB is a standard setter for the International Financial Reporting Standard for Small and Medium-sized Entities (the IFRS for SMEs) as well. This “small” Standard takes into consideration “the costs to SMEs and the capabilities of SMEs to prepare financial information.”<sup>2</sup> This Standard is based on full IFRS and is tailored to the needs of small and medium-sized entities (SMEs), private entities and non-publicly accountable entities. For some time in

the past, the application of the IFRS was mandatory for all entities in Croatia. However, many practitioners, especially those who worked in SMEs, objected that the IFRS were too complex and broad for them. This pointed to the need for national accounting standards. In 2007, the Croatian Financial Reporting Standards were issued and became effective on January 1, 2008.<sup>3</sup> According to the Croatian Accounting Act<sup>4</sup>, micro, small and medium-sized companies are the target users of the CFRS.<sup>5</sup>

The following three groups of standards deal with the investment property:

- IAS 40 *Investment property*,
- IFRS for SMEs 16 *Investment property*, and
- CFRS 7 *Investment Property* (in Croatian: *Ulaganja u nekretnine*).

Since the IFRS for SMEs and the CFRS are based on full IFRS, one could expect the same accounting treatment and classification of investment property. However, given that there are some differences in the abovementioned standards, the accounting principles for investment property differ as well.

### 2.2 The history of accounting standards for real estate

Today, the IAS 40 applies to accounting for investment property. However, the history of accounting shows that the principles of accounting for this type of assets have evolved from another standard - the IAS 25. Alexander and Archer (2008) argue that “until the 1970s, property held as an investment was generally treated for accounting purposes as any other property, with or without the possibility of revaluation and with or without the possibility of non-depreciation, depending on the jurisdiction”. As a result of the diversity in accounting practice based on the IAS 25, new pronouncements were set by the issuance of IAS 40 in 2000. The IAS 40 became effective for financial periods beginning on or after January 1, 2001.<sup>6</sup> The first main difference between the IAS 25 and 40 is in the content of the standards where the IAS 25 deals with tangible and financial assets and the IAS 40 gives direction on the accounting treatment of one type of tangible assets. The second main difference between these two standards is in the subsequent measurement of investment property.

### 2.3 Classification of investment in real estate

The accounting treatment of real estate varies depending on the intended purpose of the acquired

property. Thus, it is important to classify real estate according to its intended use (Table 1). The English accounting term used in the International Financial Reporting Standards for real estate is “investment property” and according to the IAS 40 includes “property (land or a building —or part of a build-

ing — or both) held (by the owner or by the lessee under a finance lease) to earn rentals or for capital appreciation or both, rather than for: (a) use in the production or supply of goods or services or for administrative purposes; or (b) sale in the ordinary course of business”<sup>7</sup>.

**Table 1 Classification of property according to the IFRS**

Category	Description	Authorised standard
<b>Investment property</b>	property (land or a building—or part of a building—or both) held (by the owner or by the lessee as a right-of-use asset) to earn rentals or for capital appreciation or both, rather than for: (a) use in the production or supply of goods or services or for administrative purposes; or (b) sale in the ordinary course of business.	IAS 40 <i>Investment property</i>
<b>Owner-occupied property</b>	property held (by the owner or by the lessee under a finance lease) for use in the production or supply of goods or services or for administrative purposes.	IAS 16 <i>Property, plant and equipment</i>
<b>Property held for sale</b>	Property held for sale in the ordinary course of business	IAS 2 <i>Inventory</i>
<b>Property as non-current assets held for sale</b>	Property treated as investment property under the IAS 40 or owner-occupied property under the IAS 16 whose intended use has been changed and which meet the criteria to be classified as non-current asset held for sale, or which are included in a disposal group that is classified as held for sale	IFRS 5 <i>Non-current assets held for sale and discontinued operations</i>
<b>Property under construction or development</b>	Property that is under construction and property under redevelopment for continued future use as investment property	IAS 16 <i>Property, plant and equipment</i> until construction or development is complete; afterwards the IAS 40 <i>Investment property</i>
<b>Investment property under lease</b>	Property that is acquired under finance lease	IFRS 16 <i>Leases</i>
	Property held to be leased out under an operating lease	IAS 40 <i>Investment property</i>
<b>Property from business combinations</b>	Property acquired from business combinations	IFRS 3 <i>Business combinations</i>
<b>Property with undetermined use</b>	Property for which the management has not yet determined how to use it (as an investment property, inventory or as owner-occupied property)	IAS 40 <i>Investment property</i>
<b>Property with dual use</b>	Property partially held for rental income or capital appreciation and partially for use in the production or supply of goods or services or for administrative purposes; which can be sold separately	IAS 40 <i>Investment property</i> or IAS 16 <i>Property, plant and equipment</i>

Source: Adapted from: the International Financial Reporting Standards as published in Eur-Lex, and PWC (2018)<sup>8</sup>

#### 2.4 Initial recognition and subsequent measurement

Accounting standards are a set of rules that determine the initial recognition and subsequent measurement of each financial statement item. Rules for initial recognition of an asset, equity or liability specify requirements for measuring a financial statement item for the first

time in financial statements. Subsequent measurement of the financial statement item means the valuation of this item after initial recognition. Similarities and differences in recognition and subsequent measurement of investment property according to the three sets of accounting standards are presented in Table 2.

**Table 2 Initial recognition and measurement of Investment Property According to IFRS 40, IFRS for SMEs 16 and CFRS 7**

Standard	Recognition	Subsequent measurement
IAS 40	An investment property shall be <b>measured initially at its cost</b> . Transaction costs shall be included in the initial measurement. The cost of a purchased investment property comprises its purchase price and any directly attributable expenditure. Directly attributable expenditure includes, for example, professional fees for legal services, property transfer taxes and other transaction costs. Cost of a property interest held under a lease and classified as an investment shall be recognized at <b>the lower of the fair value of the property and the present value of the minimum lease payments</b> .	An entity shall choose as its accounting policy <b>either the fair value model or the cost model</b> and shall apply that policy to all of its investment property. This Standard <b>requires all entities to measure the fair value</b> of investment property, for the purpose of either measurement (if the entity uses the fair value model) or disclosure (if it uses the cost model).
IFRS for SMEs 16	An entity <b>shall measure investment property at its cost</b> at initial recognition. The cost of a purchased investment property comprises its purchase price and any directly attributable expenditure such as legal and brokerage fees, property transfer taxes and other transaction costs.  The initial cost of a property interest held under a lease and classified as an investment property shall be recognized <b>at the lower of the fair value of the property and the present value of the minimum lease payments</b> .	Investment property whose fair value can be measured reliably without undue cost or effort shall be measured <b>at fair value</b> at each reporting date with changes in fair value recognized in profit or loss. If a property interest held under a lease is classified as investment property, the item accounted for at fair value is that interest and not the underlying property. An entity shall account for all other investment property using <b>the cost model</b> .
CFRS 7	An investment property shall be measured initially <b>at its cost</b> . Transaction costs shall be included in the initial measurement. Cost of a property interest held under a finance lease and classified as an investment shall be recognized <b>at the lower of the fair value of the property and the present value of the minimum lease payments</b> .	According to accounting policy, <b>an entity should choose either a fair value model or costs model</b> and apply this policy to all of their real estate investments. The Standard <b>requires from entity to determine the fair value</b> of an investment in real estate for the purpose either measurement (if an entity applies a fair value model) or disclosure (if an entity applies a cost model).

Source: Systematized by the authors according to relevant standards

There are no significant differences in the rules for initial recognition and subsequent measurement between national and international standards. Minor differences are only found in the description of these rules. Companies should measure investment property initially at its cost (purchase cost + transaction costs). All standards permit two models for subsequent measurement: a cost model and fair value model. The value of investment property in the financial statements may differ depending on the model selected.

### 3. Notes to the financial statements explaining investment property

#### 3.1 Notes as a source of information for financial statement users

Descriptions and clarifications of financial statement items should be presented in the notes to give

the users of financial statements a complete picture of the companies' financial position and business performance. Each accounting standard defines disclosure requirements for particular financial statement item. These requirements are extensive, particularly if we consider the IFRS. Each company individually decides which information it will disclose in the notes to the financial statements and in which form. This approach in preparing the notes usually results with a large volume of irrelevant information presented in the notes. "One study of Annual Reports in the United Kingdom (U.K.) noted that they grew on average from 26 pages in 1965 to 75 pages in 2004, reflecting increases in both voluntary and mandated disclosures. Further, a recent Deloitte U.K. publication indicated that in 1996 the average length of a U.K. Annual Report was 44 pages, whereas in 2010 it grew to 101 pages. This

increasing length and complexity of disclosures has drawn the attention of many parties in the financial reporting supply chain” (Beattie and Dhanani 2008). “It has been suggested that part of the reason for the increasing length and complexity of financial statements may be that accounting standard setters have increasingly emphasized the fundamental qualitative characteristic of relevance over reliability.”<sup>9</sup> The preparers of financial statements should be aware that they do not need to disclose all information mentioned in disclosure requirement in accounting standards but only those which are *materially significant* to the users of financial statements. Problems in disclosures in the notes have been recognized by numerous accounting and non-accounting organizations.

The International Accounting Standards Board (IASB) as the body responsible for developing the IFRS and the IFRS for SMEs<sup>10</sup> recognized this problem and launched a project “principles of Disclosure” in 2014 to improve guidance on notes to the financial statement preparation. The key disclosure problems according to the IASB are; (1) *note enough relevant information, irrelevant information and (3) ineffective communication.*<sup>11</sup> Based on a survey conducted in 2012, Chartered Financial Analyst Institute (CFA) suggested: (1) *development of a disclosure framework that allows management to decide what disclosures are relevant and necessary and (2) removal of disclosures to reduce the volume of financial statements.*<sup>12</sup> A discussion paper issued jointly by the European Financial Reporting Advisory Group (EFRAG), the UK Financial Reporting Council (FRC) and the French Accounting Standards Authority (ANC) in 2013 suggests that improvements should be made in two areas: (1) *ensuring that all and only relevant information is provided in the notes and (2) enhancing the way information is communicated.*<sup>13</sup> In 2011, the FRC issued a discussion paper titled “Cutting Clutter - Combating clutter in annual reports” which identified two problem areas: (1) *immaterial disclosures that inhibit the ability to identify and understand relevant information and (2) explanatory information that remains unchanged from year to year.*<sup>14</sup> According to the Institute of Chartered Accountants in England and Wales (ICAEW), the main issue concerning disclosures is “a trade-off between increasing regulation

and reducing the scope for professional judgement”.<sup>15</sup> The ICAEW makes recommendations to improve the notes to the financial statements such as. “(1) *disclosure requirements should allow firms to report separate information sets to different types of users, (2) standard-setters should regularly review their disclosure requirements to weed out unnecessary disclosures...*”<sup>16</sup> In 2011, the Institute of Chartered Accountants of Scotland (ICAS) and the New Zealand Institute of Chartered Accountants (NZICA) issued a document “*Losing the Excess Baggage – reducing disclosures in financial statements to what’s important.*”<sup>17</sup> The ICAS and the NZICA had been asked in October 2010 by the International Accounting Standards Board to undertake a project to review the levels of disclosure requirements in existing International Financial Reporting Standards and to recommend deletions and changes to disclosure requirements. The key recommendations were (1) *deleting specific requirements in IFRS and (2) enhancing the use of materiality in financial reporting disclosures.*

### 3.2 Disclosure requirements according to accounting standards

The IAS 40 sets out extensive disclosure requirements for investment property. Disclosure requirements are divided into three parts; (1) general requirements with regard to the applied model for subsequent measurement, (2) disclosure requirements for companies that apply the fair value model, and (3) disclosure requirements for companies that apply the cost model. General disclosure requirements include companies’ obligation to disclose in the notes information on (1) the selected model for subsequent measurement of investment property (real estate) – fair value model or cost model, (2) if it applies the fair value model, whether, and in what circumstances, property interests held under operating leases are classified and accounted for as investment property, (3) the criteria a company uses to distinguish investment property from owner-occupied property and from property held for sale in the ordinary course of business, (4) the fair value valuation of investment property and professional experience of an independent valuer, (5) the explanation for the amounts presented in the profit and loss account, etc.

**Table 3 Major disclosure requirements from IFRS for SMEs 16 and CFRS 7**

IFRS for SMEs 16 (defines requirements only for the fair value model)	CFRS 7 (major parts taken literally from IAS 40)
<p><i>“An entity shall disclose the following for all investment property accounted for at fair value through profit or loss:</i></p> <p><i>(a) the methods and significant assumptions applied in determining the fair value of investment property.</i></p> <p><i>(b) the extent to which the fair value of investment property (as measured or disclosed in the financial statements) is based on a valuation by an independent assessor who holds a recognized and relevant professional qualification and has recent experience in the location and class of the investment property being valued. If there has been no such valuation, that fact shall be disclosed.</i></p> <p><i>(c) the existence and amounts of restrictions on the realizability of investment property or the remittance of income and proceeds of disposal.</i></p> <p><i>(d) contractual obligations to purchase, construct or develop investment property or for repairs, maintenance or enhancements.</i></p> <p><i>(e) a reconciliation between the carrying amounts of investment property at the beginning and end of the period, showing separately some information (the standard specifies these disclosure requirements in more detail):</i></p> <p><i>This reconciliation need not be presented for prior periods.</i></p> <p><i>An entity that holds an investment property under a finance lease or operating lease provides lessees’ disclosures for finance leases and lessors’ disclosures for any operating leases into which it has entered.”</i></p>	<p>A company should disclose:</p> <p>a) whether it applies a fair value model or a cost model,</p> <p>b) if it applies the fair value model, whether and in what circumstances, a property interest held under an operating lease is classified and accounted for as investment property</p> <p>c) the extent to which the fair value of investment property (as measured or disclosed in the financial statements) is based on a valuation by an independent assessor who holds a recognized and relevant professional qualification and has recent experience in the location and class of the investment property being valued,</p> <p>d) the amounts recognized in profit or loss for:</p> <p>i. rental income from investment property,</p> <p>ii. direct operating expenses (including repairs and maintenance) arising from investment property, and</p> <p>iii. the cumulative change in fair value recognized in profit or loss on a sale of investment property from a pool of assets in which the cost model is used into a pool in which the fair value model is used,</p> <p><b>e) all disclosure requirements specified in CFRS 6 – Long term tangible assets, regardless whether a company applies the fair value model or the cost model.</b></p>

Source: Systematized by the authors according to relevant standards

Table 3 presents disclosure requirements for investment property according to the IFRS for SMEs and the CFRS. Disclosure requirements specified in national and international accounting standards are very similar. IAS 40 has the most extensive disclosure requirements for investment property which is understandable because the IAS and IFRS are primarily intended for the financial reporting by large companies.

#### 4. Empirical research

The purpose of this paper was to explore the extent to which the quoted companies in Croatia comply with the disclosure requirements for investment property and related accounting estimates. A study was initially conducted on a population of non-financial companies that were quoted on the Zagreb Stock Exchange in 2013 (Pavić et al., 2016), which included 132 companies. To investigate if there

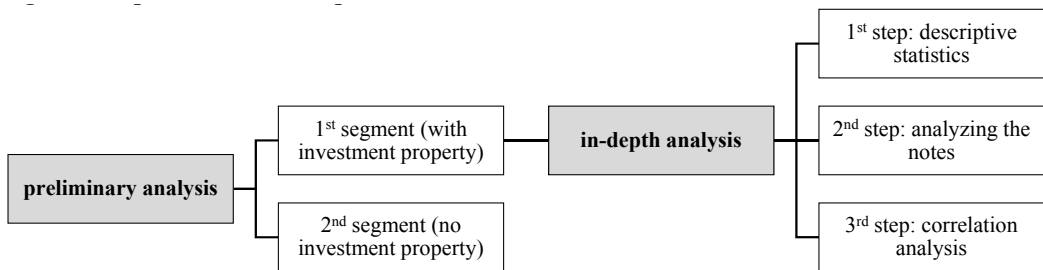
were visible improvements in the disclosure practice of the same population of companies, another research was conducted for 2017, which included 131 companies (one company that was quoted on the stock exchange in 2013 went bankrupt in the meantime).

#### 4.1 Description of the research

Since the main research goal was to explore if quoted companies in Croatia satisfy the IAS 40 *Investment property* disclosure requirements, the first step in the research was the preliminary analysis of all the quoted companies' assets structure, in order to identify the companies that have the item *invest-*

*ment property* in their balance sheets as a part of the long-term tangible assets. This resulted in dividing the population into two segments. Further analysis was conducted on a segment of quoted companies that have recorded the investment property as a type of asset. This in-depth analysis included three steps: 1) descriptive analysis of the significance of this type of asset, 2) analysis of the notes to the financial statements to explore if companies published the information on accounting estimates required by the IAS 40, and 3) correlation analysis between the significance of the item investment property and companies' disclosure transparency regarding investment property (Figure 1).

Figure 1 Steps in the research process



Source: Created by the authors

#### 4.2 Research results

The preliminary analysis of the quoted companies' asset structure shows that one third of them have the item investment property on their balance sheet for 2013 (44 out of 132; 33%), with a slight increase in 2017 (54 out of 131; 41%). However, the mean absolute value has decreased from 38 to 35 million HRK. This trend is obviously a direct consequence of the decrease in total assets of analyzed companies, which is why the relative value of investment property, both as a percentage of long-term and total assets, has increased. From the information that the item investment property on average accounts for around 10% of the companies' total assets, it could be concluded that it is a significant item on the balance sheet. However, it should be taken into account that the dispersion among the observed companies is very high, which is evident from the coefficient of variation that is higher than 100% for all variables and years. Therefore, conclusions can-

not be based on mean values - median is a much better measure of central tendency. According to the median, 50% of analyzed companies in each year have the relative value of investment property, as a percentage of total assets, higher than approximately 2%, indicating that the item is not as significant as initially concluded.

Since the mean values are statistically heavily influenced by outliers, extremely high absolute and relative values of investment property were identified and excluded when calculating measures of descriptive statistics. The total number of observations that deviated from the mean for three or more standard deviations in 2013 was five, compared to only one observation in 2017. Measures of descriptive statistics without outliers are presented in Table 4. As expected, median values did not change a lot, while mean values and measures of dispersion are significantly lower.

**Table 4 Measures of descriptive statistics for the item Investment property – outliers excluded from the calculation**

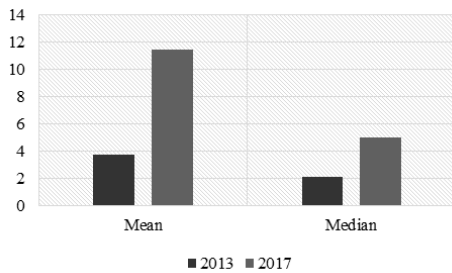
	Absolute value of investment property		Relative value of investment property as a % of long-term assets		Relative value of investment property as a % of total assets	
	2013	2017	2013	2017	2013	2017
<b>Mean</b>	18,692,489	30,949,572	3.73	11.45	2.56	8.13
<b>Median</b>	8,210,333	15,948,667	2.10	5.00	1.20	2.23
<b>Standard Deviation</b>	25,395,866	39,471,581	4.13	17.03	3.10	14.04
<b>Range</b>	91,916,538	151,248,606	14.18	79.32	10.97	67.29
<b>Minimum</b>	7,000	45,518	0.00	0.01	0.00	0.00
<b>Maximum</b>	91,923,538	151,294,124	14.19	79.33	10.97	67.30
<b>Sum</b>	729,007,056	1,640,327,316	134.24	584.12	97.32	414.51
<b>Count</b>	39	53	36	51	38	51
<b>Coefficient of Variation</b>	135.86	127.54	110.75	148.69	121.19	172.80

Source: Calculated by the authors

When observing calculated measures of descriptive statistics when the outliers are excluded, it can be concluded that the item investment property has a relatively low significance in the structure of total assets of quoted companies in Croatia. However,

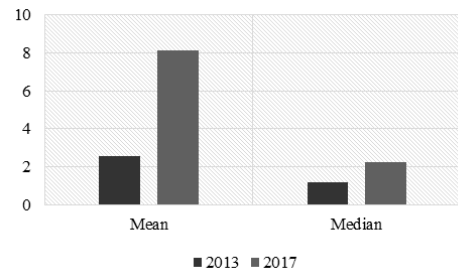
both mean and median values show that the relative significance on average is higher for 2017 compared to 2013 (Figure 2 and Figure 3). Therefore, their related disclosures were also expected to improve in the analyzed period.

**Figure 2 Mean and median of relative value of investment property as a % of long-term assets (outliers excluded)**



Source: Created by the authors

**Figure 3 Mean and median of relative value of investment property as a % of total assets (outliers excluded)**



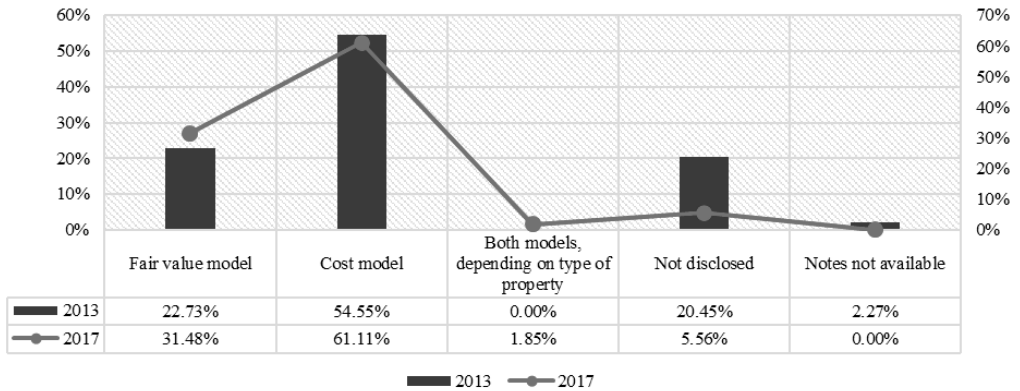
Source: Created by the authors

When analyzing the notes to financial statements of quoted companies that have the item investment property, it was investigated whether the notes contained the following elements: 1) method of subsequent measurement of investment property, 2) position of disclosed method within the notes, and 3) frequency of disclosing additional accounting estimates for com-

panies that use the cost model. As for the method of subsequent measurement (Figure 4), there are noticeable improvements in the analyzed period in terms of the number of companies that disclosed the method in the notes. Out of the total number of companies, 94% of them disclosed the method in 2017, which is a significant increase compared to 80% in 2013.



**Figure 4 Methods of subsequent measurement of investment property**

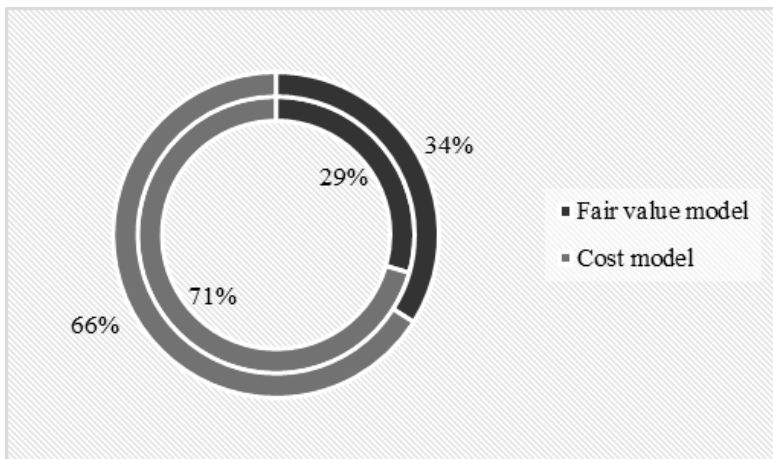


Source: Created by the authors

The cost model is the most widely used method for subsequent measurement of investment property, although there is an increase in the percentage of companies that apply the fair value model. Out of 34 companies that disclosed the method in 2013,

only 29% of them used the fair value model (Figure 5), while 34% of the 50 companies with disclosed method in 2017 measured investment property at fair value. It can be concluded that there is a trend towards the fair value model.

**Figure 5 Frequency of applied method of subsequent measurement – cost model vs. fair value model (inner circle = 2013; outer circle = 2017)**



Source: Created by the authors

The method of subsequent measurement of a certain type of asset can be directly disclosed in the notes or it can be inferred from the content of the notes. In 2013, all companies that applied the fair value model for investment property presented that information directly in the first part of the notes that refers to significant accounting policies. How-

ever, companies that used the cost method were not as transparent, since only 75% of companies disclosed the method directly. These numbers improved in 2017 (Table 5), when the same indicator increased to 88%, which indicates increased compliance with the provisions of IAS 40 as a relevant standard for investment property.

**Table 5 Position of the disclosure method for subsequent measurement of investment property in the notes for companies that use the cost model**

	2013		2017	
	Absolute value	Relative value	Absolute value	Relative value
<b>directly in accounting policies</b>	16	66.67%	29	85.29%
<b>directly within the notes to the balance sheet</b>	2	8.33%	1	2.94%
<b>indirectly in accounting policies</b>	0	0.00%	1	2.94%
<b>indirectly within the notes to the balance sheet</b>	6	25.00%	3	8.82%
<b>TOTAL</b>	<b>24</b>	<b>100.00%</b>	<b>34</b>	<b>100.00%</b>

Source: Calculated by the authors

For companies that use the cost model for subsequent measurement of investment property, the standard requires certain additional accounting estimates to be disclosed in the notes to the financial statements. The frequency of analyzed quoted companies that disclosed this information in 2013 and 2017 is shown in Table 6. When observing the frequencies in 2013, the results indicate that a relatively small percentage of companies disclosed all three accounting estimates related to investment property. More specifically, ap-

proximately 38% of them disclosed the estimated useful lives of assets classified as investment property, while 29% of them also provided the information on the estimated fair value or the explanation why the fair value could not be assessed. Such low numbers can be attributed to the fact that the majority of companies probably concluded that this information was not significant enough to be provided in the notes, due to a relatively small share of investment property in the structure of total assets.

**Table 6 The frequency of disclosing additional accounting estimates for companies that use the cost model for subsequent measurement**

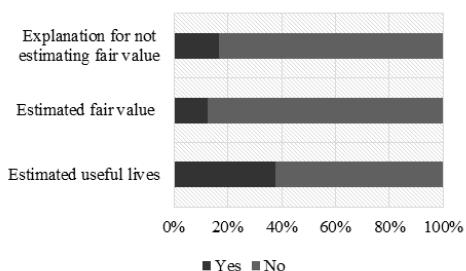
	2013		2017	
	Absolute value (out of 24)	Relative value	Absolute value (out of 34)	Relative value
<b>Estimated useful lives</b>	9	37.50%	24	70.59%
<b>Estimated fair value</b>	3	12.50%	7	20.59%
<b>Explanation for not estimating fair value</b>	4	16.67%	6	17.65%

Source: Calculated by the authors

Significant improvements are noticeable in 2017, especially regarding the disclosed estimated useful lives (Figure 6 and Figure 7), since the percentage of companies disclosing such information almost doubled – from 38% to 71%. The increase in the

frequency of disclosing fair value or an appropriate explanation is less pronounced. However, an increase of 9% in 2017 when compared to 2013 is still a positive trend.

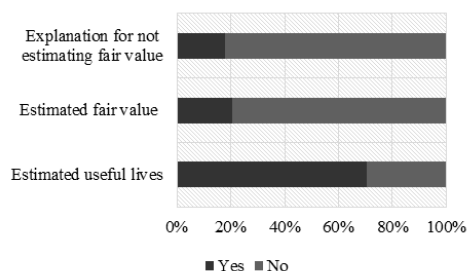
**Figure 6** The frequency of disclosing additional accounting estimates for companies that use the cost model – 2013



Source: Created by the authors

Companies use their judgment when deciding which information to provide in their notes to the financial statements, based on the materiality principle. On the one hand, the results of the descriptive analysis indicate that, on average, the item investment property has relatively low share in long-term or total assets of quoted companies in Croatia. On the other hand, the in-depth analysis of disclosures provided in the notes shows that a small number of analyzed companies fully comply with the provisions of the IAS 40 regarding the disclosure of appropriate accounting estimates related to

**Figure 7** The frequency of disclosing additional accounting estimates for companies that use the cost model – 2017



Source: Created by the authors

investment property. Logically, it can be assumed that these two variables are positively correlated. In order to quantify the companies' level of transparency when it comes to investment property, companies were awarded points for each category of the required disclosures under the IAS 40 (Table 7). The maximum number of points was five - four points were given if the company published all the information required by the IAS 40 and one point was given for additional disclosures in the form of analytical structure of investment property.

**Table 7** Criteria for awarding points to companies for their transparency regarding investment property

For companies applying the cost model		For companies applying the fair value model	
Category	Points	Category	Points
Method of subsequent measurement	2 if directly stated; 1 if indirectly stated	Method of subsequent measurement	4
Estimated useful lives	1		
Estimated fair value or provided explanation	1		
Additional disclosures on investment property	1	Additional disclosures on investment property	1
Maximum number of points	5	Maximum number of points	5

Source: Created by the authors

Once the level of transparency was quantified, the Pearson and Spearman correlation coefficients were calculated. The first variable was the assessed level of transparency and the second variable was

the share of investment property in long-term/total assets (Table 8). For both observed years, the correlation coefficients indicate a positive relationship between the variables.

**Table 8 Correlation coefficients between the share of investment property in the balance sheet and the level of disclosures on accounting estimates in the notes**

Correlation between the share of investment property in long-term assets and the estimated level of disclosures related to accounting estimates in the notes								
	2013				2017			
	R	p (two-tailed)	n	df	R	p (two-tailed)	n	df
<b>Pearson Correlation</b>	0.3974	0.0083	43	41	0.3353	0.0132	54	52
<b>Spearman Correlation</b>	0.5120	0.0004	43	41	0.3708	0.0058	54	52
Correlation between the share of investment property in total assets and the estimated level of disclosures related to accounting estimates in the notes								
	2013				2017			
	R	p (two-tailed)	n	df	R	p (two-tailed)	n	df
<b>Pearson Correlation</b>	0.4127	0.0060	43	41	0.3015	0.0267	54	52
<b>Spearman Correlation</b>	0.4939	0.0008	43	41	0.3339	0.0136	54	52

Source: Calculated by the authors

According to the Pearson coefficient, which evaluates the linear relationship between the variables, the relationship is weak. However, the Spearman coefficient is higher for 2013, suggesting that the variables tend to change together, but not necessarily at the constant rate. The same coefficient is much lower for 2017. The final conclusion is that the correlation can be considered as statistically significant and positive by normal standards.

## 5. Conclusion

A property which is held to earn rentals or for capital appreciation is accounted for under IAS 40 *Investment property*. IAS 40 allows investment property to be measured subsequently at cost or fair value. It also requires the disclosure of a variety of information in the notes to the financial statements by specifying which information should be disclosed when applying the cost model and which in the case of fair value model. The purpose of this research was to analyze the notes of quoted companies in Croatia so as to determine which information on accounting estimates related to investment property they disclose.

The preliminary analysis of the quoted companies' asset structure showed that approximately one third of them have the item investment property in their balance sheet for 2013, with a slight increase in 2017. When observing measures of descriptive statistics that were calculated when the outliers were excluded, it is evident that the investment property has a relatively low significance when compared to total assets of analyzed companies. The notes to

the financial statements are composed based on the materiality principle, which explains why the analyzed companies did not fully comply with the required disclosures set in IAS 40. It is important to note that there are certain improvements in 2017 in comparison to 2013, primarily in terms of the percentage of companies that disclosed the method of subsequent measurement of investment property. Although there is a trend towards using the fair value model, the cost model is still mainly used for subsequent measurement. Moreover, there are also improvements regarding the disclosed estimated useful lives of investment property for companies that apply the cost model, while the percentage of companies that disclose the estimated fair value or an appropriate explanation remains very low. The general impression gained through the analysis of the notes is that there are positive improvements in providing more transparent information for investors and other interested financial statement users. As expected, companies with a bigger share of investment property have shown greater level of transparency, providing additional information which is not required by the standards.

The research was limited to companies quoted on the Zagreb Stock Exchange. Further research could include a wider population of companies that are required to apply IAS 40. Moreover, there is a possibility of conducting a survey of accountants to explore their experience of and opinions about the application of IAS 40, as well as potential areas of improvement in the accounting treatment of investment property.

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## **KUPOVANJE NEKRETNINA U FUNKCIJI ULAGANJA U NEKRETNINE PREMA NACIONALNIM I MEĐUNARODNIM RAČUNOVODSTVENIM STANDARDIMA – SLUČAJ HRVATSKE**

### **SAŽETAK**

Računovodstveni tretman nekretnina varira ovisno o namjeri s kojom poduzeće kupuje nekretninu. U ovom se radu na teorijski i praktični način obrazlažu računovodstveni standardi za postupanje s ulaganjima u nekretnine, s naglaskom na Međunarodnim standardima financijskoga izvještavanja, Hrvatskim standardima financijskoga izvještavanja (HSFI) i Međunarodnim standardima financijskoga izvještavanja za mala i srednja poduzeća (MSFI za MSP). Teorijski dio rada bavi se analizom različitih modela mjerenja i računovodstvenog tretmana ulaganja u nekretnine prema različitim računovodstvenim standardima. Posebna pozornost posvećena je bilješkama uz financijske izvještaje. Empirijski dio rada predstavlja proširenje istraživanja provedenog 2013. godine na uzorku kotirajućih poduzeća u Republici Hrvatskoj. Analizirani su financijski izvještaji kotirajućih poduzeća te je istraživanje pokazalo da kotirajuća poduzeća u bilješkama uz financijske izvještaje ne objavljuju sve relevantne informacije o ulaganjima u nekretnine. S ciljem ispitivanja jesu li postignuta određena poboljšanja u financijskom izvještavanju o ulaganjima u nekretnine, usporedili smo rezultate iz 2017. godine s rezultatima iz 2013. godine.

**Ključne riječi:** ulaganja u nekretnine, bilješke uz financijske izvještaje, kotirajuća poduzeća, nacionalni računovodstveni standardi, MSFI, MSFI za mala i srednja poduzeća

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# ADVERTISING-BASED REVENUE MODEL IN DIGITAL MEDIA MARKET

## ABSTRACT

In the case of advertising-based revenue model, a company creates a digital media product, attracts interaction and engagement of users and then sells access to this audience to advertisers. This revenue model allows users to receive useful content for free or at a low price, while publishers accelerate the growth and adoption of their digital product. Although overreliance on advertising may result in failure to develop the core product, the advertising-based revenue model has become one of the most popular sources of revenue for many web products. Existing empirical studies on digital media revenue models are conducted from singular viewpoints, focusing on new types of revenue models and lacking the comprehensive research of possibilities of advertising-based revenue model in the modern digital media market. In this study, the focus is on the real case of creating the content website and making it profitable in six months using the pure advertising-based revenue model. It is empirically proven that, in order to stay competitive, a new digital media product should aim at decreasing website costs, increasing revenue and scaling up the product to reach a wider audience. Minimum marketing costs can be achieved through working on the relevance and quality of advertising, reasonable targeting and landing page experience. As for increasing advertising revenue, the main point is constantly experimenting with advertising format optimization, adding new advertising networks and enhancing landing page quality. It is empirically proven that the pure advertising-based revenue model can be profitable for a new digital media product entering a highly competitive market. However, high gross margins can be achieved only by attracting quality target audience, achieving economies of scale and diversifying the revenue model.

**Keywords:** Digital media, revenue model, online advertising, advertising campaign, advertising network

## 1. Introduction

The advertising-based revenue model in media has been popular since the time of such media magnates as William Randolph Hearst and Joseph Pulitzer. In the early 20th century, there were already many literate people in the USA. The value of the press – as a source of news, type of entertainment

and method of influence – was realized practically by all sectors of society. It created a significant demand for publications, however, this demand was inelastic: broad masses were ready to pay for their copy of a newspaper or magazine less than their actual cost. Publishers realized that if you got a large audience, the real revenue lied in selling access to

this large audience to advertisers, rather than just in circulation sales (Ladd, 2011: 32).

100 years later the media changed significantly. Personal computers and the internet made a great shift from traditional to digital media. What's more, the expansion of mobile internet access and ever-faster connection speeds opened up more options for media companies than ever before. Despite differences between business models used in the modern digital media market, one can establish a common feature for them: regardless of the availability of other financial sources, advertising is one of the most important components of their business activity (Albarran, 2017: 32). For commercial digital media, advertising remains one of the main ways to make a profit. For example, in 2017, digital newspaper advertising revenue worldwide amounted to 11.4 billion USD. It is 2.4 times as much as digital newspaper circulation revenue worldwide in 2017, which amounted to 4.75 billion USD<sup>1</sup>.

What's more, the 2017 Nielsen research shows that millennials understand that advertising is necessary for brands to inform their audience about their products and services (79%). Most respondents state that they are generally not bothered by advertising (46%), especially if the content is free (75%)<sup>2</sup>.

In this regard, it could be concluded that digital media is beneficial to both sides: users have access to useful content from their device at any time, while digital publishers make a profit from advertising targeted at users of their product (Fan et al., 2007: 145).

However, competition in the digital media market is fierce since there are so many players striving for market dominance. To name a few e-publishing giants, which monetize online content on their websites through advertising: BuzzFeed, Vox Media, HuffPost, Mashable, Insider Inc., Vice Media, The Washington Post, The Wall Street Journal, Fox Corporation, etc.

The objective of this article is to find out whether it is possible to enter a highly competitive digital media market with minimum investments and make a new digital media product profitable in the short term using the pure advertising-based revenue model. The first part of the article is devoted to the research framework for studying digital media market and its main revenue models, in particular,

the advertising-based revenue model. The second part presents the case of entertainment website Rumour Juice, which was founded in May 2018 and passed its break-even point in October 2018 using the advertising-based revenue model. The last part contains conclusions and directions for future research.

## 2. Theoretical Framework

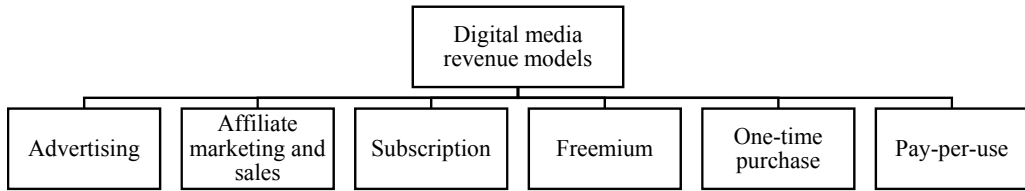
The term "revenue model" is often confused with "business model". A business model describes the rationale of how an organization creates, delivers and captures value for its customers (Osterwalder, Pigneur, 2010: 14).

A revenue model describes the structure of how a company generates revenue or income. A revenue model is just a component of the business model. For example, the business model of BuzzFeed website consists in producing free entertainment content, attracting huge traffic for its publications through social media and getting revenue from the attracted audience using the advertising-based revenue model.

Among the most popular revenue models of digital media are the following (Figure 1):

1. Advertising: a company creates a digital media product, attracts interaction and engagement of users and then sells access to this audience to advertisers.
2. Affiliate marketing and sales: a company refers to a certain product or service by sharing it in its digital media product and gets a commission on each sale made through their product on behalf of the merchant.
3. Subscription: users pay a fixed rate for access to a product at regular intervals.
4. Freemium (free + premium): users get basic features of a digital media product for free and can access the richer functionality for a subscription fee.
5. One-time purchase: a one-time payment model where users own a product after purchase.
6. Pay-per-use: the use of a product or service is metered and customers are charged each time they use it.



**Figure 1 Types of Digital Media Revenue Models**

Source: Author

The advertising-based revenue model has some benefits as well as challenges. This model lets users receive useful content for free or at a low price, while publishers accelerate the growth and adoption of their digital product. Data-driven targeting lets advertisers efficiently find their target audience, so when a publisher is connected to the relevant ad networks and their selling process is automated, advertising turns out to be one of the most profitable revenue models for digital media. It is also worth noting that targeting and real time bidding are closely tied to programmatic advertising, which finds the widespread application in many media companies. Programmatic advertising is a software-based method of buying, displaying and optimizing advertising space subject to the available audience data in order to better target certain potential users<sup>3</sup>. For example, the USA digital display advertisers invested nearly 68.47 billion USD in programmatic advertising in 2019, which amounted to 83.5% of digital display ad dollars in the USA that year<sup>4</sup>.

At the same time, advertising is a revenue model with inherent conflict: advertisers and users do not want the same thing. Advertisers are interested in more ad impressions and conversions, while users want valuable content without the annoying number of ads. The overreliance on advertising may result in failure to develop the core product and pump up results with the costly acquisition of users (Zhang, Hingle, 2017: 347).

One of the biggest problems of publishers worldwide is ad blockers. Ad block is a software designed to remove or alter online advertising in a web browser or an application, preventing page elements containing ads from being displayed. Ad blockers hurt publishers' advertising revenues by producing a significant loss of ad impressions (Redondo, Aznar, 2018: 1608).

The average global adblocking rate in 2018 is estimated at 27%. Greece and Poland are masters of adblocking: their rates are 42% and 36% respectively. Among other leaders are the following countries: France

(34%), Turkey (33%), Germany (33%), Hungary (32%), Croatia (32%), Sweden (32%), Portugal (31%), Spain (31%) and Austria (31%). Ireland and the USA have the exact same penetration rate of 27%<sup>5</sup>.

Desktops and laptops are devices where most ad blocking occurs. Blocking ads on smartphones is less feasible, because the most activity on mobile devices takes place within individual apps (Miklosik et al., 2018: 176).

Many internet users try to block ads, however, for their part, advertisers and publishers try to block ad blockers. The Washington Post and several other publishers block access to their publications for users, who use ad blockers. Such users receive a message calling to disable their ad block, because many publishers live off advertising. For example, by blocking access to content, Incisive Media, which owns more than 20 websites, managed to reduce the number of page views using ad blocking by 40%. On finance-related websites, such as Investment Week and Professional Advisor, Incisive Media reduced the number of page views using ad blockers by 45-55%<sup>6</sup>.

Since 2016, best-selling German newspaper Bild has been offering its readers with ad blockers two options:

- 1) deactivate the ad blocker or whitelist the publisher, or
- 2) sign up for the BILDsmart: a 2.99 EUR monthly subscription, which eliminates 90% of advertising and makes page loading 50% faster.

During the first three months, the use of ad blockers on Bild website decreased by almost 80%<sup>7</sup>.

In 2016, the Financial Times used a creative way to combat ad blocking. The digital newspaper began blanking out for users with ad blockers some percentage of words in articles, symbolizing the percentage of the company's revenue that comes from advertising. Words were blanked out in a random sequence with the ultimate message to readers that ad blocking harms the production of high-quality content<sup>8</sup>.

Digital media are always searching for new ways to improve user experience on their websites. Native advertising has become one of such ways. A native ad is the material in an online publication that resembles the publication's editorial content but is paid for by an advertiser and intended to promote a product or service<sup>9</sup>.

In contrast to the flashy banner format, the native format returns the status of useful information to advertising. Brands create services and goods, while native advertising conveys this information in an accessible form to users (Wojdyski, Evans, 2016: 158).

There are two main native ad formats. The first format is sponsored content. The brand places useful material on the publisher's website. Materials are marked as sponsored, but in fact, their usefulness overlaps with the advertising effect. Due to this, users share the link with friends and increase the virality of the text.

In September 2015, the Financial Times began to publish native ads on their website under the heading of Paid Post. 74% of newspaper readers found the information they receive in sponsored content useful. After the launch of the Paid Post column, the active engagement time has increased by 123% and the click-through rate by 30%<sup>10</sup>.

The second format is native advertising in the website's feed. A sponsored link is located in the block where a user is used to reading content. The brand message is embedded in the website's content, but when users click on it, they get to the advertiser's site. It lets brands and media get away from the problem of banner blindness. Native ad statistics shows that the CTR for native ads is as much as eight times higher than for traditional display ads<sup>11</sup>.

Media most often use both native formats. In the case of sponsored content, a publisher shares with an advertiser the authority of its publication. For example, Vice and BuzzFeed efficiently integrate sponsored content in their business strategy.

The second format provides great opportunities for targeting and does not limit the advertiser in formats. Today, as a way to monetize their websites, native advertising embedded in the feed is used by most major media companies, such as The Guardian, The Independent, Forbes, 9GAG, The Sun etc.

Despite the challenges of the advertising-based revenue model, it has become one of the most popular sources of revenue for many web products. Modern theoretical research dedicated to advertising focuses on the development of interconnection between media and advertising (Gustafsson, 2006), discov-

ering the role of advertising in digital media product monetization (Perez-Latre, 2007) and systemizing the existing techniques of increasing revenue by using different pricing models (Asdemir et al., 2012) and advertising levels (Fan et al., 2007).

Empirical research relies on evidence obtained through observation or scientific data collection methods. For example, Harms et al. (2019) investigated consumer perceptions of article-style native advertisements and banner advertisements by analyzing data (retrieved from 303 respondents in an online experiment) with partial least squares path modelling. Bachmann et al. (2019) conducted a factorial between-subjects experiment to investigate the potential impact of native advertising on perceived media quality. However, many modern studies treat the advertising-based revenue model as old-fashioned and focus on alternative revenue models, including paywalls (Fletcher, Nielsen, 2017), micropayments (Geidner, D'Arcy, 2015), crowdfunding (Ladson, Lee, 2017) or sharewalls (Bechmann et al., 2016).

Existing empirical studies are conducted from singular viewpoints, lacking the comprehensive research of possibilities of advertising-based revenue model in the modern digital media market. Rumour Juice website is an example of whether online advertising can be a reliable source of revenue for a new digital product entering a highly competitive market. The scientific value of this research consists in its methodology of creating a real digital media product and analyzing empirical data in order to get useful insights in the field of advertising-based revenue model implementation.

### 3. Methodology

The objective of the research study is to empirically find out whether the pure advertising-based revenue model can be profitable for a new digital media product entering a highly competitive market. The focus is on the real case of creating a content website, named Rumour Juice, and making it profitable in six months using the advertising-based revenue model and implementing common practices of efficient product management and online marketing.

Rumour Juice<sup>12</sup> is an entertainment website dedicated to Hollywood celebrities. Its target markets are English-speaking Tier 1 countries, such as the USA, the United Kingdom, Australia and Canada. Rumour Juice revenue model is based on online advertising.

The market of English-language websites about world-famous celebrities is highly competitive. For comparison, its biggest players and their website metrics are given in Table 1.

**Table 1 Metrics of English-Language Websites about Celebrities as of October 2019**

Nº	Website Name	URL	Visits in millions	Unique users in millions	Pages per Visit	Average Visit Duration, minutes	Bounce Rate, %
1	Celebuzz	<a href="https://www.celebuzz.com/">https://www.celebuzz.com/</a>	252.2	222.1	1.63	2.63	71.24
2	Maily Online	<a href="https://www.dailymail.co.uk/">https://www.dailymail.co.uk/</a>	161.2	46.7	2.98	15.10	59.98
3	Showbiz CheatSheet	<a href="https://www.cheatsheet.com/">https://www.cheatsheet.com/</a>	154.3	52.3	1.4	4.70	70.85
4	BuzzFeed	<a href="https://www.buzzfeed.com/">https://www.buzzfeed.com/</a>	92.1	37.6	3.18	10.95	67.27
5	Business Insider	<a href="https://www.businessinsider.com/">https://www.businessinsider.com/</a>	85.5	47.3	1.97	6.28	69.42
6	People	<a href="https://people.com/">https://people.com/</a>	63.2	23.3	2.08	6.28	77.29
7	Cosmopolitan	<a href="https://www.cosmopolitan.com/">https://www.cosmopolitan.com/</a>	47.8	35	1.51	5.70	77.65
8	TMZ	<a href="https://www.tMZ.com/">https://www.tMZ.com/</a>	40.4	14.6	2.23	5.67	72.63
9	Elle	<a href="https://www.elle.com/">https://www.elle.com/</a>	37.5	20.6	1.52	4.63	75.23
10	E! Online	<a href="https://www.eonline.com/">https://www.eonline.com/</a>	27.3	16.5	2.51	3.45	53.77
11	Insider	<a href="https://www.insider.com/">https://www.insider.com/</a>	22.1	16.8	1.97	4.77	76.09
12	Hello!	<a href="https://www.hellomagazine.com/">https://www.hellomagazine.com/</a>	21.8	9	2.11	5.20	68.88
13	Bored Panda	<a href="https://www.boredpanda.com/">https://www.boredpanda.com/</a>	21.6	10.6	2.39	7.42	58.53
14	Hollywood Reporter	<a href="https://www.hollywoodreporter.com/">https://www.hollywoodreporter.com/</a>	19.1	14.1	1.6	4.40	81.08
15	Hollywood Life	<a href="https://hollywoodlife.com/">https://hollywoodlife.com/</a>	16.8	11	3.36	3.88	68.04
16	Billboard	<a href="https://www.billboard.com/">https://www.billboard.com/</a>	15.5	10.8	2.06	5.32	65.74
17	Entertainment Weekly	<a href="https://ew.com/">https://ew.com/</a>	15.5	9.1	1.78	4.03	75.79
18	Popsugar	<a href="https://www.popsugar.com/">https://www.popsugar.com/</a>	13.8	9.9	3.35	4.25	68.25
19	US Weekly	<a href="https://www.usmagazine.com/">https://www.usmagazine.com/</a>	13.6	6.5	2.17	4.05	75.16
20	Harper's Bazaar	<a href="https://www.harpersbazaar.com/">https://www.harpersbazaar.com/</a>	11	8.7	1.81	4.45	75.5
21	Pop Culture	<a href="https://popculture.com/">https://popculture.com/</a>	10.3	7.4	1.52	4.05	76.24
22	Marie Claire	<a href="https://www.marieclaire.com/">https://www.marieclaire.com/</a>	8.9	7.4	1.78	5.25	77.82
23	InStyle	<a href="https://www.instyle.com/">https://www.instyle.com/</a>	6	4.2	1.75	3.37	71.49
24	Seventeen	<a href="https://www.seventeen.com/">https://www.seventeen.com/</a>	5.2	4.7	1.76	3.40	75.95
25	Vogue	<a href="https://www.vogue.com/">https://www.vogue.com/</a>	4.7	3	4.98	6.38	64.86
26	Factinate	<a href="https://www.factinate.com/">https://www.factinate.com/</a>	3.6	2	4.52	7.35	74.04
27	Zimbio	<a href="http://www.zimbio.com/">http://www.zimbio.com/</a>	3.6	3	2.8	3.02	64.03
28	The Things	<a href="https://www.thethings.com/">https://www.thethings.com/</a>	2.9	2	3.58	3.68	55.03
29	Perez Hilton	<a href="https://perezhilton.com/">https://perezhilton.com/</a>	2.8	1.1	2.81	3.95	73.11
30	PopBuzz	<a href="https://www.popbuzz.com/">https://www.popbuzz.com/</a>	2.1	1.9	2.41	2.62	63.68

Source: Semrush, October 2019

After conducting user research and A/B testing, the final business model for running Rumour Juice website during the first six months consisted in the following:

1. Producing daily feature articles about popular celebrities, for example, "12 Famous BFFs Celebrities You Didn't Know Were Best Friends".
2. Attracting users to different articles through online marketing via advertising networks such as Facebook Ads, Google Display & Video 360, Google Search Ads 360, Snapchat Ads and Twitter Ads.
3. Selling advertising space at the website to advertising networks such as Google AdSense, Facebook Audience Network, Teads, Taboola and District M.

#### 4. Results

Rumour Juice was founded in May 2018 and passed its break-even point in October 2018. As of October 2018, Rumour Juice had 1.01 million monthly unique users (Table 2). 55.63% of them were new ones brought to the website through efficient online marketing. Monthly page views amounted to 8.22 million. Accordingly, average page views per user equalled 8.10 pages. In October 2018, the average session length was 3.91 minutes, median session length was 2.47 minutes and median time spent per user was 2.60 minutes. The total amount of October sessions equals 1.04 million, while the bounce rate of web sessions amounted to 22.29%.

*Table 2 Rumour Juice Website Metrics as of October 2018*

Date	New Users	Unique Users	Page Views	Average Page Views per User	Average Session Length, min	Median Session Length, min	Median Time Spent per User, min	Number of Sessions	Bounce Rate of Web Sessions, %
01.10.2018	19184	31948	250724	7.83	3.77	2.26	2.37	36740	23.20
02.10.2018	10624	21921	183287	8.35	4.02	2.56	2.68	22594	23.30
03.10.2018	52220	81405	602338	7.39	3.89	2.26	2.39	81696	25.50
04.10.2018	12102	21185	156964	7.39	4.02	2.23	2.33	22208	25.20
05.10.2018	8137	16827	128941	7.63	3.55	2.04	2.14	16518	26.30
06.10.2018	5430	11970	99282	8.28	4.31	2.47	2.56	12025	23.40
07.10.2018	10346	20427	165826	8.11	3.77	2.43	2.55	20454	23.50
08.10.2018	5976	9908	68525	6.89	3.28	1.76	1.87	10279	29.00
09.10.2018	10547	17233	122400	7.07	3.40	1.85	1.97	16247	27.40
10.10.2018	18331	26372	217926	8.24	3.34	2.14	2.25	27427	22.20
11.10.2018	28860	43680	360758	8.24	3.63	2.18	2.31	44862	24.10
12.10.2018	12603	20611	160737	7.75	3.63	2.04	2.16	21097	25.20
13.10.2018	16081	25105	210741	8.37	3.71	2.55	2.65	25623	23.00
14.10.2018	18874	31131	271535	8.71	4.00	2.71	2.83	31120	21.70
15.10.2018	20550	32035	251114	7.82	4.26	2.77	2.90	32529	22.50
16.10.2018	36763	65196	517825	7.93	3.65	2.34	2.55	67343	20.10
17.10.2018	40675	68574	537234	7.82	4.20	2.72	2.88	68775	17.50
18.10.2018	22697	41222	317208	7.68	4.31	2.59	2.75	41121	19.00
19.10.2018	23719	42213	346189	8.18	4.47	2.97	3.13	43196	20.00
20.10.2018	5865	12203	99559	8.13	4.56	2.64	2.76	12956	27.00

Date	New Users	Unique Users	Page Views	Average Page Views per User	Average Session Length, min	Median Session Length, min	Median Time Spent per User, min	Number of Sessions	Bounce Rate of Web Sessions, %
21.10.2018	18635	33529	305037	9.08	3.53	2.32	2.42	34415	20.50
22.10.2018	23440	40935	340023	8.3	3.64	2.22	2.34	43648	23.20
23.10.2018	16733	31206	288286	9.23	3.88	2.43	2.56	34496	22.10
24.10.2018	28949	59847	494203	8.25	4.02	2.73	2.87	61768	21.00
25.10.2018	13686	32479	258439	7.95	4.20	2.51	2.64	34255	24.00
26.10.2018	11620	27871	241921	8.67	4.39	2.74	2.88	29625	22.30
27.10.2018	9097	23253	209241	9	4.43	3.01	3.14	24750	19.60
28.10.2018	9609	25679	233128	9.07	4.38	3.00	3.15	26855	19.80
29.10.2018	16702	39479	334370	8.47	3.98	2.57	2.68	39132	21.40
30.10.2018	5952	17698	140131	7.92	3.47	2.05	2.16	19117	25.40
31.10.2018	29575	39891	303386	7.6	3.12	2.35	2.47	39460	23.00
TOTAL	563582	1013033	8217278	8.10	3.91	2.47	2.60	1042331	22.29

Source: Facebook Pixel, Rumour Juice Website, October 2018

Total costs for running Rumour Juice in the period May-October 2018 amounted to 80132.81 USD. They included costs for the team (salaries and workplace), web hosting, domain and marketing. The

total advertising revenue for this period amounted to 88906.15 USD. Its key variables were ad impressions and eCPM (Table 3). All in all, after six months of running Rumour Juice, its ROI amounted to 10.95%.

**Table 3 Advertising Revenue of Rumour Juice website, May-October 2018**

Months	Page Views	Ad Impressions	eCPM, USD	Ad Revenue, USD
May 2018	531970	968185	0.94	910.09
June 2018	3098027	5731350	1.08	6189.86
July 2018	4136112	7899974	1.32	10427.97
August 2018	6621100	12911145	1.44	18592.05
September 2018	7919189	16075954	1.51	24274.69
October 2018	8217278	18160184	1.57	28511.49
TOTAL	30523676	61746792	1.43	88906.15

Source: Facebook Monetization Manager, Rumour Juice Website, May-October 2018

## 5. Discussion

The Rumour Juice team took a highly competitive market with hundreds of competitors and made a thorough research about target audience and big players' strategy.

It should be noted that most ad exchanges provide higher CPMs and payoffs, when a publish-

er works with audiences from more developed countries. For example, as of March 2018, Facebook advertising average CPM in the United Kingdom was 3.15 USD and in the USA it was 2.29 USD. For comparison, in Colombia, it equalled 0.42 USD and in Ecuador, it equalled 0.55 USD (Table 4).

**Table 4 Facebook Advertising Average CPM in USD in Selected Countries Worldwide as of March 2018**

№	Country	Average CPM, USD
1	UK	3.15
2	Spain	2.42
3	USA	2.29
4	Greece	2.11
5	Puerto Rico	1.32
6	Costa Rica	1.2
7	Argentina	1.08
8	Panama	1.05
9	Uruguay	1.02
10	Chile	0.9
11	Peru	0.85
12	France	0.84
13	Mexico	0.76
14	Bolivia	0.71
15	Paraguay	0.68
16	Dominican Republic	0.59
17	Guatemala	0.58
18	Ecuador	0.55
19	Colombia	0.42

Source: Statista, March 2018

Thus, to stay competitive, Rumour Juice strategy was to decrease website costs and increase advertising revenue while operating in English-speaking Tier 1 countries. As for decreasing costs, the main point was to minimize marketing costs paying special attention to the relevance and quality of advertising, reasonable targeting and landing page experience.

May 2018 was dedicated to experiments with website content, article formats and advertising campaigns settings. The results of paid online marketing during that month showed that Rumour Juice could achieve the minimum CPC at the level of 0.03 USD, maximum CTR at the level of 25% and maximum page views per user at the level of 12. Hence, for the rest of months, main KPIs in paid online marketing were set at the following levels: CTR = 20%, CPC = 0.04 USD and average page views per user = 8.

To measure the effectiveness of different templates, Rumour Juice tested the “clickability” of articles’ headlines, publishing the same articles twice under different headlines, adapting the word order and wording. In such a way, the following features of most clickable headlines were discovered:

- 1) reductions in wording, e.g. using “here’s”, “there’s” etc.;
- 2) repetitions, e.g. using double “why” or double “you” in the sentence;
- 3) numbers, e.g. “10 Most Handsome Athletes in the World”;
- 4) words-emotions: adjectives, adverbs, you-phrase promises, e.g. “insanely cool”, “super cute”, “it will make your heart melt” etc.;
- 5) slang words targeted at particular audience, e.g. adding adverb “bloody” to adjectives to make them more appealing or exaggerative, if the article is targeted at Australian audience.

Rumour Juice experimented with low search volume keywords to bring organic traffic to the website. For example, after research of the USA search keywords, there was discovered such low search volume keyword as “Kylie Jenner Car”, which was used nearly 30 times a day. After creating and publishing the relevant article under headline “Kylie Jenner Car Collection”, this article became one of the most successful website’s articles by organic traffic. Besides SEO tricks, Rumour Juice used viral and social techniques to attract new audiences. It used such tools as “Google Trends”, “CrowdTangle” and “BuzzFeed” to define most popular and viral topics in search engines and social networks and create new articles dedicated to these viral topics.

Although Rumour Juice tried to diversify its paid online marketing strategy, using different traffic channels, such as Facebook Ads, Google Display & Video 360, Snapchat Ads etc., Facebook Ads performed better than other networks in the case of promoting articles about celebrities. It is therefore worth considering in detail how Rumour Juice set up its advertising campaigns on Facebook.

Split testing or A/B testing was mandatory for the success of Rumour Juice advertising campaigns. Testing different advertising assets and audiences was aimed at finding the most relevant user groups, who were the website’s target audience. When creating ads on Facebook, Rumour Juice defined the

variables to test (for example, audience, delivery optimization, placements or design) and then created options for each of the variables. Facebook prevents the intersection of audiences, so during tests a user from one group is not able to click on both versions of the ad. Hence, Rumour Juice efficiently tested almost everything: objectives, specific characteristics of the audience, advertising format, the length of the ad text etc.

All in all, the objective of all Facebook advertising campaigns was "Traffic", which is designed to drive users to the website. The advertising delivery was optimized for link clicks, so that Facebook searched for those users, who were most likely to click on Rumour Juice ads. To avoid overpayments, Rumour Juice adjusted its budget manually. The initial bid for every ad was 0.05 USD. If an ad with such a bid got normal coverage (more than 200 users in the first three hours), the bid was left unmodified. If it didn't, the bid was raised until reaching the needed coverage. Since Rumour Juice produced new articles every day, the accelerated delivery was used to get advertising results for each article as quickly as possible.

Advertising campaigns were based on numbers, rather than assumptions. During advertising campaigns, Rumour Juice analyzed the audience and their reactions and corrected mistakes as quickly as possible. Additional settings and quick response were needed even when it seemed that everything in advertising campaigns was thought out down to the last detail.

As for increasing advertising revenue, the main point was constantly experimenting with advertising format optimization, adding new advertising networks and enhancing user experience. The main KPI in advertising revenue was eCPM = 1.5 USD.

Rumour Juice kept track of frequency and number of ads per user per hour, because frequent ad impressions could badly affect the user experience. Rumour Juice reached the optimal number of ads per page through performing different A/B tests and usability tests, measuring the metrics and analyzing the advertising results. One of the techniques to minimize the ad annoyance was embedding native banners that fitted the website's style. Properly placing ads, combining formats and examining the impact of its intensity on user experience were crucial to increase eCPM and advertising revenue. What's more, to increase the chance of selling impressions to the highest performing advertising

network, Rumour Juice experimented with ad waterfalling and open bidding, which involved the following reputable ad exchanges:

- 1) Google AdSense (1,0880,000+ websites use this Google ad exchange<sup>13</sup>, which paid out nearly \$10 billion to its publishers in 2015<sup>14</sup>);
- 2) Facebook Audience Network (270+ websites use this Facebook mobile ad exchange<sup>15</sup>, which paid out approximately \$1.5+ billion to its publishers and developers in 2018<sup>16</sup>);
- 3) Teads (333,000+ websites use this global ad exchange<sup>17</sup>, which provides monetization solutions to over 65% of the global comScore 300 editorial publishers<sup>18</sup>);
- 4) Taboola (103,000+ websites use this ad exchange<sup>19</sup>, which serves over 450 billion recommendations to over 1.4 billion unique visitors every month<sup>20</sup>);
- 5) District M (89,000+ websites use this global programmatic ad exchange<sup>21</sup>, which operates in over 200 countries all over the world<sup>22</sup>).

## 6. Conclusion

The advertising-based revenue model is a framework that emphasizes the sale of advertising as a major source of revenue. For commercial digital media, advertising remains one of major ways to make a profit.

Advertising can make a new digital media product profitable in the highly competitive market. However, one should make a thorough research about the target audience and big players' strategy. What's more, it is crucial to be efficient in decreasing website costs and increasing advertising revenue by using best practices of content management, digital marketing and programmatic advertising. Working on the relevance and quality of advertising, reasonable targeting and landing page experience is necessary to efficiently cut marketing costs. As for increasing advertising revenue, it is necessary to constantly experiment with advertising format optimization, adding new advertising networks and enhancing landing page quality.

The case of Rumour Juice showed that, although the pure advertising-based revenue model makes it

possible to pass break-even point in the relatively short term, high gross margins can be achieved only by attracting quality target audience and achieving economies of scale. Modern media companies tend to diversify their sources of revenue, since selling ads is not really enough for building scalable and profitable operations. The concentration of online advertising revenue in the hands of big tech companies, such as Google and Facebook, makes the overreliance on advertising-based revenue model unjustifiably risky<sup>23</sup> (Alpert, 2019). Especially middle-sized and small publishers can suffer significantly, since the pure advertising-based revenue model becomes too dependent on the policies and rules of third parties' ad exchange platforms. Therefore, the most reasonable solution for any publisher's revenue model is mixing advertising with affiliate marketing, subscription, freemium etc. in different combinations and proportions.

The limitations of this study consist in the focus on a single content website from the e-publishing

segment. Digital media market includes seven segments, including digital video, video games, e-publishing, digital audio, social media, search engines and digital advertising. Each segment has its own features, competitive environment, product life cycle and audience preferences. The successive implementation of advertising-based revenue model in developing Rumour Juice does not prove that advertising is the best solution to monetize every digital media product. However, the described case of Rumour Juice serves as an example that modern digital technologies make it possible for a new digital media product to succeed in terms of long-tail economy. This study can serve as the basis for further research in the field of revenue models of modern digital media products. Consideration of a range of digital media products from different segments, analysis of their key figures at different stages of their lifecycle and systematization of achieved results may lead to the creation of a generalized guide to creating a profitable digital media product involving scientific approach.



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Alona Bekh

## MODEL PRIHODA NA TEMELJU OGLAŠAVANJA NA TRŽIŠTU DIGITALNIH MEDIJA

### SAŽETAK

U slučaju modela prihoda koji se temelji na oglašavanju poduzeće stvaranjem digitalnog medijskog proizvoda, privlači se korisnike na interakciju sa sadržajem te zatim oglašivačima prodaje pristup toj publici. Taj model prihoda omogućuje korisnicima primanje korisnog sadržaja besplatno ili po niskoj cijeni, a izdavačima omogućuje ubrzavanje rasta i prihvatanja njihovih digitalnih proizvoda. Iako pretjerano oslanjanje na oglašavanje može zakočiti razvoj glavnog proizvoda, model prihoda koji se temelji na oglašavanju postao je jedan od najkorištenijih izvora prihoda za mnoge proizvode na mreži. Postojeće empirijske studije o modelima prihoda digitalnih medija provedene su s relativno uskog gledišta jer se koncentriraju samo na nove modele prihoda, a nisu obuhvatile istraživanje svih mogućnosti koje na modernom tržištu digitalnih medija pruža model prihoda koji se temelji na oglašavanju. U ovom je radu pozornost usmjerena na stvarni slučaj stvaranja *web-mjesta* sa sadržajem, koje je za šest mjeseci trebalo postati profitabilno s pomoću modela prihoda koji se temelji isključivo na oglašavanju. Ako se novi digitalni medijski proizvod želi održati konkurentnim, iskustvo govori da treba raditi na smanjenju troškova održavanja *web-mjesta*, povećanju prihoda i dosega proizvoda kako bi se doprlo do šire publike. Troškovi za marketing mogu se držati pod kontrolom povećavanjem relevantnosti i kvalitete oglašavanja, usmjeravanjem na određenu publiku i osiguravanjem dobrog iskustva na stranici koju korisnik prvu posjeti (eng. *landing page*). Ako se želi povećati prihod od oglašavanja, najvažnije je stalno eksperimentirati i nastojati optimizirati oglašivački format dodavanjem novih oglašivačkih mreža i povećavanjem kvalitete *landing* stranica. Empirijski je dokazano da čisti model prihoda na temelju oglašavanja može biti profitabilan za novi digitalni medijski proizvod koji ulazi na visoko konkurentno tržište. Međutim, visoke bruto marže mogu se ostvariti samo ako se privuče kvalitetna ciljna publika, ostvari ekonomija razmjera i diverzifikacija modela prihoda.

**Ključne riječi:** digitalni mediji, model prihoda, online oglašavanje, oglašivačka kampanja, oglašivačka mreža



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# THE IMPACT OF DISTRIBUTION CHANNELS ON THE BARGAINING POSITION OF CROATIAN WINE PRODUCERS

## ABSTRACT

This paper presents an exploratory study of the relationship between wine producers and distributors in the Croatian wine sector. It focuses on the impact of distribution channels on the bargaining position of wine producers, thereby adding to the growing body of research seeking to determine the factors that influence the growth potential of the traditional agricultural sector. Due to the fragmentation on the production side of the market and a high level of concentration on the distribution side, the wine sector provides a suitable context for studying the bargaining power of agricultural (wine) producers and hypothesizing on future outcomes in terms of industry structure and growth potential. Presuming that the share of value retained by the wine producer depends on his bargaining position, two hypotheses were tested: H1: A higher degree of self-reliance improves a wine producer's bargaining position and H2: A higher number of distribution channels improves a wine producer's bargaining position.

After a brief review of relevant scientific literature, five regression models were created and tested on a sample of 124 Croatian wine producers, which yielded statistically significant results confirming the hypotheses. The final model controls for production volume, number of labels and respective region. The paper ends with some general conclusions and recommendations for future research.

**Keywords:** Distribution channels, wine producers, market power, bargaining position

## 1. Introduction

The paper explores the relationship between wine producers and distributors and presents data relevant for understanding the market conditions that influence the development of the wine sector in Croatia.

Considering the fragmentation on the production side of the market, and high concentration on the distribution side, the wine industry is a suitable setting for investigating the impact of distribution channels on the producers' bargaining position. While many winemakers are small-scale producers,

the more ambitious ones among them are seeking for ways to develop their business and looking for new distribution channels. To keep up production levels and enter new markets, they often seek the services of specialized distributors possessing specific knowledge about consumer markets and the logistic infrastructure to deliver the product to the final buyer.

The empirical part of this research is based on in-depth interviews that have been used to establish the current Croatian wine producers' bargaining position towards vis-à-vis the distributors. The authors interviewed 124 wine producers, which account for one quarter of the total number of wine producers listed in the Croatian Wine Registry, producing wine for commercial purposes; and approximately one half of all wine producers using the services of distributors. Interviews were conducted from March to July 2019.

The paper is structured as follows. After a brief outline of the theoretical background, some facts and figures on the Croatian wine industry are provided, that set the context for examining the relationship between wine producers and distributors. The fourth part of the paper presents model development. The fifth part of the paper provides the key results of an empirical analysis of the producer-distributor relationship. The paper ends with a discussion on the findings confirming theoretical expectations, and with a proposal of issues that require further research.

## 2. Theoretical background

The ideas for structuring this research are drawn from market structure and mechanism design theory and, partly, from agency theory, which offer insights into some of the reasons why producers may have a problem in controlling the distribution of their products. The purpose of intermediaries in a distribution channel is to connect the producer and the consumer markets. A channel may have several intermediaries, forming what theory refers to as a vertical chain of interrelated actors. At each stage of this chain, a specific bargaining relationship is established, determining how the profits within the channel are shared among the participants and how this affects the price paid by the end consumer.

The economic theory on vertical relationships relies on the explanations of market power. Historically, theory was inclined to expect dominant positions on the sellers' side of the market. However, more recently, due to the increased importance of mass distribution (Allain, 2002), the dominant position may have shifted to the distributors' advantage. It is likely that the increase in the number of intermediaries has affected the balance of power between producers and retailers. More recent research confirms that intermediaries have gained stronger bargaining power, even in cases of low market concentration (Haucap et al., 2013; Hayashida, 2018). The buyer power of intermediaries in the modern agricultural distribution chain can obstruct the development of producers in the wine industry. Battigalli et al. (2007) analyzed the impact of buyer power on producers' investment behavior and concluded that the bargaining process can affect the producers' motivation to invest in quality. In the longer term, increasing buyer power of intermediaries by lowering the profits of producers may increase producer concentration (Haucap et al., 2013), leading to lower variety and lower service quality.

Due to the imbalances of bargaining power between contracting parties, unfair trading practices can emerge on any side of the retail chain. For some products it is likely that producers can achieve a better bargaining position as a result of the power of their brand and the degree of consumer brand loyalty, while in other circumstances intermediaries hold a greater bargaining power. The sources of this imbalance are diverse and depend on the presence of switching costs, informational asymmetry and incomplete contracts, and the perishable nature of goods (European Commission, 2014)<sup>1</sup>. Incomplete contracts theory sets the basic propositions that define the bargaining position of contracting parties under asymmetric market conditions. According to Hart (2017: 1750), "contracts are incomplete in reality and contractual incompleteness underlies numerous significant phenomena...". As noted by Schmitz (2013: 3), different authors may focus on different problems. These phenomena can be observed at the microeconomic level, in setting the rules that govern the relationships among parties on the market;<sup>2</sup> and on the intermediate level of industrial organization, especially for regulation purposes (market design, vertical agreements). In

his Nobel Prize lecture, Hart was mostly focused on firm boundaries, i.e. ownership rights (transaction internalization); however, he also mentioned “mechanisms design theory” (2017: 1732). Chan et al. (2018) explore how information asymmetry between producer (manufacturer) and retailer influence contract-format choice by making comparison between profits gained within transfer contracts instead of vertical or shared contracts.

Agency theory will expect at least part of this efficiency to be governed by the quality of control instruments applied by those engaging intermediaries, or distributors, as is the case in this research. The originators of agency theory, Jensen and Meckling (1976), suggested that whenever there is delegation of authority, there will be some loss of value due to the differences in motives (interests) of the principal and agent. In a situation where an agent exploits his position and behaves opportunistically<sup>3</sup>, the principal will be deprived of some value that would otherwise accrue solely to him (i.e. in cases where there are no intermediaries). To prevent excessive appropriation of value by the agent, the principal will be willing to take some actions (i.e. set up system mechanisms) that will limit the possibilities of opportunistic behavior by the agent. These actions, whether monitoring or bonding (incentives that might prevent the agent from exploiting his position of power), add some costs to the principal's overall costs of doing business. Agency costs, when it comes to the relationship of producers and distributors, are, in effect, a reflection of market positions of different actors along the same value chain.<sup>4</sup> Researchers that investigated agency relationship in the buyer-supplier relationship include: Mishra et al., 1998; Whipple, Roh, 2010; Steinle et al., 2014; Cadot, 2015. They viewed the buyer (customer) as a principal who is faced with an information asymmetry: inability to evaluate the suppliers' intentions and product/service quality, and opportunistic behavior of the distributor (agent). In this paper, in wine producer – distributor relationship, the wine producer is perceived as the principal who creates a product and uses the services of distributors (agents) to gain access to the market.

With the increase in production, each producer is faced with a decision on distribution of additional quantities. Deciding how many and which distri-

bution channels to use is strategically as important as product development and production itself (Kalubanga et al., 2012). The decision to increase the number of distribution channels requires significant financial investment and also economic analysis to examine the cost effectiveness and to exploit the potential benefits of a larger number of distribution channels.

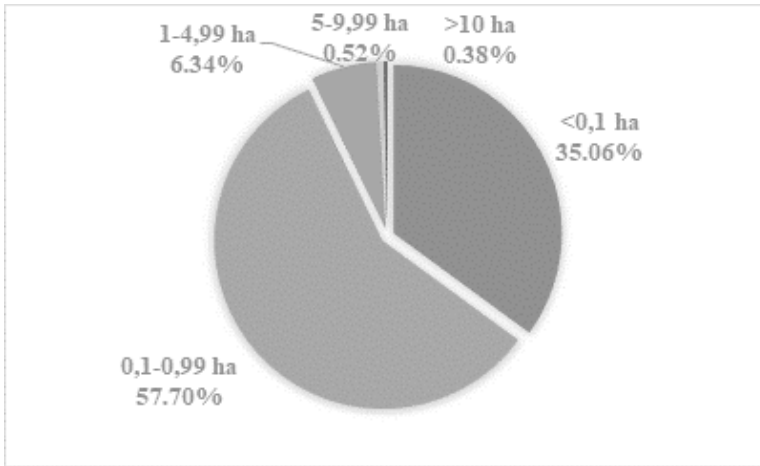
### 3. The Croatian wine sector

Wine production stands out in Croatian agriculture, being a traditional culture with large potential for branding Croatia as a tourist destination. Employment in the wine sector is substantial, and so are the returns generated by the industry. After a period of expansion, the sector is at a crossroad, trying to identify opportunities for future growth.

Both geographical position and political and economic context have a big influence on different sectors (Sokolic et al., 2014; Kastelan Mrak et al., 2016). The same applies to the viticulture and wine production. While geographical features are important because the possibility for grape growing depends on the quality of land, economic characteristics, especially tourism, divide wine regions into those that have tourism as a “natural” distribution channel (Adriatic region) and the ones that do not so they have to think of a different way to place their products on the market (Continental region). Each wine region has a significant number of wine producers who produce the same wine type and use the same technological processes, leading to intense competition among producers also at the regional level.

According to the Paying Agency for Agriculture, Fisheries and Rural Development<sup>5</sup>, on December 31, 2018 there were 38,475 registered wine producers in Croatia, the total area under vines was 19,409 ha, while the reported production for 2017 was 575,939.75 hl. Given that only 1,648 companies submitted a request for placing wine on the market, that would be the probable number of commercial producers, while the rest produce wine for their own needs. Chart 1 shows the distribution of production relative to the size of area under vines on December 31, 2018. The data presented helped to estimate the actual population size of this research, or more concretely, how many wine producers use the services of a distributor.

**Chart 1 Distribution of production according to the size of area under vines on December 31, 2018**



Source: Authors' calculation according to data from the 2018 Vineyard register, available at: [www.apprrr.hr](http://www.apprrr.hr)

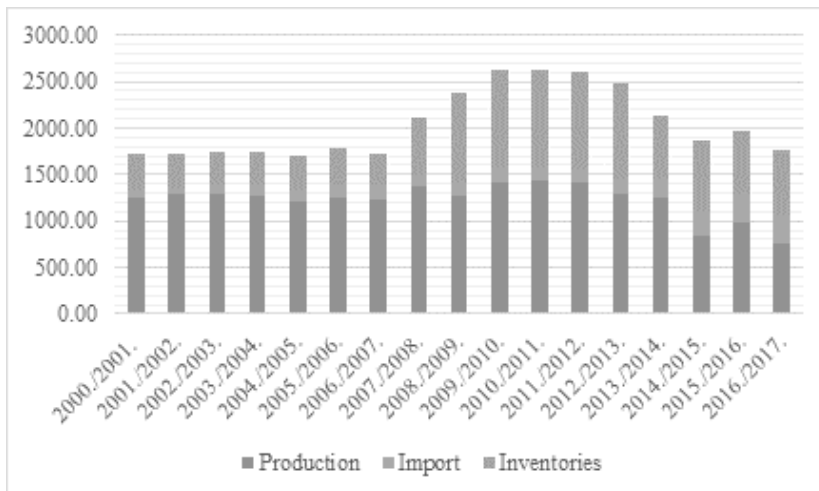
According to the information obtained from wine producers during interviews, producers who produce less than 40,000 liters, which implies cultivation of about 5 ha in Adriatic Croatia and about 6.5 ha in Continental Croatia, mainly do not use the services of a distributor, but rather sell their products through their own shops and distribute their products themselves. Based on the data in the previous chart, 0.9% or about 345 wine producers cultivate over 5 ha, so our estimation is that between

200 and 250 wine producers use the services of a distributor, and are thus the subject of this research.

There is a trend of increasing the share of *quality and premium wine* segment in Croatia. Its share in total production increased from 68% in 2009 to 81% 2018. The share of *premium wine* doubled, while the share of *quality wine* increased by 15%, which indicates changes in consumer demand ([www.apprrr.hr](http://www.apprrr.hr)).

The following Chart (Chart 2) shows wine consumption trend in Croatia.

**Chart 2 Wine consumption trends in Croatia in the period from 2000 to 2017**



Source: Authors' calculation according to the Croatian Bureau of Statistics<sup>6</sup>



Most of the wine Croatia imports comes from Macedonia and Bosnia and Herzegovina, while Croatia exports wine mainly to Bosnia and Herzegovina and Germany (Čačić et al., 2010). The increase in imports is the result of increased market demand (imports compensate for a low yield) and increased tourist demand (which cannot be met in the short term). This has caused imports to increase by 100% in the last 10 years. Wine exports is decreasing because Croatia does not produce enough wine to meet domestic market needs, and the degree of self-sufficiency is decreasing - it was lower than 80% in 2016/2017 (CBS). Considering the small quantities potentially available for exports, and due to land constraints and labor force shortages, significant export growth is not expected in the near future.

The last 25 years have been marked by political, technological and social changes that have facilitated the development of the private sector. Similar market dynamics have also affected wine production and wine distribution, resulting in a growing number, scaling in size and differentiation in quality of today's operating companies. EU funding has enabled wine producers to modernize production equipment, thereby improving wine quality. To continue the positive trends, agricultural policy should take into account the fact that excessive concentration along the distribution chain may cause redistribution of the new value being created by joint efforts of wine producers and public authorities that support the sector.

#### 4. Model development

The research was conducted to get a better understanding of factors that affect power positions of distributors in the market. The factors considered in this research are briefly described below.

##### 4.1 Variables

An effective distribution range gives the producer access to the market (clearance), and can also render competitive advantage: access to markets he is unable to reach on his own, better visibility, lower costs, and steady financial performance. If the producer wants to have more substantial control of the distribution process, he/she will bear the costs of warehousing, additional employment, administration, marketing and logistics, when needed. However, due to small quantities and varying production volume on a year-to-year basis, combined with low man-power and investment capacity, the majority

of wine producers not selling directly from farm gate will turn to specialized distributors. Moreover, once a larger share of their distribution is taken up by specialized distributors, a hold-up problem is likely to occur.

To ensure the distribution of products, wine producers may turn to several distribution channels, as was observed in this research.

The distribution range (distribution channels) indicates the number of alternative channels available for product distribution. In the wine sector, the reported channels of distribution employed by Croatian wine producers include:

Direct sales (farm gate sales, own shops)

Sales to tourist industry establishments (HoReCa - a distribution channel that includes hotels, restaurants and catering services) – vertical integration

Retailers (generalist distribution chains) – vertical integration

Specialized beverage distributors.

Several authors studied the influence of the number and nature of distribution channels on value-creation and appropriation. Levary and Mathieu (2000) find that distribution through two channels, self-controlled and through intermediary, leads to increased profits for both parties. Lassar and Kerr (1996) argue that the greater the number of distributors in one area, the greater the loss of control for the manufacturer and the possibility of distributor opportunistic behavior. Mukhopadhyay et al. (2008) introduce a model that allows the distributor to add value to the product and thus differentiate the product from the product directly sold by the manufacturer in order to prevent manufacturer-distributor conflict. Vinhas and Heide (2014) investigate how opening manufacturer own sales channels affects the opportunistic behavior of distributors, and conclude that increasing competition, caused by manufacturer opening own sales channels, increases the opportunistic behavior of distributors, but also provides benefits for customers. Adimo and Osodo (2017) conclude that distribution differentiation increases sales, revenues and market share at the micro location. Research has also been dedicated to online sales, as a special distribution channel. Yan and Bhatnagar (2008) compared online sales and distributor sales and concluded that the type of product had a significant impact on the financial performance of a distribution channel.

Yan shows that concerns about unfair distribution of profits may be two-sided. His 2011 paper argues that selling products directly through online sales exacerbates the conflict between manufacturer and distributor because the distributor believes that a part of the profit is being stolen from him. This finding suggests that the fairness of the distribution of profits may be a matter of perception.

Based on the results of previous research, the expectation in this research was that the higher the number of distribution channels employed by the wine producer, the better his bargaining position. It is also expected that a decrease in the dependence on the distributor, which is measured by the ratio of the percentage of sales through own shops compared to the percentage of sales through intermediaries, will improve the bargaining position of wine producers. According to the analyzed sample, the wine producers manage to sell only 20% of their production to the final customer through their own shops, while 80% of their production reaches the final customer through intermediaries, mostly through the distributor (40.6%).

Previous research provided the basis and motivation for exploring how the number of distribution channels and the dependence on the distributor affect the bargaining position of the wine producer. Large margin spreads encountered in the research sample raised a question whether the margins appropriated by the agent fairly represent their share of contribution in new value creation. The collected data indicated a variation in the total intermediaries' margin, spanning from 31% to 67% of the final price at the end market; implying that at least a part of this spread<sup>7</sup> may be the result of unequal bargaining position of individual wine producers that contract the services of a distributor.

This observation leads to the principal hypothesis: **the share of value retained by the wine producer depends on his bargaining position.** A better bargaining position, measured by the producer's share in the retail price would reflect a higher participation in the total value generated.

In this research, a wine producer's bargaining position is seen as being influenced by two factors: the number of distribution channels employed (related to the possibility to choose the most efficient channel; the possibility for distributors to compete on the price and quality of the service offered; attenuation of information asymmetry) and a degree of dependence (exposure to hold-up problems).

***Thus, two hypotheses were proposed and tested:***

***H1 A higher degree of self-reliance improves a wine producer's bargaining position***

***H2 A higher number of distribution channels improves a wine producer's bargaining position***

The research was designed to control for the following factors: size (production volume), scope (number of labels) and region. The arguments for designing such a model are explained below.

By producing closely related products (wine labels) and increasing production volumes, the average cost of production is reduced (economies of scope and scale). The benefits of economies of scope and scale are cost savings, increased competitiveness and better utilization of management skills and sales network, all of which strengthen the bargaining power of a wine producer vis-à-vis the intermediaries (Velázquez et al., 2017). The intermediaries are willing to accept lower margins in order to be competitive in the wine market. Because of the above, the indicators of company size (production volume and number of labels) are **control variables** in this paper.

Many researchers have examined the impact of the region of origin of wine on the purchasing decisions, which is also expected to affect the bargaining position of the wine producer. In their study on a sample of 352 Australian wine consumers, McCutcheon et al. (2009), as well as Chamorro and Garcia-Galan (2015) who used a sample of 427 Spanish wine consumers, concluded that, in addition to the quality, price and type of wine, the decision to buy wine is also influenced by the region of origin. Čop et al. (2019) conducted a survey of business performance of wine producers in the Adriatic and Continental Croatia on a sample of 95 wineries, and concluded that the region had no significant impact on the operations of Croatian wineries. Given that their research was conducted on a sample including only limited liability companies and public limited companies, which account for only about 1.1% of the total number of registered larger wine producers in Croatia, a similar survey was conducted on a sample of 124 wine producers (Katunar, 2019), where all wine producers, regardless of the type and size of business (small, medium and large), were represented. Katunar concluded that there is a correlation between the region and selected indicators of winemakers' business, and that wine producers from Adriatic Croatia achieve better business results than wine producers from the Continental region. This finding supported the decision to include the region of origin as a **control variable** in this paper. The variables used in this study are explained in the following table.

**Table 1** Definition of variables

Variable	Acronym	Definition
INTERMEDIARIES MARGIN	MRG	Intermediaries margin serves as an indicator of the bargaining position of the wine producer. It is calculated as the difference between the price for the distributor and the average retail price, and expressed as a % of the retail price
NUMBER OF CHANNELS	NRCH	Number of channels is the number of distribution channels that wine producers use to reach the final consumer
INTERMEDIARIES	DISTR	Intermediaries is calculated as a percentage of production that wine producer sells to final consumers through an intermediary (retail chain, distributor or HoReCa)
PRODUCTION VOLUME	PV	Size of a wine producer expressed as the production volume in liters (economies of scale)
NUMBER OF LABELS	NRL	Size of a wine producer expressed as the number of wine labels (economies of scope)
REGION	REG	Region of origin: Adriatic and Continental

Source: Authors

#### 4.2 Research instrument

The research instrument was set up according to the research hypotheses. The questionnaire, which was the basis for conducting in-depth interviews, was used to collect empirical data. 124 wine producers were interviewed at 7 wine fairs, from March to July 2019. The interviews lasted approximately 25 minutes. The questionnaire consisted of 45 questions divided into 4 groups. The first set of questions comprised general information about the wine producing entities. The second and the third set of questions were used in qualitative and quantitative analysis. The fourth set of questions encouraged the wine producers to express their opinions and views on particular issues, which was essential for the interpretation of the results.

#### 4.3 Sample

During the data collection phase, 124 wine producers were interviewed. These producers cultivate 5,300 ha of vineyards. Given that according to the data of the Vineyards Register, there were 19,409 ha under vineyards in Croatia in 2018, the observed sample covers over 25% of the total Croatian wine industry, and about 50% of wine producers sell at least part of their production to final customers through intermediaries. Table 2 shows the share of the interviewed producers in the total number of registered wine producing entities, along with the share in the total area under vines. Table 3 presents data on the types of businesses in the Croatian wine industry and in the sample.

**Table 2** Share of wine producers and of the area under vines in Croatia and in the sample by regions

Wine region	Share of wine producers in Croatia (%)	Share in the sample (%) (n=124)	Area under vines in Croatia (%)	Share in the sample (%) (n=124)
Slavonia and Danube Region	34.37	21	39.25	56.4
Central Croatia	25.49	24,2	12.11	19.8
Dalmatia	32.11	17,7	32.27	11.2
Croatian Istria and Kvarner	8.03	37,1	16.37	12.6
<b>TOTAL</b>	<b>100%<sup>s</sup></b>	<b>100%</b>	<b>100%<sup>a</sup></b>	<b>100%</b>

Source: Authors' calculation based on conducted interviews

**Table 3 Share of wine producers in the total number of entities in Croatia and in the sample by type of business**

Type of business	Share in total no. of business entities in Croatia (%)	Share in the sample (%) (n=124)
Sole proprietorship	1.2	21.8
Family-run agricultural business	97.6	31.5
Cooperative	0.1	2.4
Limited liability company (llc)	1.0	38.7
Public limited company (plc)	0.1	5.6
<b>TOTAL</b>	<b>100%</b>	<b>100%</b>

Source: Authors' calculation based on conducted interviews

Although 97.6% of the total number of registered wine companies are family-run agricultural businesses (Wine register 2018), this number cannot be considered relevant as a number of commercial wine producers, since the majority of family-run agricultural businesses are engaged in agriculture for their own needs.

## 5. Results of empirical analysis

This part of the paper presents descriptive statistics and correlation analysis, followed by five regression models and a final regression model.

**Table 4 Descriptive Statistics**

Variable	Variable	N	Minimum	Maximum	Mean	Std. Deviation
INTERMEDIARIES MARGIN	MRG	124	31	67	45.04	6.58
NUMBER OF CHANNELS	NRCH	124	1	4	2.82	0.77
INTERMEDIARES	DISTR	124	10	100	79.72	19.39
SIZE (PRODUCTION VOLUME)	PV	124	8.000	9.000.000	316.209,7	1051232.
SIZE (NUMBER OF LABELS)	NRL	124	2	45	9.73	6.36
REGION	REG	124	0	1	0.56	0.49

Source: Authors' calculation

**Table 5 Correlation analysis – Spearman test (n=124)**

Correlation	MRG	NRCH	DISTR	PV	NRL	REG
MRG	1.000000					
NRCH	-0.283097	1.000000				
DISTR	0.276268	-0.357623	1.000000			
PV	0.044178	0.302128	0.096213	1.000000		
NRL	-0.184226	0.267302	-0.035857	0.584387	1.000000	
REG	-0.346928	0.397209	-0.239824	-0.119360	-0.082405	1.000000

Source: Authors' calculation

Table 6 Regression models

Variables		(1) MARGIN	(2) MARGIN	(3) MARGIN	(4) MARGIN	(5) MARGIN
NRCH	Coeff.	-2.28		-1.84	-1.80	-0.76
	Std. Error	(0.739)		(0.761)	(0.792)	(0.870)
	p-value	(0.003)*		(0.017)**	(0.025)**	(0.381)
DISTR	Coeff.		0.08	0.06	0.06	0.06
	Std. Error		(0.029)	(0.030)	(0.030)	(0.029)
	p-value		(0.007)*	(0.029)**	(0.029)**	(0.050)**
PV	Coeff.			-3.64E-07	-3.12E-07	-6.27E-07
	Std. Error			(5.56E-07)	(6.29E-07)	(6.30E-07)
	p-value			(0.515)	(0.620)	(0.2883)
NRL	Coeff.				-0.02	-0.06
	Std. Error				(0.106)	(0.105)
	p-value				(0.860)	(0.595)
REG	Coeff.					-3.37
	Std. Error					(1.294)
	p-value					(0.010)*
N		124	124	124	124	124
Adjusted R <sup>2</sup>		0.065	0.051	0.090	0.083	0.125

\*p&lt;0.01, \*\*p&lt;0.05

Source: Authors' calculation

Table 6 shows 5 models of the influence of distribution channels on the bargaining position of Croatian wine producers. The number of entities included in research is 124. The first 2 models ((1) and (2)) are tested with single linear regression. According to results for model (1) and model (2), the influence of the independent variable (number of channels (model (1)) and intermediaries (model (2))) on the dependent variable (margin) is statistically significant ( $p<0.01$ ) **confirming the hypotheses tested in this paper.**

According to the interpretation of the results obtained, an increase in the number of distribution channels by one distribution channel reduces the intermediaries margin by 2.28%, i.e. improves the bargaining position of wine producers. Increasing wine producers' dependence on intermediaries by 10% increases the intermediary margin by 0.82%, i.e. weakens the bargaining power of wine producers.

Models (3), (4) and (5) include control variables (production volume expressed in liters, number of labels, and region).

The final model (model (5)) was developed and tested by multiple linear regression.

The estimated regression equation of the given model (5) is:

$$\text{MARGIN} = 45.19 - 0.76 \text{ NR OF CHANNELS} + 0.06 \text{ INTERMEDIARIES} - 6.72\text{E-}07 \text{ PRODUCTION VOLUME} - 0.06 \text{ NR OF LABELS} - 3.37 \text{ REGION}$$

In the final model, independent variable DISTR (intermediaries) and control variable REG (region) are statistically significant ( $p<0.05$ ). The value of R<sup>2</sup> of 0.125 in the final model indicates that 12.5% of the variation of the dependent variable is explained by the variations of the independent variables. Increasing wine producers' dependence on intermediaries by 10% increases the intermediary margin by 0.6%, i.e. weakens the bargaining position of wine producers.

After estimation of models (3), (4) and (5), diagnostic tests were conducted for multicollinearity using Variance Inflation Factors and heteroscedasticity (White test).

**Table 7 Variance Inflation Factors (VIF)**

Variable	(3) VIF	(4) VIF	(5) VIF
NRCH	1.09	1.17	1.48
DISTR	1.05	1.05	1.06
PV	1.05	1.33	1.40
NRL		1.42	1.45
REG			1.35

Source: Authors' calculation

**Table 8 White test**

Variable	(3)	(4)	(5)
NRCH	0.2906	0.2114	0.1200
DISTR	0.9961	0.5255	0.7417
PV	0.9369	0.8418	0.9603
NRL		0.3770	0.4442
REG <sup>2</sup>			0.7575

Source: Authors' calculation

According to the VIF factor (Table 7), which is significantly below 10, there is no problem of multicollinearity. Moreover, given that the p-values of the White test (Table 8) are above 0.05, there is no problem with heteroscedasticity in the models (3), (4) and (5).

## 6. Discussion and conclusion

Even though the research presented in this paper is part of a broader exploration of business policies and growth strategies of Croatian wine producers, by focusing on the bargaining positions of wine producers in the distribution chain, this paper has confirmed the presence of power asymmetry between producers and intermediaries. Thus, it confirmed the findings of other authors that a shift of market power from the producers to the distributors is occurring along with the trend of increasing importance of mass distribution.

This paper investigated the role of distribution channels and its impact on the bargaining position of wine producers, as a weaker contracting party in the Croatian wine sector, and provides recommendations for wine producers. The results confirmed the importance of managing distribution channels on the part of wine producers. The conclusion is

that a higher degree of self-reliance improves the wine producer's bargaining position. Furthermore, the findings suggest that the higher the number of distribution channels employed, the stronger the wine producer's bargaining position. The research model also controlled for production volume, number of labels and region.

Considering that most Croatian wine producers are small producers, several additional observations have been made. Firstly, small wine producers in Croatia do not have direct access to retail chains, making them likely to employ distribution services to reach the retail chain. A second observation refers to a characteristic typical of wine producers – they tend to start as a cottage food operation, selling their product at the gate. As their production volumes increase, they turn to intermediaries to move their goods to the final user. However, it appears that the wine producers that do not switch completely to intermediaries, maintain a better bargaining position. This was evident from the data analyzed – producers with a higher share of sales through own shops had a higher share in the total margin. This suggests that it is beneficial for producers to sell at least part of their product range through their own shops. Also, in addition to increased bargaining power, selling through own shops solves the problem of payment uncertainty and enhances cash flow.

The limitation of the research is its design that was adapted to accommodate the data available through interviews. Due to the inability to obtain more detailed data, especially financial figures, variables were measured by the limited data provided by the interviewed wine producers. Recommendations for future research include the use of accounting data and broadening of data sources: the discussion of the results could benefit from the opinions of tourist industry representatives and professional sommeliers. Moreover, similar research might be conducted on a sample of EU countries to observe their distribution strategies and regulatory treatment of distribution channels.

There were also problems in proving some apparently common and sound theoretical assumptions, such as the influence of size/scale on the producers' bargaining position. Theory assumes that relative size should influence the bargaining position, however, in the analyzed sample, production volumes (scale) and number of labels (scope) did not prove to be statistically significant factors. One of the pos-

sible explanations for this finding could lie in the fact that even the largest Croatian wine producers are rather small in comparison to distributors, and none of the producers account for a significant share in any distributors' total sales. This finding indicates significant market asymmetry favoring distributors. However, in order to construct sound arguments concerning potential abuses of market power (the issue of market regulation was not taken into account in this research), further research is required. Some of the issues that should be explored in future research are market demand trends (expansion/contraction), profit margins, as well as the cost structures and earning potential of the distribution side of the market. A portfolio approach differentiating producers of different sizes and dif-

ferent business models could be of benefit to both wine producers and distributors. Another complementary approach concerns studying the content of contractual arrangements. If some categories of wine producers or agricultural producers in general can be shown to have some influence on contract arrangements, these could be used to put forward recommendations for agricultural producers trying to develop their business models.

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## ENDNOTES

- 1 European Commission (2014), "Study on the Legal Framework Covering Business-to-Business Unfair Trading Practices in the Retail Supply Chain".
- 2 A contract agreement serves to explicitly stipulate mutual expectations of bargaining parties.
- 3 Behavior that can lead to a situation of moral hazard, that is, the behavior of the agent that results in less successful business operations of the company for the owner.
- 4 Another strand of this research (Katunar, 2019) has demonstrated that those producers that employ assets to monitoring and bonding activities, do enjoy higher shares in the value (selling price) achieved at the end market.
- 5 Paying Agency for Agriculture, Fisheries and Rural Development (PAAFRD), Vineyards Register data 2018, available at: <https://www.aprrr.hr/> (Accessed on: December 7, 2019)
- 6 Croatian Bureau of Statistics, available at: [www.dzs.hr](http://www.dzs.hr) (Accessed on: December 5, 2019)
- 7 The other part of this margin spread represents higher costs of operations, as it should be acknowledged that some wine producers, for example, smaller in scale, of lower wine quality, lower brand recognition, may raise the operations' costs for the distributor. Still, with the available data it was impossible to establish the share of justified expansion of the agents share in the final price.
- 8 According to the Paying Agency for Agriculture, Fisheries and Rural Development (APRRR) (Vineyards register) in 2018 there were 38.475 entities in Croatian wine industry.
- 9 According to the Paying Agency for Agriculture, Fisheries and Rural Development (APRRR) (Vineyards register) in 2018, in Croatian wine industry 38.475 entities cultivated 19.409 ha of vineyards.

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## **UTJECAJ DISTRIBUCIJSKIH KANALA NA PREGOVARAČKU POZICIJU HRVATSKIH VINARA**

### **SAŽETAK**

Ovaj rad istražuje odnos proizvođača vina i distributera u hrvatskom vinskom sektoru. S obzirom na rastući broj istraživanja koja se bave pokušajem utvrđivanja čimbenika koji utječu na potencijal rasta tradicionalnog poljoprivrednog sektora, u ovom smo se radu usredotočili na pitanje kako distribucijski kanali utječu na pregovarački položaj proizvođača vina. Zbog fragmentacije na strani proizvođača i visoke koncentracije na strani distributera, smatramo da je vinski sektor pogodan objekt za analizu pregovaračke moći poljoprivrednih (vinskih) proizvođača i za spekuliranje o budućim ishodima u kontekstu strukture industrije i potencijala rasta. Pretpostavljajući da dio vrijednosti koja ostaje proizvođaču ovisi o njegovom pregovaračkom položaju, u radu se ispituju dvije hipoteze: H1 - Viši stupanj prodaje putem vlastitih prodajnih kanala poboljšava pregovarački položaj proizvođača vina i H2 – Veći broj kanala distribucije poboljšava pregovarački položaj proizvođača vina.

Nakon kratkog pregleda relevantne znanstvene literature, na uzorku od 124 hrvatska proizvođača vina formira se i ispituje pet regresijskih modela koji pokazuju malu, ali statistički značajnu potvrdu hipoteza. Konačni model kontroliran je za količinu proizvodnje, broj etiketa i regiju proizvodnje. Rad završava općim zaključcima i preporukama za buduća istraživanja.

**Ključne riječi:** distribucijski kanali, proizvođači vina, tržišna moć, pregovarački položaj

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# THE IMPACT OF HUMAN RESOURCES ON THE EXPORT PERFORMANCE OF KOSOVO SMEs

## ABSTRACT

This paper highlights the importance of human resources in the performance of Kosovo exporting SMEs. Due to its fragile past, Kosovo has suffered greatly from both economic and human resources underdevelopment. In the late 1990s, the European Union (EU) began to promote trade liberalization in order to bring about regional reconciliation in the Western Balkan region. SMEs in Kosovo need to develop their competitiveness in order to increase their exports. Therefore, the aim of this paper is to analyze the impact of human resource characteristics such as the number of employees, education level, and attendance of training related to exports on the level of exports of 100 Kosovo SMEs. The Probit model is used to derive statistical results. Statistical analysis is conducted based on descriptive statistics, Reliability Test - Cronbach's Alpha-, Pseudo R<sup>2</sup>, LR chi<sup>2</sup>, the Prob>chi<sup>2</sup> and Wald test. It can be concluded that this research will be of interest for the field of Human Resources Management as well as the scientific community in developing countries such as Kosovo. The main conclusion of the paper is that human resources of Kosovo exporting SMEs do not have the necessary expertise and contemporary knowledge regarding international trade.

**Keywords:** Human resources, Kosovo, SMEs, export growth, Probit model

## 1. Introduction

SMEs play an important role in economies of every country in the world. According to Krasniqi (2007), the increased importance of SMEs in transition countries lies in their ability to solve some of the economic problems stemming from the process of transformation from a central planning to a market economy. In the market economy, the internationalization of SMEs is vital for development of international business and trade activities. Therefore, an international strategy of large, small, established and new enterprises is essential for an enterprise's survival and success (Sirmon et al., 2011; Harc, 2019). Human resources are the most important element in that strategy as they are key to the survival and success of any company.

Kosovo, similar to other Western Balkan countries, is still suffering the tragic consequences of past conflicts. Improving the business climate and a rapid development of exporting SMEs can create an atmosphere of peace and long-term reconciliation (Jusufi, Lubeniqi, 2019). Kosovo has signed several agreements related to trade liberalization. These agreements such as the Stabilisation and Association Agreement (SAA), CEFTA 2006, and bilateral free trade agreements have enabled trade without barriers (Jusufi, Bellaqa, 2019). However, it is not enough to remove barriers to free trade development if there is not enough supply from exporting SMEs.

Increased supply in manufacturing depends on the capacity, skills and capabilities of human resources. Due to the poor production base, export activities

of Kosovo SMEs are at a low level. To target EU and global market needs, the government should implement long-term policies, including technical and financial support, and provide valuable information about new industry trends, contemporary trainings in human resource capacity development, technologies, and market needs within the EU and other global markets (Qorraj, Jusufi, 2019; Buturac et al., 2019; Rustemi, 2011).

It should be noted that Kosovo faces significant problems in devising policies for improvement in the quality of work life. Especially the mismatching between the skills of the labor force and market needs poses a serious problem. Due to the political crisis in the former Yugoslavia, the early 1990s were marked by a significant drop in the workforce, re-

duced size of the active population, as well as a high level of unemployment. Employment reduction was primarily caused by drastic cuts in the state-owned or public sector entities.

All these developments have left serious consequences on the competencies, capabilities and skills of Kosovo human resources. Hence, Kosovo must develop adequate policies that will improve the education system. A modern education system would produce professional staff or human resources who would then contribute to the efficiency of exporting SMEs. This would increase international trade activities globally and regionally. The following table shows the share of exports statistics in percent of different types of enterprises in Kosovo and other countries in the Western Balkan region.

**Table 1** Share of exports in %

Type of enterprises	Albania	Bosnia & Herzegovina	Kosovo	North Macedonia	Montenegro	Serbia
Micro	9.11%	11.03%	54.85%	7.43%	12.34%	7.95%
Small	17.50%	21.32%	33.55%	10.13%	37.02%	11.05%
Medium	34.58%	28.89%	8.93%	14.03%	25.97%	20.25%
Large	38.80%	38.76%	2.67%	68.43%	24.67%	60.75%
SMEs	61.19%	61.24%	97.33%	31.58%	75.33%	39.25%

Source: OECD et al. (2019)<sup>1</sup>

HR of exporting SMEs should develop innovative processes. New manufacturing methods, new ideas, new techniques and technologies increase the level of exports of such SMEs. Cojocar (2017)<sup>2</sup> claims that SMEs in Western Balkans, including Kosovo, face greater hiring challenges if they are innovative. SMEs which invest more in R&D are foreign owned or have international business contacts; nonetheless, they too face hiring challenges. These types of SMEs require employees with special skills and abilities. Hence, skill forecasting and anticipation systems are needed to better inform professionals in career and education guidance services as well as school leavers and university graduates about job opportunities on the labor markets (Lame, Çela, 2004; Arandarenko, Bartlett, 2012). Such policies will enable the development of human capital, which will in turn improve the effectiveness of HR management in the SMEs.

The paper explores the impact of the number of employees, engagement of external experts in export-

ing SMEs, education level of employees, attending trainings related to export growth, and sources of recruitment on SMEs exports. The paper seeks to provide a better insight into the characteristics of human resources in Kosovo SMEs and gives recommendations on how to improve their quality.

## 2. Theoretical framework

The term resource includes tangible, intangible, and human resources. Tangible resources are various material and financial resources that an enterprise has. Intangible resources are invisible resources in the form of reputation of the organization, organizational culture and technological resources, such as trade secrets, patents, copyrights, and know-how. Human resources represent the knowledge and skills of enterprise employees (Delić, Smajlović, 2014). The successful organizations consider their workforce as the biggest source of sustainable competitive advantage. Human resources are inimitable, therefore, managing them effectively plays a fundamental role

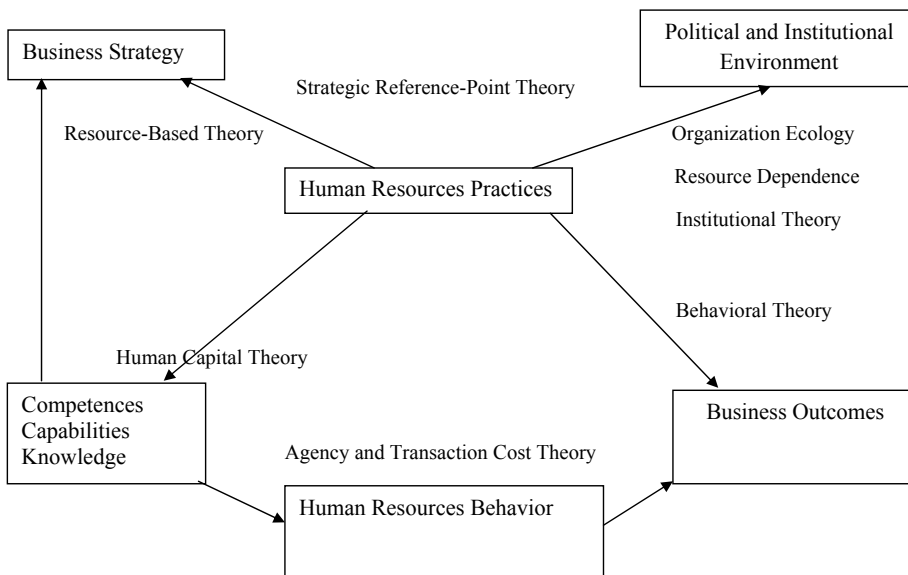
in the success and growth of the organizations, especially for manufacturing SMEs (Sohail-Rehan, Ul-Haq, 2018; Jashari, Kutllovci, 2020).

Human Resource Management (HRM) is the process of employing people, training and compensating them, designing policies relating to them, and developing strategies to retain them. Over the last twenty years, HRM has undergone many changes, giving it a very important role in today's enterprises. In the past, HRM meant processing payroll, sending birthday gifts to employees, arranging company outings, and making sure that forms are filled out correctly. HRM has had more of an administrative role than a strategic role essential for the success of the enterprises (Osmani, 2016). Therefore, human resource management has become key to the success and good performance of enterprises around the world.

There are elements or parameters that affect the effectiveness of this process. According to Vućur

et al. (2016), different groups of parameters influence the process of human resources management. The first set of parameters includes parameters that affect employee satisfaction, such as time spent within the enterprise, participation in decision-making, rewards, education and advancement. The second set of parameters includes parameters that refer to employee behavior, such as the number of complaints, absenteeism, and requests for redundancies and dismissals. The third set of parameters includes parameters related to their access to the required information or the employees' environment, support from the enterprise, encouraging employee creativity and innovation, stress at work, interpersonal relationships and the overall state of the enterprise. Several hypotheses and theories have been put forward to elaborate on the impact of these parameters on HR development. Theoretical approaches to human resource management are presented in the figure below.

Figure 1 Theoretical approaches to Human Resource Management (HRM)



Source: Pardo and Moreno (2009)

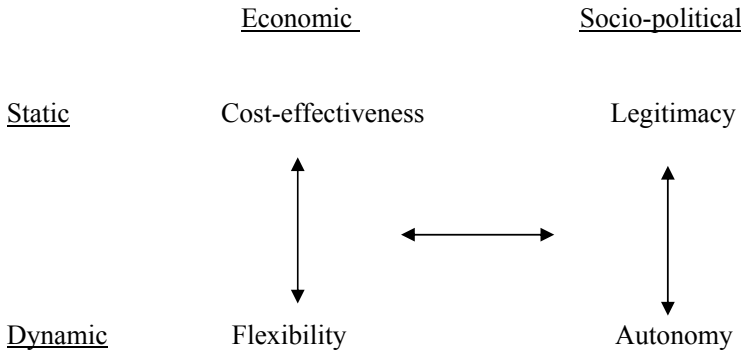
The development of management science has played an important role in facilitating the development of the concept of Human Resource Management. The new concept of Human Resource Management sees employees as the most important resource in the SME. It represents the human factor in the organization, i.e. combined intelligence, skills

and experiences that give the organization its distinctive character. Human capital resources include the training, experience, judgment, intelligence, relationships, and insight of individual managers and employees in organizations (Berisha-Qehaja, Kutllovci, 2015).

The new concept of Human Resource Management should be observed as a separate concept that considers employees as the most important resource of the business organization, on the basis of which it acquires a certain strategic and competitive advantage. Knowledge, skills, capabilities, personal characteristics and ambitions of employees become the

dominant factor of development of the business organization, and in this context, of its adaptability to the demands of the environment (Camilovic, 2009). The goals of human resource management can be categorized into two groups: economic goals and socio-political goals. The following figure presents these goals from a static and dynamic point of view.

Figure 2 The goals of Human Resource Management (HRM)



Source: Boxall (2007)

In the human resource literature there is some theoretical and empirical evidence regarding the impact of human resources on economic indicators. In regard to the contribution of human resources to economic growth and development on the macro level, it can be claimed that it has been measured by the influence of the population's education level on economic growth. This means that the subject of calculation is the correlation between the achieved

education level and the achieved GDP per capita (Karaman Aksentijević, Ježić, 2009). A robust HR system will be the most valuable asset of a twenty-first century institution and the productivity of an enterprise will be closely correlated with the employee-oriented managerial system. As can be seen from the table below, Human Resource Management activities contribute greatly as a determinant of SME growth.

Table 2 Determinants of SME growth

Owner-Manager	SME	Business Strategy
Education/training		State support
Gender		External finance
Age	Firm age	Product development
Founder of business	Ownership Industrial sector	Process development
Career history	Location	Marketing
Management	Legal structure	Management recruitment
Expertise/experience	Size	Planning
Other business interests		Workforce/management training
Other business owners		

Source: Bryan, 2006

As a result, HRM indeed plays an important role in achieving competitive advantage through people. It now has the opportunity to move out of the background into the mainstream of organizational strategy and management. As intellectual capital is the key competitive advantage in the knowledge economy, human management should naturally become an integral part of the corporate strategy and a key responsibility of all levels of management (Vokić, Vidović, 2007; Voca, Havolli, 2019). Ramirez et al. (1997) emphasize the importance of economic reforms, and assert that a focus must be placed on human resources development from the very beginning of any reform program. Economic growth itself will not be sustained unless preceded or accompanied by improvements in human resources.

For SMEs that operate through export activities in the foreign market, Kadochnikov and Fedyunina (2017) find strong empirical evidence that improvements in the availability of human resources for larger export flows with larger export values may have important economic policy implications both at national and regional levels. International trade activities are very important for economic development, especially in developing countries such as Western Balkan countries. Human capital is an important source of international competitiveness for SMEs in developing countries. However, only SMEs

with a larger share of well-educated workforce have higher export propensity and intensity (Gashi et al., 2013). The first hypothesis is formulated as follows:

$H_1$ : *The level of education increases the export capacities of SMEs.*

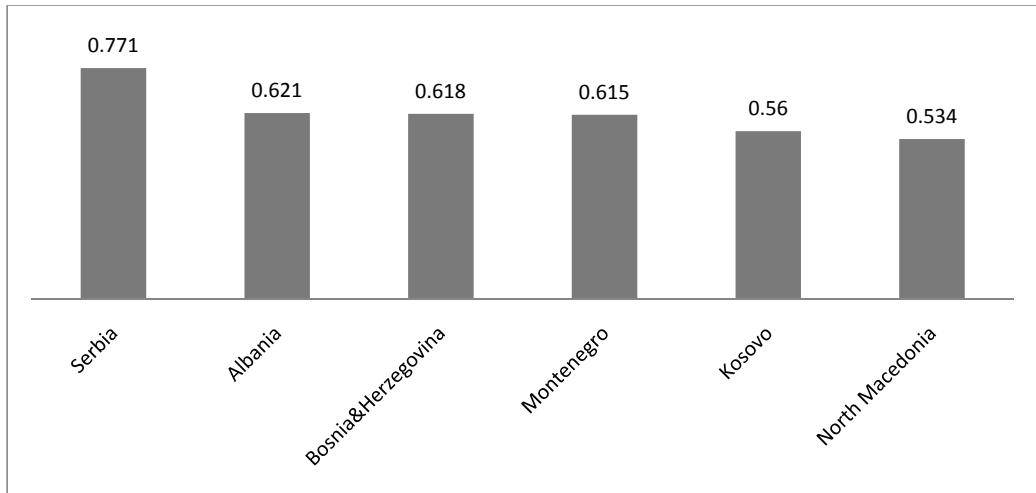
Through empirical findings, Siddique and Mahmood (2015) show that human capital is positively related with the export of goods and services in developing countries. As stock of human capital rises, it enhances the country's attractiveness, which in turn increases the exports of goods and services. Csugány (2018) highlights that the quality of education, trainings and the education attainment are equally important in human resource development. Not only the tertiary education plays important role in technological progress, but also the overall education system must operate well to achieve human resource development. In innovation-based economies, school life expectancy is higher as is the quality of human resources, as indicated by better average PISA results. Several indicators measure the level of development of human resources. Human Resources Development Index shows the level of development of human resources and capital for each country of the world. The following table presents the level of development of human resources in the Western Balkan region.

**Table 3** *Human Resources Development Index, Research Capacity Index, Technology and Innovation Efficiency Index and the Ability to Absorb Knowledge and Technology Index for Western Balkan Countries*

Country	Human Resources Development Index	Research Capacity Index	Technology and Innovation Efficiency Index	Ability to Absorb Knowledge and Technology Index
Albania	0.8070	0.0000	0.0478	0.6184
Bosnia and Herzegovina	0.8020	0.0000	0.1621	0.6925
Montenegro	0.8220	0.0000	0.0000	0.3780
North Macedonia	0.8080	0.0216	0.2760	0.6444
Serbia	0.8210	0.2333	0.2456	0.6405
Kosovo	0.7130	n/a	n/a	n/a

Source: Karaman Aksentijević and Ježić (2009); UNDP (2012)<sup>3</sup>

The following figure shows the 2018 statistics of the Human Capital Index (HCI) for Western Balkan countries.

**Figure 3 Human Capital Index (HCI) for Western Balkans in 2018**

Source: Muja (2018)<sup>4</sup>

In their paper, Brush et al. (2002) conclude that human resources of exporting SMEs have advantages compared to non-exporting SMEs in these attributes: marketing expertise, international work experience and international education. In addition, the engagement of external or foreign experts is thought to have a significant impact on exporting SMEs. The next hypothesis is formulated as follows:

*H<sub>2</sub>: The engagement of external (foreign) experts increases the level of exports.*

Marimuthu et al. (2009) emphasize that SME performance in relation to human capital should not be understood as a phenomenon that only adds more zeros to an SMEs profits, but rather as the most 'valuable assets' in the organization. Human capital enhances the capacity of SMEs for achieving better results through innovation and creativity. Hence, SMEs should come up with effective plans, especially for investing in the various aspects of human resources. It enables SMEs to enhance their performance and ensures SMEs' competitiveness needed for their long-term survival.

According to Fafchamps (2009), human capital may not be necessary to start exporting products, but it may be essential to remain competitive and increase quality levels when the advantage of cheap

labor starts losing its importance. Human resource skills increase competition and give a positive direction to international business flows. Qorraj and Jusufi (2018) analyzed the main factors that exporting SMEs should improve in the future in order to optimally use the EU market. Around 20% of SMEs declared that human resources are among the main factors of company success, while 24% believe it is government policies. Only 15% rely on production capabilities, and most of them, around 39%, chose EU financial support for their SMEs. Hence, these are the main factors that need to be improved in order for SMEs to increase their performance in international trade. Successful promotion of trade, specifically trade liberalization through free trade agreements will be achieved in Kosovo only through the improvement of economic and human indicators. Improving human indicators is achieved through various trainings. The third hypothesis is formulated as follows:

*H<sub>3</sub>: Participation in trainings increases the level of exports.*

The impact of training participation on export growth has been scarcely investigated and very few publications can be found in the human resources literature that discuss this issue. Therefore, this pa-



per will be among the few that address the impact of training on increasing the exports of manufacturing SMEs.

### 3. Research methodology

Empirical research has involved the collection of data using a survey. The process of data collection took place between September 2019 and March 2020. We surveyed 100 Kosovo exporting SMEs that currently operate in the EU market. Kosovo has a limited number of SMEs that operate in international markets; therefore, the sample of exporting SMEs is limited. The target audience were CEOs and human resource managers of manufac-

turing SMEs in all regions of Kosovo. The duration of the interviews ranged from 50 to 60 minutes. Due to the nature of the empirical problem, face-to-face interviews were conducted. We obtained the data on the exporting SMEs from the National Customs Agency of Kosovo.

The probit regression equation is as follows:

$$P(Y_i = 1) = \Phi(\beta_0 + \beta_1 \text{Number of employees} + \beta_2 \text{Engagement of external experts in SME} + \beta_3 \text{Education level of employees} + \beta_4 \text{Attending export trainings} + \beta_5 \text{Sources of recruitment} + \epsilon_i)$$

Table 4 Variables description

Dependent variable	Variables descriptions and measurement
Export growth	1- if the export increased, 0- otherwise
Independent variables	Variables descriptions and measurement
Number of employees	1-9 employees (reference category), 1. 10-49 employees, 2. 50-250 employees
Engagement of external experts in SME	1. Yes, 2. No
Education level of employees	Primary education (reference category), 1. Secondary education, 2. Tertiary education, 3. M.Sc., 4. Ph.D.
Attending trainings geared towards raising the level of exports	1. Yes, 2. No
Sources of recruitment	Internal advertisement (reference category), 1-Press advertisement, 2-Former employees, 3-Promotions

Source: Own study

The dependent variable is capturing the period 2016–2019. The dependent variable is export growth if SMEs. In the questionnaire, respondents were asked whether the export of their SMEs has increased in the mentioned period.

### 4. Research results and analysis

The following table presents the descriptive statistics for each variable and its constituent categories. Descriptive statistics help to understand the features of a specific data set by giving frequencies and percentages for the sample of the data.

**Table 5 Descriptive statistics**

Variables	Frequency	Percent
<i>Number of employees:</i>		
1-9 employees	13	12.9
10-49 employees	54	53.5
50-250 employees	33	32.7
<i>Engagement of external experts in SME:</i>		
Yes	16	15.8
No	84	83.2
<i>Education level of employees:</i>		
Low	6	5.9
Secondary	39	38.6
High	45	44.6
Master of science level	8	7.9
PhD level	2	2.0
<i>Attending trainings geared towards raising the level of exports:</i>		
Yes	68	67.3
No	32	31.7
<i>Sources of recruitment:</i>		
Internal advertisement	28	27.7
Press advertisement	65	64.4
Former employees	5	5.0
Promotions	2	2.0

Source: Own calculations

Cronbach’s alpha is a measure of internal consistency, that is, how closely related a set of items are as a group. It is considered to be a measure of scale reliability. The reliability of any given measurement

refers to the extent to which it is a consistent measure of a concept. Cronbach’s alpha is one way of measuring the strength of that consistency.

**Table 6 Reliability test: Cronbach’s Alpha**

Cronbach’s Alpha	Cronbach’s Alpha based on standardized items	Number of items
0.613	0.614	6

Source: Own calculations

The alpha coefficient for the six items is 0.613 suggesting that the items have relatively high internal consistency. The pseudo R2 is 0.33. LR chi2 is the likelihood ratio chi-square test. The value of this test is 30.09. The Prob>chi2 shows that jointly the coefficients are highly significant because the value

of this test is 0.04. The Wald test, which is a test for exclusion restrictions, is 29.08. All of these tests show that our model is statistically significant.

It is known that Human Resource Management has a positive influence on employee wellbeing, productivity, and organizational climate. However, there is

a possibility that good Human Resource Management practices are not the cause of good business performance, but vice-versa (Bakator et al., 2019). In her empirical research, Klepić (2019) concludes that due to their size (small number of employees), SMEs draw support for competitive struggle on a globalised market mainly from the uniqueness of their human resources, their motivation and capabilities. Thus, for this type of enterprise, the quality of human resources plays an important role in gaining competitive advantage.

However, according to Stanescu et al. (2018), there is no direct link between the number of employees and profit of the SMEs. In this research, *the number of employees* variable confirms the positive correlation between the reference category and the other two categories. Especially, the 10-49 employees category shows high value (3.183), and is significantly correlated with the category 50-250 employees. This suggests that the larger the number of employees, the greater the likelihood of increased exports.

**Table 7 Probit Model Estimation Results**

Variables	B	Std. Error	Wald	df	Sig.	Exp (B)
<i>Number of employees:</i>						
1-9 employees (Reference category)						
10-49 employees	1.168	1.046	1.222	1	0.026**	3.153
50-250 employees	0.590	0.518	1.296	1	0.045**	1.804
<i>Engagement of external experts in SME</i>	0.983	0.627	1.186	1	0.276	1.505
<i>Education level of employees:</i>						
Primary education (Reference category)						
Secondary education	0.482	1.300	0.137	1	0.711	1.619
Tertiary education	0.619	1.003	0.381	1	0.537	1.857
M.Sc.	0.561	1.005	0.312	1	0.577	0.753
Ph.D.	0.225	1.854	0.015	1	0.903	0.853
<i>Attending trainings geared towards raising the level of exports</i>	2.467	0.771	10.226	1	0.001**	8.782
<i>Sources of recruitment:</i>						
Internal advertisement (reference category)						
Press advertisement	-0.395	0.578	0.466	1	0.495	0.674
Former employees	-0.213	0.034	0.034	1	0.853	0.808
Promotions	-0.471	0.092	0.092	1	0.792	0.624
Constant	-2.074	1.876	1.223	1	0.269	0.126

Notes: \*\*significant at 5%.

Source: Own calculations

*Engagement of external (foreign) experts* in exporting SMEs is vital for the development of their activities. SMEs must build an effective international network of potential customers, partners, experts and suppliers<sup>5</sup>. However, very few export SMEs in Kosovo have engaged external (foreign) experts in their manufacturing activities. The odds ratio of this variable shows the value of 1.505, which

confirms a positive relationship with the dependent variable 'export growth'. The engagement of external (foreign) experts increases the level of exports of SMEs.

In terms of the *education level of employees*, the first reference category is the level of primary education. As visible from the figures for the other four categories, only the SMEs that are in the category of

employees with a M.Sc. (0.753) and a Ph.D. (0.853) do not have a positive relationship with the reference category. Kotorri and Krasniqi (2018) found important empirical evidence regarding education of managers or employees in exporting firms. According to them, managerial characteristics, rather than firm or environmental characteristics, determine the export performance of Kosovan firms. Hiring managers with higher education and international experience improves export performance as they have better strategic decision-making skills and capabilities, a deeper understanding of foreign markets, and established social and professional networks.

Havolli (2013) suggests that the role of education in promoting economic well-being should be initiated by the improvement of the educational quality. Ajdarpašić and Qorraj (2019) claim that the governments in the Western Balkans should increase their financial support for education and should participate actively in enhancing education, research, and innovation. According to them, institutions in these countries need to develop relevant programs based on labor needs, thereby improving the quality of human capital through training schemes. There should be a combination of teaching and research activities at universities in Kosovo.

The results confirm that *attending trainings geared towards raising the level of exports*, greatly affects the growth of exports of SMEs. The odds ratio of this variable (8.782) shows a high and very important value, which should be taken into account by the senior management of the SMEs. Moreover, this variable is significant. The more employees and management staff participate in the trainings, the higher will be the level of exports of the SMEs. The abilities and skills of young workers who arrive in the market in general are unknown (Acemoglu, Pischke, 1998). Therefore, training is necessary in all SMEs, whether exporting or non-exporting.

Assessment of training needs depends on institutions involved and level of management<sup>6</sup>. All levels of management in exporting SMEs need training to improve the level of their exports and increase their knowledge of the international market. Konings and Vanormelingen (2010) found that training boosts marginal productivity of an employee more than it increases his/her wage. Attending training geared towards raising the level of exports is a sig-

nificant variable in this equation. Without adequate training, the level of exports cannot increase.

In his research, Gashi (2014) shows that investment in training has a consistent positive and statistically significant relationship with the export propensity and longevity of serving export markets. The results of his survey of 500 Kosovar SMEs indicate that the education system in Kosovo does not necessarily provide the right level and mix of skills required by the private sector, which in turn forces managers of SMEs to invest a significant proportion of their limited resources in training to increase the knowledge and skills of their employees.

Saleem and Khurshid (2014) found that the recruitment process plays a significant role in hiring competent employees and ensuring good job performance. This paper seeks to investigate the impact of *recruitment practices* on increasing exports of the SMEs. According to our empirical results, none of the categories has a positive relationship with the reference category. Therefore, we can conclude that the sources of recruitment do not have an impact on increasing the exports of the analyzed SMEs.

## 5. Discussion and conclusion

The significance of the study lies in the elaboration of a topic that has so far been underresearched. There is little literature on the characteristics, potentials, level of education and skills of human resources in Kosovo SMEs. In particular, there is very little evidence regarding the human resources in Kosovo exporting SMEs. The EU has liberalized its market through *free trade agreements* for all Western Balkan countries. Most exporting SMEs from Kosovo have access to the EU market. In order to take advantage of the benefits provided by the EU, the SMEs must have the competitive ability to operate successfully in the EU market.

The theoretical and empirical evidence provided in this paper suggests that the production of new and quality products, the increase in production capacities and the increase in the level of sales and exports are highly dependent on human resources management. Human resource management activities should increase the efficiency of employees and improve their skills and abilities in order to increase SME performance. Furthermore, employee education, their technical and interpersonal skills, recruitment practices, engagement of competent ex-

perts to perform specific tasks, and training of staff at all levels were found to be the most important elements or variables that affect the performance of Kosovo exporting SMEs.

The first hypothesis is as follows: *“The level of education increases the export capacities of SMEs”*. According to our results, the level of education of SME employees has a positive relationship with the growth of exports. The education system in Kosovo is not responsive to the needs of the labor market and enterprises. A large number of employees have postsecondary education, while very few hold a M.Sc. or a Ph.D. degree. This is a major disadvantage for the SMEs in Kosovo because such employees have greater innovation skills, i.e. the ability to develop innovative processes in the enterprise. While in EU enterprises, there are many highly educated employees, in Kosovo and other Western Balkan enterprises, there are very few.

The second hypothesis: *“The engagement of external (foreign) experts increases the level of exports”* is accepted. The engagement of external (foreign) experts in Kosovo SMEs leads to an increase in the level of exports because there is a positive relationship between this variable and the dependent variable ‘export growth’. From the descriptive statistics it can be concluded that a small number of exporting SMEs have engaged external (foreign) experts in their business activities. Therefore, exporting SMEs should employ and engage as many external experts as possible. Their expertise will help increase the level of knowledge and skills among employees as well as the SME export capacity.

The third hypothesis of this research: *“Participation in trainings increases the level of exports”* is

also accepted. The results of this paper show that provision of various trainings related to export techniques, methods, processes and strategies has a highly positive impact on export activities of the analyzed SMEs. Moreover, this variable is significant. The trainings provide the expertise that managers and employees need in order to gain a competitive advantage in the challenging and complex world of export and international trade. Governments in these countries need to grant subsidies to exporting SMEs in order to increase the level of exports to the EU and other parts of the world. Therefore, there should be greater support from governments in order to increase the level of exports in these countries.

The results of this research indicate that in addition to limitations in production capacity, exporting SMEs in Kosovo lack the necessary expertise and contemporary knowledge of trends in international trade. Therefore, it can be concluded that the government of Kosovo should provide greater support to exporting SMEs. Moreover, exporting SMEs should invest more in human resources, in particular in raising their knowledge and skills regarding exporting activities through modern methods of training, counseling, seminars, workshops, etc. The limitations of this study lie in the number of analyzed SMEs. Kosovo does not have a large number of exporting SMEs. Therefore, the findings of this study cannot be applied to other countries. Further research is necessary to extend our knowledge of the psychological characteristics, intercultural competence and foreign language skills of human resources in exporting SMEs, as well as the impact of these characteristics on international business flows and activities.

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## UTJECAJ Ljudskih RESURSA NA IZVOZNE REZULTATE MALIH I SREDNJIH PODUZEĆA NA KOSOVU

### SAŽETAK

U radu se naglašava važnost ljudskih resursa u rezultatima kosovskih malih i srednjih poduzeća koja su izvoznici. S obzirom na problematičnu prošlost, Kosovo trpi znatne posljedice ekonomske nerazvijenosti, ali i nedovoljnog razvoja ljudskih resursa. Krajem 90-tih Europska unija počela je poticati liberalizaciju trgovine kako bi doprinijela regionalnom pomirenju na području zapadnog Balkana. Ako žele povećati izvoz, MSP-ovi na Kosovu trebaju razvijati svoju konkurentnost. Cilj je ovog rada analizirati kakav utjecaj na izvoz 100 kosovskih MSP-ova imaju čimbenici povezani s ljudskim resursima, kao što su broj zaposlenika, razina obrazovanja i osposobljavanje za izvozne poslove. Za izvođenje statističkih rezultata korišten je probit model. Statistička analiza provedena je na temelju deskriptivne statistike, a za određivanje pouzdanosti korišteni su Cronbach Alpha, Pseudo R2, LR chi2, Prob>chi2 i Waldov test. Može se zaključiti da će istraživanje biti zanimljivo stručnjacima koji se bave ljudskim resursima te znanstvenoj zajednici u zemljama u razvoju poput Kosova. Glavni je zaključak istraživanja da ljudski resursi u kosovskim MSP-ovima koji su aktivni u izvozu nemaju suvremena stručna znanja koja su potrebna za uspješno sudjelovanje u međunarodnoj trgovini.

**Ključne riječi:** ljudski resursi, Kosovo, mala i srednja poduzeća (MSP), rast izvoza, probit model



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# SEASONAL WORKFORCE MANAGEMENT: EXPLORING EMPLOYEES' INTENTION TO RETURN

## ABSTRACT

The persistent shortage of seasonal workers in the hospitality industry has elevated the importance of seasonal employee retention. Consequently, this study, one of the few to do so, considers whether perceived supervisor support, affective organizational commitment, and work engagement are positively related to influencing seasonal workers' intention to return to their same place of employment the following season. Specifically, this research posits that affective organizational commitment and work engagement mediate the relationship between perceived supervisor support and intention to return. In order to study this issue, data was gathered from seasonal employees who worked in Croatian hotels located in tourist-oriented cities during the 2019 tourist season. Significant relationships were observed among all four of the study's four variables, yet only one of the model's paths was found to be significant. This preliminary research begins the process of gaining a better understanding behind the dynamics of seasonal employment, an area of increasingly high importance for hotels and the hospitality industry in general.

**Keywords:** Hospitality, seasonal workforce, perceived supervisor support, affective commitment, work engagement, intention to return

## 1. Introduction

Seasonal workers are playing an instrumental role in the service sector, particularly in the hotel industry. The level of said seasonal workforces supporting Mediterranean tourism is such that it is almost, dare we say, unimaginable for hotel and tourism operators to run their businesses without them. And statistics show that the size of the seasonal work-

force is growing. Note that in Croatia in 2017, seasonal workers made up 70% of total labor employed in the hotel industry, an increase of 11% compared to 2013 (Tutek, 2018)<sup>1</sup>.

Seasonality is caused, primarily, by an imbalance of demand and supply in travel since most tourists tend to travel during the summer season (Butler, 1994). Seasonality characterizes the very nature

of the tourism industry and hotels are not exempt from this phenomenon. As such, hotels face numerous challenges, with retaining seasonal employees and increasing their return rates being vital (Andriotis, 2005).

The chronic shortage of a competent labor force is one of the main difficulties for Croatian hoteliers (Croatian Employment Service, 2020)<sup>2</sup>. Because of this, their Human Resource departments are applying effort and resources to hire and retain skilled and valuable seasonal employees each season. The fact that the hotel industry is currently hit by the COVID-19 pandemic does not help the problem. On the contrary, once business volumes return, seasonal job candidates may be even more reluctant to accept seasonal jobs due to the hotel industry's potential exposure to some future, comparable crisis.

Discussions with Croatian hotel industry professionals provided the impetus for this research. Hoteliers repeatedly provided feedback as to how seasonal employee turnover negatively affected their operations. Echoing industry professionals, research by Suštar and Laškarin (2020) determined that only a few scientific-type analyses addressed seasonality problems in this region. After reviewing the literature, it is evident that there is a knowledge gap in terms of understanding essential characteristics of hotel human resources; namely, seasonal employees.

This paper's key objective, then, is to ascertain how perceived supervisor support (PSS), affective organizational commitment (AOC) and employee's work engagement (WE) are related in the context of hotel seasonal employees. Furthermore, these variables' potential relationship with seasonal workers' intention to return (ITR) to their current employer (hotel) in the following season is also examined. In spite of seasonal workforce scarcity, seasonal employees are often perceived as subpar compared to permanent employees since their function is temporary in nature. As a result of such perception, we have had less attention directed towards this labor segment.

## 2. Literature Review

The following literature review provides justification to explore the above-mentioned variables and test the rationality of the associated proposed model with a seasonal workforce sample in mind. The vast majority of reviewed studies sampled full-time

or non-disclosed employment status individuals, making this paper's research particularly relevant.

Seasonality has been described as the practice of engaging in shorter periods of business operations while trying to achieve full-year revenues (Baum, 1999) or as certain periods of the year when businesses face higher demand (Butler, 1994). Human-intensive industries, especially tourism and hospitality, are primarily relying on hiring additional seasonal employees in order to meet seasonality's higher demand as employing more permanent employees is not economically feasible in such a varying business environment.

The first part of the literature review is focused on distinguishing between the main terms and concepts associated with workforce characteristics, i.e. differences between permanent, temporary and seasonal workforce. Following this, descriptions of this research's model variables (*perceived supervisor support*, *work engagement*, *affective commitment* and *intention to return*) will be discussed separately along with the notable research findings.

### 2.1 Seasonal Workforce

According to Atkinson (1984), the labor force can be divided into two segments: the core and peripheral. In general, core employees are those permanently employed, working full-time and possessing relevant expertise which is in short supply. On the other hand, the peripheral workforce is comprised of those who do not have a standard or traditional type of employment; for example, contingent or temporary work (Burgess, Connell, 2006). Many industries (agriculture, construction, tourism, retail) use this kind of duality in order to cater to periods of higher demand so as to use labor efficiently. Lips (1998) relates the process of hiring a temporary workforce to the principles of the "just-in-time" manufacturing and staying competitive at a given period in time.

Due to seasonality, the mentioned Atkinson duality of core and peripheral workforces is visible and frequently used in hospitality, with the core group representing a smaller portion of the workforce (Riley, 1991).

When it comes to the essence of the definition of seasonal employment, different authors agree on the general notion of it being short-term and with a fixed period of employment (Lautsch, 2002; McLean Parks et al., 1998). As part of the discus-

sion of seasonal work, it should be acknowledged that a seasonal workforce is a temporary type of workforce but not all temporary employees are seasonal. Although temporary and seasonal types of employment can overlap by some definitions, i.e. being of fixed term and having a predetermined termination date (OECD, 2020)<sup>3</sup>, seasonal employment specifically emerges from periods of higher seasonal demand and is potentially cyclical in nature (Ainsworth, Purss, 2008).

## 2.2 Perceived Supervisor Support (PSS)

According to Kottke and Sharafinski (1988), perceived supervisor support can be defined as the employees' perception on the volume of support received from the supervisor, the degree to which the supervisor cares about the well-being of a subordinate and, in general, the sense of the employee that she/he is valued by the supervisor for her/his contributions at work. Researchers have found that in an environment in which a subordinate experiences support from her/his supervisor, the subordinate is realizing the need and obligation of helping the supervisor achieve the set goals (Eisenberger et al., 2002). The most important aspect of a relationship between a subordinate and supervisor is the quality of their relationship, which, in turn, is largely affected by the amount of supervisor's time dedicated to subordinates (Liden et al., 1997).

In the context of perceived support, Eisenberger et al. (1997) clearly differentiate between PSS and perceived organizational support (POS) as two separate constructs. It is important to note that PSS is more evident to an employee than POS as an employee has more contact with an immediate supervisor (vs. the organization at large) on a daily basis (Maertz et al., 2007). That is why exploring PSS in a hotel setting is critical since in this context supervisors and subordinates interact intensively. Furthermore, when it comes to hotel workers, PSS enables the development of job embeddedness and ultimately employee retention (Karatepe, 2014). As Karatepe (2014) observed, many studies have focused on PSS as one of the most dominant factors in human resources practice yet studies tend to concentrate on permanent employees' PSS while seasonal workforce analysis is largely overlooked.

## 2.3 Affective Organizational Commitment (AOC)

The next variable used in this paper's model is *affective organizational commitment*, a term developed

by Allen and Meyer (1990) as a part of a three-component model of commitment that includes: affective organizational commitment, continuance commitment and normative commitment. The affective organizational component indicates employees' emotional connection, involvement and identification with the organization.

Research by de Cuyper et al. (2009) pertaining to AOC observed its relationship to job insecurity when considering permanent and temporary workers. The research suggests that, for permanent workers, the effect of job insecurity is negatively related to AOC and job satisfaction; however, a similar relationship was not found among temporary employees as was expected given that their contracts expire at a pre-agreed time. By creating meaningful relationships with employees, as explained by the reciprocity effect and social exchange theory, hotels create mutual trust with their employees and encourage improved employee performance. When considering non-standard employment, particularly contingent workers, Van Dyne and Ang (1998), back the general theory that workers with such non-standard types of employment have lower levels of AOC than standard employees.

## 2.4 Work Engagement (WE)

Kahn (1990) introduced the term work engagement and used it to describe individuals who are immersed and psychologically present while working. When examining other authors' definitions of work engagement, Schaufeli et al. (2002) note that WE is not a temporary state, but rather a steady one with variations characterized by dedication, enthusiasm and inspiration. The authors also accentuate energy while performing tasks and commitment towards finding solutions as part of WE. Suan and Nasurdin (2016) note that PSS positively correlates to WE, especially for the male workers. Furthermore, some studies have determined a positive relationship between receiving positive feedback from customers and work engagement for both high- and low-customer contact employee groups (Barnes et al., 2014). The above-mentioned studies were conducted without any reference to seasonal workforce in general, let alone seasonal employees in tourism. An exception to this is research by Arasli et al. (2020) which measured WE in a seasonal setting while examining seasonal employee leadership. Barron et al. (2014) also conducted research on WE within the tourism industry, however, it was

not directed at seasonal employees, and suggested that the connection between a supervisor and an employee is a crucial component of employees' work engagement.

### 2.5 Intention to Return (ITR)

ITR can be defined as the "likelihood to return next season to a job position" (Alverén et al., 2012). Studies that have focused on solving employee retention difficulties have revealed that companies must first identify sources of retention problems (Bonn, Forbringer 1992; Sarabakhsh et al., 1989) and understand which attributes of the work environment lead to higher or lower retention. It is important to distinguish between the terms 'intention to return' and 'turnover intention,' as confusion arises in interpretation and the two terms tend to be falsely equalized. On the one hand, as previously noted, ITR refers to the likelihood of *returning*, and, on the other hand, turnover intention concerns one's plans for *leaving* (Saeed et al., 2014).

Studies have examined antecedents to an employee's ITR to a seasonal job. For example, Šošić et al. (2018) analyzed factors affecting the re-acceptance of a seasonal job in the Dubrovnik region (Croatia). This research suggested that seasonal employees with higher educational levels are more likely to refuse the position the following year. The authors explained this by postulating that college graduates are more likely to seek permanent and more professionally suitable employment. Additionally, Šošić et al. (2018) found significant support for the existence of a positive relationship between seasonal employees re-accepting employment and satisfaction with their supervisor.

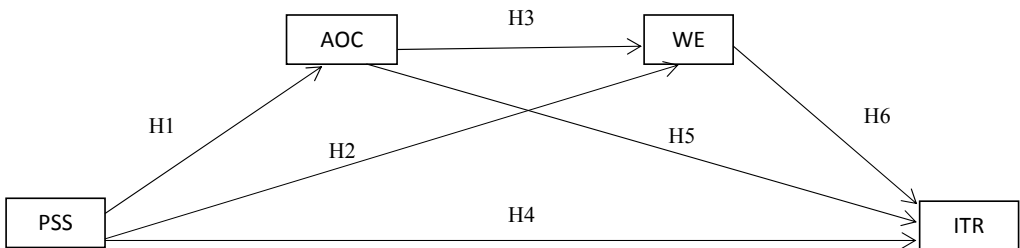
### 3. Proposed Model

To date, a limited number of studies have been dedicated to exploring seasonal work and the factors influencing an individual's intention to return to a specific job position in the following season. This research aims to do that by proposing a model (Figure 1) that builds on prior related research.

A review of the literature reveals support for PSS as an antecedent to AOC (Liden et al., 1997; Eisenberger et al., 2002) as well as to WE (Arasli, Arici, 2019; Suan, Nasuridin, 2016). Moreover, Karatepe (2014) found support for a relationship between PSS and ITR. Šošić et al.'s (2018) work indicates a linkage between AOC and ITR as seasonal employees' re-acceptance of seasonal work was related to their relationship with their supervisor and, by extension, the organization. Barron et al.'s (2014) research lends support to the notion that an employee's relationship with her/his supervisor and the associated AOC is linked with her/his WE. Applying Schaufeli et al.'s (2002) construct of WE as being a state characterized by dedication, enthusiasm and inspiration, it is plausible that WE and ITR are related in that the more one is dedicated, enthusiastic and inspired on the job, the more likely one is to re-accept the position.

The proposed model for this paper's research is presented graphically in Figure 1. As an initial examination of the proposed model, various relationships of the models' four variables were examined through six hypotheses. Furthermore, as depicted in Figure 1, this research proposes that AOC and WE act as serial multiple mediators on the relationship between PSS and ITR in the seasonal workforce context.

Figure 1 Proposed model



Source: Prepared by the authors

Associated hypotheses include:

*H1:* In the seasonal workforce context, Perceived Supervisor Support is positively related to Affective Organizational Commitment.

*H2:* In the seasonal workforce context, Perceived Supervisor Support is positively related to Work Engagement.

*H3:* In the seasonal workforce context, Affective Organizational Commitment is positively related to Work Engagement.

*H4:* In the seasonal workforce context, Perceived Supervisor Support is positively related to Intention to Return.

*H5:* In the seasonal workforce context, Affective Organizational Commitment is positively related to Intention to Return

*H6:* In the seasonal workforce context, Work Engagement is positively related to Intention to Return. and

*H7:* In the seasonal workforce context, AOC and WE have a significant serial multiple mediating effect on the relationship between PSS and ITR.

#### 4. Research Method

This research effort seeks to determine if AOC and WE mediate the relationship between PSS and ITR. Previously developed and validated instruments associated with these constructs were modified to meet this research's needs. Karatepe (2014) specifically modified Karasek et al.'s (1982) original survey for the hospitality industry and this five-item revised scale was used in this research. AOC data was captured with Allen and Meyer's (1993) six-item scale, a modification of their original work (Allen, Meyer, 1990). Schaufeli et al.'s (2019) three item UWES-3 measuring instrument was used to acquire WE information. Finally, Alverén et al.'s (2012) adapted version of Price and Mueller's (1981) work was used to determine ITR. All four instruments had a Likert five-point response set with responses ranging from (1) strongly disagree to (5) strongly agree.

Potential mediation effects in this paper's proposed model were evaluated for statistical significance via IBM SPSS version 26.0 in combination with PROCESS Macro version 3.5's (Hayes, 2013) Serial Multiple Mediation Model 6 (Hayes, 2012)<sup>4</sup>. PROCESS version 3.5 uses the percentile method to calculate bootstrap confidence intervals when determining significance of mediating paths (Hayes, 2020)<sup>5</sup>. The significance level for this study was set at .05.

#### 4.1 Sample

This research also gathered sociodemographic data of respondents, including: gender; age; department within the hotel in which they worked; education level; number of seasons employed at their current hotel (place of employment). Participants in the study were individuals seasonally employed in Croatian hotels during the summer of 2019. Participants in the survey were obtained via the present authors' formal and informal networks in the regional hotel workforce as well as the associated snowballing mechanism. Furthermore, all participants were seasonal employees hired for the April to October period, excluding employees with a student contract, i.e. student workers.

The survey, given the presence of the COVID-19 pandemic, was distributed in an online form via email and social media networks to hotel seasonal workers in three prominent Croatian tourist destinations: Split-Dalmatia county; Dubrovnik-Neretva county; and Zadar county. Note, however, that the Covid-19 environment restricted accessibility to the desired sample, limiting the number of participants. In order to obtain a more sizable sample, hotels' star ratings were not the focus of the study and were not a determinant when choosing the participants in this preliminary study of seasonal workforce management.

From a sample of 85 completed surveys, the majority of participants were female (70.6%). Most of the participants were under 30 years of age (85.9%) and the remainder ranged from 31 to 40 years of age (14.1%). Regarding the educational level attained by respondents, a high school diploma was the most frequent answer (49.4%), followed closely by a Bachelor's degree (41.2%). In terms of the hotel department in which respondents worked, most were employed in the Spa and Wellness department (28.2%), followed by the Front Office (27.1%) and the Food and Beverage department (20%).

The last two demographic questions addressed the number of seasons respondents worked at the same hotel. It was determined that the 2019 season was the first season with their respective employers for 31 (36.5%) of the respondents. The next largest cohort of respondents, 23 (27.1%), was those for whom the 2019 season was their second year at the same hotel. Detailed sociodemographic data is presented in Table 1.

**Table 1** Participants' sociodemographic data

	n	%
<b>Gender</b>		
Male	25	29.40
Female	60	70.60
<b>Age</b>		
Up to 30	73	85.90
31 - 40	12	14.10
<b>Education</b>		
High school	42	49.40
Bachelor's degree	35	41.20
Master's degree	8	9.40
<b>Department</b>		
S&M	7	8.20
F&B	17	20.00
Housekeeping	8	9.40
Front office	23	27.10
Spa and wellness	24	28.20
Finance	2	2.40
HR and admin.	2	2.40
Other	2	2.40
<b>Season(s) worked at the same hotel</b>		
One	31	36.50
Two	23	27.10
Three	20	23.50
Four	4	4.70
Five or more	7	8.20
<b>Total</b>	<b>85</b>	<b>100.00</b>

Source: Prepared by the authors

## 5. Results

This research sought to determine if AOC and WE act as mediators on PSS' influence on ITR. As an initial step, the mean, standard deviation and Pearson correlation analyses were conducted and results can be found in Table 2. The values in Table 2 show that positive significant relationships were found among all variables. The PSS – WE pairwise relationship was significant at the  $p < .05$  level and the

others at the  $p < .001$  level. Simple linear regression analysis was applied to the variables as stated in hypotheses *H1* through *H6* and they were all found to be significant at the  $p < .001$  level with the exception of the PSS → WE path which was significant at  $p = .014$  (see Table 3). **Finding all paths within the model to correlate significantly (Table 2) and to have significant regression characteristics (Table 3), support was found for hypotheses *H1* through *H6*.**

**Table 2 Mean, Standard Deviation and Pearson Correlation Values for Study Variables**

Model Variables	Mean	SD	PSS	AOC	WE	ITR
Perceived Supervisor Support	4.061	.823	1			
Affective Org. Commitment	3.489	.926	.539***	1		
Work Engagement	3.902	.810	.267*	.548***	1	
Intention to Return	3.859	1.092	.412***	.667***	.469***	1

Note: N = 85, \*p < .05 (2-tailed), \*\*\*p < .001 (2-tailed)

Source: Prepared by the authors

**Table 3 Model's Associated Linear Regression Statistics**

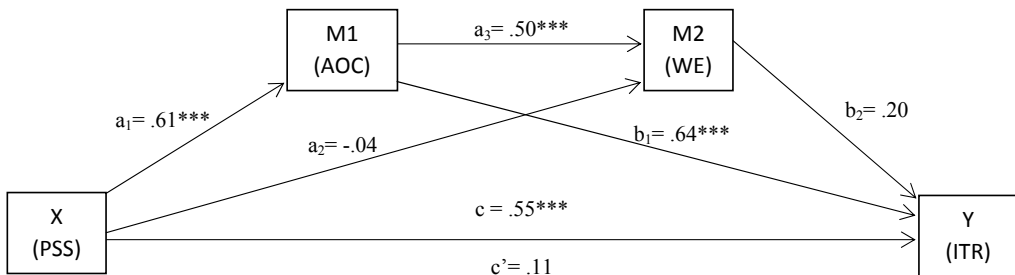
Hypo	IV	DV	F(1,83) Value	p-value	R <sup>2</sup>	Beta (B)	95% CI
H1	PSS	AOC	34.021	<.001	.291	.606	[.400,.813]
H2	PSS	WE	6.357	.014	.071	.262	[.055,.469]
H3	AOC	WE	35.629	<.001	.300	.479	[.320,.639]
H4	PSS	ITR	16.958	<.001	.170	.547	[.283,.811]
H5	AOC	ITR	66.499	<.001	.445	.787	[.595,.979]
H6	WE	ITR	23.400	<.001	.220	.633	[.372,.893]

Source: Prepared by the authors

In order to show that AOC and WE serially mediate the relationship of PSS and ITR, a four-step regression approach combined with a bootstrap method

as suggested by Hayes (2012<sup>6</sup>, 2013) was employed. Values associated with the four steps of this approach are seen in Figure 2.

**Figure 2 Serial-double mediation of AOC and WE on the relationship between PSS and ITR with non-standardized beta values**



Note: \*\*\*p < .001

Source: Prepared by the authors

Overall, the proposed model exhibits signs of mediation but not completely. It can be seen in Figure 2 that, as required in Step 1 of Hayes' four step analysis for mediation, the total effect ( $c = .55$ ,  $SE = .13$ ,  $t = 4.12$ ,  $p < .001$ ) of PSS (without mediating variables) on ITR was significant. When the two mediating variables were introduced, the relation-

ship of PSS with ITR ( $c' = .11$ ,  $SE = .13$ ,  $t = .83$ ,  $p = .41$ ) was no longer significant, as required by Step 4 of the Hayes' approach. Moreover, the direct effect of the first mediating variable, AOC, on the second mediating variable, WE, was significant ( $a_3 = .50$ ,  $SE = .10$ ,  $t = 5.200$ ,  $p < .001$ ). However, while the direct effect of PSS on AOC was significant ( $a_1 = .61$ ,  $SE$

= .10,  $t = 5.983$ ,  $p < .001$ ), the direct effect of PSS on WE was not ( $a_2 = -.04$ ,  $SE = .11$ ,  $t = -.370$ ,  $p = .712$ ). Consequently, Step 2 of Hayes' analysis was not met. When examining the mediating variables' direct effects on ITR, it was seen that AOC's was significant ( $b_1 = .64$ ,  $SE = .13$ ,  $t = 4.860$ ,  $p < .001$ ) while WE's was not ( $b_2 = .20$ ,  $SE = .13$ ,  $t = 1.554$ ,  $p = .124$ ), violating Step 3 of Hayes' analysis. **Considering these results, AOC and WE did not serially mediate the relationship between PSS and ITR. Therefore, support for H7 was not found in this study.** Finally, the overall model was at a significant level ( $F(3.81)$ ,  $p < .001$ ) and had an r-squared value of 46.46%.

A summary of total indirect effects and specific indirect effects associated with the mediating variables is found in Table 4. The statistical significance of the model's indirect effects was examined over 5,000 bootstrap samples, with the estimates taken at the 95% confidence level. As seen in Table 3, given that zero is not included in the confidence interval, the PSS → AOC → ITR path's indirect effect was significant while the PSS → WE → ITR and PSS → AOC → WE → ITR paths' indirect effects were not. Furthermore, combining the above information, it is determined that the proposed model's total effect equals .55 and the total direct and indirect effects are .11 and .44, respectively.

**Table 4 Summary of Total Indirect Effect of AOC and WE on the Relationship between PSS and ITR and Specific Effects**

	Effect	Bootstrapping 95% Conf. Int.		
		SE	Lower	Upper
Total Indirect	.4406	.0946	.2622	.6381
PSS → AOC → ITR	.3871	.1017	.1987	.5993
PSS → WE → ITR	-.0081	.0340	-.0919	.0543
PSS → AOC → WE → ITR	.0564	.0527	-.0391	.1710

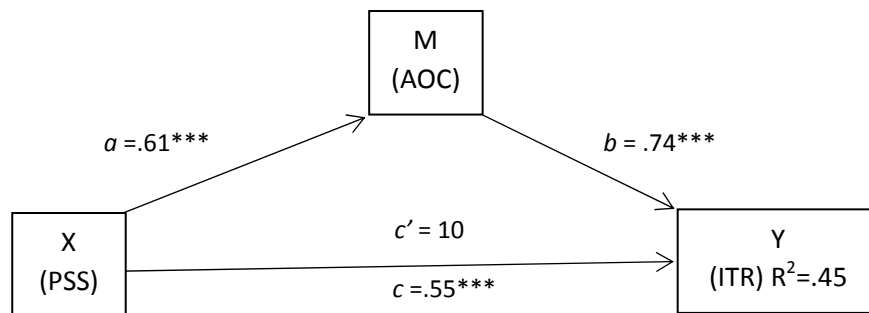
Note: N = 85, k = 5,000

Source: Prepared by the authors

Given that this paper's model was not fully supported, additional analyses were performed to gain more insight into the impact of the proposed mediating variables, AOC and WE, on the relationship between PSS and ITR. Specifically, two simple

mediator models (Hayes, 2012)<sup>7</sup>, one that has AOC mediating PSS and ITR and the other that has WE mediating PSS and ITR were examined; the diagrams are found in Figures 3 and 4, respectively.

**Figure 3 AOC acting as a mediator on the relationship between PSS and ITR with non-standardized beta values**



Note: \*\*\*p < .001

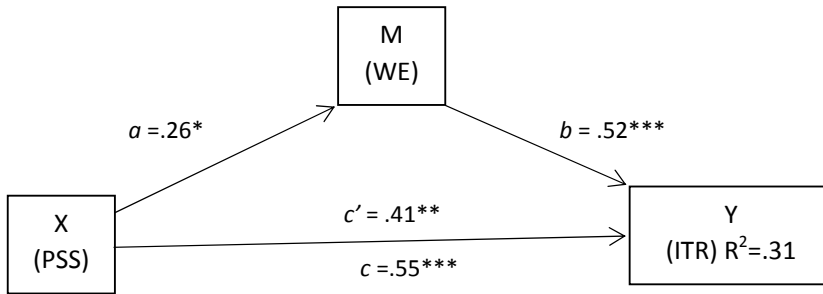
Source: Prepared by the authors



Applying the Baron and Kelly (1986) four-step approach for establishing mediation, it can be seen in Figure 3 that AOC fully mediates the relationship between PSS and ITR. PSS significantly predicts ITR ( $c = .55, SE = .13, t = 4.12, p < .001$ ), satisfying Step 1.

PSS also significantly predicts AOC ( $a = .61, SE = .10, t = 5.983, p < .001$ ), Step 2, and AOC significantly predicts ITR ( $b = .74, SE = .11, t = 6.442, p < .001$ ), Step 3. Lastly, PSS did not significantly predict ITR ( $c' = .10, SE = .13, t = .76, p = .45$ ) in the presence of AOC.

Figure 4 WE acting as a mediator on the relationship between PSS and ITR with non-standardized beta values



Note: \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$   
 Source: Prepared by the authors

A similar Baron and Kelly (1986) examination was applied to a model having WE mediate the relationship between PSS and ITR (Figure 4). As already established above, PSS significantly predicts ITR. Additionally, PSS significantly predicts WE ( $a = .26, SE = .10, t = 2.521, p = .014$ ) and, likewise, WE significantly predicts ITR ( $b = .52, SE = .13, t = 4.057, p < .001$ ). But note that PSS still significantly predicts ITR in the presence of WE ( $c' = .41, SE = .13, t = 3.241, p = .002$ ); although PSS' effect on ITR has been partially reduced, having been redirected through WE. Therefore, WE is

considered to partially mediate the relationship of PSS on ITR.

The total effect in the above two single mediator models, the path from PSS to ITE, was .55. The statistical significance of the model's indirect effects was examined over 5,000 bootstrap samples, with the estimates taken at the 95% confidence level. A summary of the indirect and direct effects of the models are found in Table 5. Note that all direct and indirect paths are significant, with the exception of  $c'$  in the AOC mediated model, establishing a full mediation of the relationship between PSS and ITR.

Table 5 Summary of Indirect Effects of AOC and WE as single mediators on the relationship between PSS and ITR

	Effect	Bootstrapping 95% Conf. Int.		
		SE	Lower	Upper
Total Effect PSS → ITR	.5466	.1327	.2826	.8106
Indirect Effect PSS → AOC → ITR	.4488	.0985	.2708	.6556
Direct Effect PSS → AOC → ITR	.0978	.1292	-.1592	.3548
Indirect Effect PSS → WE → ITR	.1368	.0610	.0291	.2672
Direct Effect PSS → WE → ITR	.4097	.1264	.1582	.6613

Note: N = 85, k = 5,000.  
 Source: Prepared by the authors

In summary, AOC and WE were found to separately (two simple mediation models) fully and partially, respectively, mediate the relationship of PSS and ITR in the seasonal employment context. When considering a serial multiple mediation model, as suggested by theory, it was seen that not all of the indirect paths were significant. Indirect paths containing WE were not found to significantly mediate the relationship between PSS and ITR.

## 6. Discussion and Conclusion

This research contributes to literature in two regards as, for the first time, the study's considered variables have been configured in such a way that AOC and WE act as serial multiple mediation of PSS and ITR, and regarding the fact that the analysis was applied to a seasonal context. The significance of the results can be used in order to better understand the issue of intention to return rates of hotels' seasonal employees and overall, provide understanding about the factors that lead to higher return rates.

As part of the research design, it was proposed that AOC and WE serve as serial multiple mediators to the relationship between PSS and ITR. As an initial step, it was found that all four variables within the model correlate significantly and have significant regression characteristics (Tables 2 and 3). Part of this finding was in alignment with the results previously established in the full-time employment context; namely, the relationship between PSS and AOC (Liden et al., 1997; Eisenberger et al., 2002).

This research suggests that the same PSS and AOC relationship holds in the seasonal work context. Notably, this finding suggests that certain HR relationships, regardless of employment status, are universal, implying that management may utilize similar approaches in managing these relationships since they are applicable for both full-time and seasonal employees. Furthermore, the PSS and WE relationship previously observed in both the seasonal employment context (Arasli, Arici, 2019) as well as in non-disclosed employment context (Suan, Nasurdin, 2016) was also observed in this study. While the PSS and WE relationship in this study was not as pronounced as other pairwise relationships in this study, it was still significant at  $p < .05$  (Tables 2 and 3).

The existence of PSS, AOC and WE proved to be critical elements for seasonal employees. Moreover, this study indicates that AOC affects the level of seasonal employees' work engagement (Tables 2 and 3). Such results may further encourage companies to attempt to design favorable work conditions, which would boost work engagement of seasonal employees. For future research, we would encourage colleagues to investigate whether or not an employer's pledge (a non-binding promise as opposed to a formal contract) concerning employing seasonal employees the following season would positively impact WE via the mechanism of perceived job security.

The results have also shown that WE is positively related to ITR (Tables 2 and 3). Note that the relationship between work engagement and returning could be potentially impacted by other considerations or variables. It could be the case, for example, that an individual's preferred career path and industry of choice (for employment) might moderate one's level of work engagement. Given the structure of Croatia's economy and its heavy dependence on travel and tourism (World Travel & Tourism Council, 2020)<sup>8</sup>, non-travel-and-tourism jobs are not relatively plentiful, potentially creating a pool of seasonal workers that are in the hotel industry out of necessity (need for employment) rather than choice. Consequently, this potential pool could adversely impact seasonal hotel work engagement levels.

While the overall model exhibited mediation, not all paths within the model were significant; thus, hypothesis H7 was not confirmed. There were, however, encouraging signs concerning the model's validity. Note that all of the model's variables exhibited significant correlations. Additionally, AOC and WE individually mediated the relationship between PSS and ITR, suggesting that these two variables in some form or combination act as mediators. In the end, however, only one of the model's three indirect paths was significant. Specifically, AOC significantly acted as a mediator but WE and the path through AOC and WE did not (Table 4).

Some plausible explanations as to why not all of the model's indirect paths were significant have been identified. First, as mentioned before, this study's sample did not differentiate as to whether or not the hotel industry was the respondents' first choice. Second, this study did not distinguish between vol-

untary seasonal workers (employees who only want to work seasonally; i.e., they don't want to work full-time) and involuntary seasonal workers (those who would prefer full-time employment but had to settle for seasonal employment). This line of thinking proposes that the desired employment status might act as a moderator on the relationship between PSS and WE. If future researchers were to incorporate Ball's (1988) voluntary vs. involuntary construct, they might find that this explains why this paper's model has two insignificant paths. As the third and final possible explanation, the method by which WE was operationalized is offered as a reason to explain the model's insignificant paths. Note that in an effort to produce a more time-friendly survey instrument, the original UWES-17 instrument was abbreviated to this study's UWES-3 instrument (Schaufeli et al., 2019), resulting potentially with an incomplete operationalization of WE and a measurement error.

An additional proposal for future research is to investigate whether results would be different if participants were tested before, during, and after the season. More specifically, it could be investigated whether this approach would produce discrepancies in results simply by having different measurement time periods. We also recommend exploring

seasonal workers' ITR related to star rating of the hotel or economic conditions of the country where they come from. As mentioned earlier, Mediterranean tourism is highly seasonal and developing a cross-country seasonal workforce comparison in this respect would be quite interesting. Also, further research could be aimed towards chain brand association being a determinant for one's ITR to the job position.

When it comes to limitations of the study, there are several which need to be noted and are mostly connected to the sample and its participants. Sample size, as is always the case in social sciences, may represent a limitation and affect the outcome of research. The initial plan of the study was to use a paper-and-pen questionnaire in order to increase control and maintain truthfulness in results, specifically reaching the most fitting participants. Our initial objective was to test seasonal workers at the beginning of the season, i.e. in March or April in hotels throughout the three regions mentioned in our research method. However, due to the COVID-19 pandemic, the method for primary research shifted towards an online form of questionnaire. Although the online survey eliminated the barrier of the geographically spread sample, this method decreased our capacity to administer surveys in person.

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## UPRAVLJANJE SEZONSKOM RADNOM SNAGOM: ISTRAŽIVANJE NAMJERE POVRATKA ZAPOSLENIH

### SAŽETAK

Kronični nedostatak sezonskih radnika u ugostiteljstvu i turizmu povećao je važnost zadržavanja sezonskih zaposlenika. Stoga ova studija, jedna od rijetkih koja to čini, razmatra jesu li uočena podrška nadređenih, afektivna organizacijska predanost i radna angažiranost, pozitivno povezana s namjerom sezonskih radnika da se sljedeće sezone vrate na svoje isto mjesto zaposlenja. Konkretno, ovo istraživanje pokazuje da afektivna organizacijska predanost i radna angažiranost posreduju u odnosu između uočene podrške rukovoditelja i namjere zaposlenih da se vrate. U svrhu proučavanja ove problematike prikupljeni su podatci sezonskih zaposlenika koji su tijekom turističke sezone 2019. godine radili u hrvatskim hotelima koji su smješteni u gradovima orijentiranim na turizam. Uočene su jake veze između sve četiri varijable ove studije, ali otkriveno je da je samo jedna od relacija modela višestruke regresije značajna. Ovo istraživanje započinje proces stjecanja boljeg razumijevanja dinamike sezonskog zapošljavanja, područja od sve veće važnosti za hotele i ugostiteljsku industriju uopće.

**Ključne riječi:** turizam i ugostiteljstvo, sezonska radna snaga, percipirana podrška rukovoditelja, afektivna posvećenost, radna angažiranost, namjera povratka

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# THE INSTITUTIONAL FRAMEWORK MODEL FOR THE IMPLEMENTATION OF THE EU COHESION POLICY IN CROATIA FOR THE 2021-2027 PROGRAMMING PERIOD

## ABSTRACT

The EU cohesion policy is considered one of the most important policies implemented and financed through the EU common budget, as about a third of the EU budget is allocated to funds that are instruments of that policy. The goal of the EU regional policy is to reduce development disparities between EU regions by co-financing development projects. Given that the less developed regions benefit the most from this policy, it is extremely important for Croatia because it directly affects the country's economic and social development and helps it converge towards the EU average. Considering the above, this paper seeks to contribute to the scientific discourse on the use of regional policy funds by examining the topic beyond temporal boundaries of programming periods and by proposing an institutional framework model for the management of the EU regional policy instruments in Croatia. To empirically determine the key institutional factors in the absorption of EU funds, the paper considers the existing EU fund management systems of selected EU countries. Through scientific research and comparative analysis of management systems in nine Central and Eastern European countries and drawing on the experience of the Croatian system and its functioning, an optimal model for the management of the EU regional policy funds at the national level was formulated. The proposed model should improve strategic decision making by the executive branch and help Croatia make the best possible use of EU regional policy funding, which should in turn reflect positively on economic growth.

**Keywords:** EU regional policy, EU regional policy funds, a model of the institutional system for the implementation of EU regional policy instruments in the Republic of Croatia

## 1. Introduction

While acknowledging the modern trends in regional economic sciences, it is important to point out that modern research is largely focused on analyses of EU regional policy, long- and short-term EU regional policy issues and its financial framework (more in: Bachtler et al., 2018), while the link between institutional (often: administrative) capacities and regional policy fund management systems is analysed to a lesser extent (Boijmans, 2014<sup>1</sup>; Farole et al., 2011). Namely, the implementation of regional policy in the EU Member States is governed by national systems, i.e. the institutionally organised systems that differ between countries. This means there is no single, universal model, and thus the intensity and dynamics of the use of EU funds differ between countries.

Given that each EU Member State independently establishes an EU fund management system, i.e. an institutional system for managing EU regional policy funds, analyses of these systems are mostly done for individual countries and are limited to a description of the system, without any elaboration on its efficiency and improvement guidelines. In this context, it is necessary to further connect analytical and professional knowledge on the efficiency of the EU regional policy funds management system and theoretical concepts of regional development, with the need to adapt national management systems to meet real development needs, investment priorities and administrative capacity. This is particularly important because the contemporary research reveals positive trends in economic structure and productivity of Central and Eastern European countries (Dobrzanski, Grabowski, 2019), as well as in the quality of the business environment and business resilience (Malinic et al., 2020; Jablonska, Stawska, 2020), as a result of support from alternative financing sources (EU funds).

Some analyses were conducted for the previous EU budget perspectives to assess the effects of regional policy and spending, mainly by the professional and scientific community within the European Commission. In this context, it is necessary to mention several scientific papers on the impact of EU regional policy funds spending along with the efficiency analyses of those funds and policies (Varga, Jan in 't Veld, 2010; 2009; Ederveen et al., 2006; Ederveen et al., 2003). Some sources have also analysed the testing and evaluating of the impact of regional policy (De la Fuente, 2010; Bachtler, Wren,

2006). It is necessary to mention some earlier research papers by the authors who are familiar with the topics of regional policy and transfer of funds to the Member States and whose expertise will be referred to in this scientific research, such as Allard et al., (2008), Herve and Holzmann (1998). Moreover, research papers that link the issue of income inequality and regional policy such as those by Boldrin and Canov (2001), Burnside and Dollar (2000), Dawkins (2003), MacKinnon and Cumbers (2019) will be considered. All the above sources partially provide the foundation for understanding the structural reform scenarios (more on this in: D'Auria et al., 2009; Roeger et al., 2008; Varga and in 't Veld, 2010), which can be financed under the EU's regional policy.

In order to define a new or further develop the existing system in Croatia, in addition to describing the experience of Croatia, the paper presents and examines the EU fund management systems in nine countries (Cyprus, Estonia, Hungary, Latvia, Lithuania, Malta, Slovakia, Slovenia and Poland). Special attention was paid to collecting comparable sets of data for the analysed countries, bearing in mind the limitations that may arise in research, such as the availability of data that can be used to compare the implementation systems of individual countries. It should be emphasised that the most transparent and available data were related to the amounts of contracting and disbursement of EU funds because the EU countries are required to submit such data to the European Commission. However, it was extremely difficult to obtain official and reliable data regarding the management system architecture and the changes in the system for management of EU regional policy funds over time. Therefore, the analysis of the EU regional policy fund management system included only those Central and Eastern European countries for which reliable data on the management system architecture could be obtained.

## 2. EU cohesion policy and analysis of progress in EU funds allocations

All EU countries can use the EU regional policy funding through its instruments, i.e. funds. Regional economic growth is extremely important for long-term sustainable national economic growth. Therefore, it is necessary to establish the most significant long-term drivers of this growth and, where possible, identify those determinants that



are exogenous at the regional level and thus subject to intervention (Harris, 2010). A brief look at the history of economic thought from Adam Smith, David Ricardo, Thomas Robert Malthus, Karl Marx to John von Neumann shows that the growth of production in total depends on the behaviour of individuals, that is, it is endogenous, as stated by Kurz and Salvadori (in: Salvadori et al., 2003), Capello and Nijkamp (2011).

It should be noted that the economic policy of the national economy's transformation, as pointed out by Sukharev (2005)<sup>2</sup> is not influenced by the transformation process itself but by the conditions and opportunities for economic growth, requiring the correct choice of national development policy instruments. Ferry and McMaster (2013) point out that the establishment of a mechanism for the implementation of EU-funded regional development programmes has played a significant role in changing the perception of the domestic regional policies' objectives and content. The process of implementing the Structural Fund programme itself can introduce a new institutional framework and mechanisms into the field of regional policy, especially at subnational levels and within the private and voluntary spheres (more in: Roberts, Hart 1996, in: Ferry, McMaster, 2013). It is an inevitable fact that there is considerable diversity between European regions in relation to almost all economic, but also other factors, representing a great challenge at the EU level in terms of structural policies. As Ferry and McMaster (2013: 1504) point out, the regional policy can promote changes in internal policy by providing an additional source of funding for regional development, with a mandatory framework governing the content, governance, and implementation of the policy. Institutional reliability and institutional framework here become matters of great importance.

Brunetti et al. (1997) have analysed five categories of institutional reliability: 1) predictability of rules, 2) political stability (or lack of uncertainty), 3) security of property rights, 4) reliability of the judiciary, and 5) lack of corruption while trying to explain whether institutional changes have an impact on the relative economic performance of not only the former transition countries but also on the regional level. The results of the research confirmed that a reliable institutional framework could be an important precondition for the successful transformation of the economy and the improvement of the

economic performance of the countries of Eastern and Central Europe (see also: Fischer et al., 1996).

The analysis of the implementation progress of the European Structural and Investment Funds for the 2014-2020 programming period is based on the European Commission data, which are available on an annual basis (end of the calendar year and the last available quarter) (Figure 1). As expected, the disbursement rate in relation to the total planned funds for each individual state is extremely low in the first two years. Thus, at the end of the second year of the programming period (2015), no country has a percentage higher than 3% of disbursed funds in relation to the allocated funds. This may be related to delays in the preparation of operational programmes (strategic documents that define investment priorities from the EU funds) and to delays in the preparation, publication and implementation of tenders. The first disbursements can be received as advance payments, but only after the implementation of the project can we talk about real payments. Furthermore, the establishment or adjustment of a national management system for EU funds to the needs of the new budgetary perspective (2014-2020) also contributes to the low funding in the first two years of the financial perspective.

However, financial implementation in 2017 falls behind the dynamics of the previous programming period by almost a year, as a result of which the percentage of disbursements of EU funds is a cause for concern, which puts additional pressure on the audit of the efficiency of EU funds management system. In order to get a more detailed picture of the implementation of regional policy funds, the utilization of EU regional policy funds and progress in the implementation of the European Structural and Investment Funds in a cumulative amount are shown (Annex 1 and Figure 1, respectively).

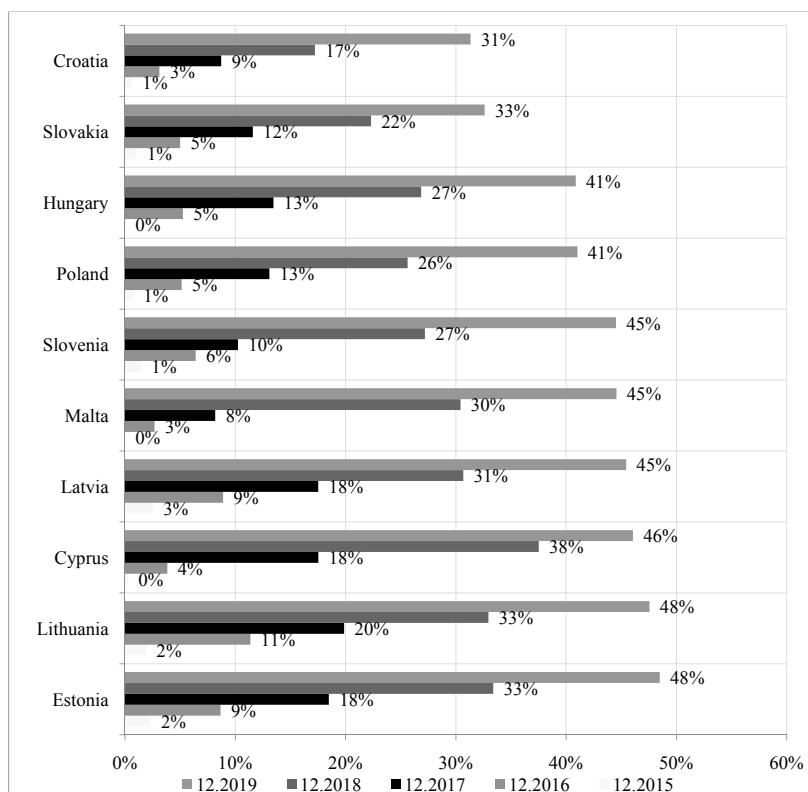
Given that there is a longer time period (from the end of 2015 to the end of 2019) in which progress (dynamics) in the disbursement of EU funds can be monitored, observing the relative change of the selected countries' positions and reaching certain conclusions is possible. One of the important observations is related to the dynamics of disbursements in the Baltic states. Namely, in the first part of the EU programming period, Estonia, Latvia and Lithuania, according to the data on disbursements of the European Structural and Investment Funds for the end of 2015, 2016 and 2017, were among the

top four out of ten observed countries (including Croatia) (Figure 1).

In the following years, these positions were retained - and at the end of 2019, Estonia was ranked first among the ten analysed countries, Lithuania was in the third place and Latvia was fourth. A more regulated and efficient system of managing EU funds in a country contributes to the stability and improves the dynamics of the EU funds' absorption, which is most visible in the Baltic states. In comparison, Croatia was persistently at the bottom of the scale of European Structural and Investment Funds' disbursements relative to the allocations, dropping from ninth place in 2016 and 2017 to last, tenth place at the end of 2018, where it remained at the end of 2019. In the case of Croatia, it should be noted that already at the beginning of the 2014-2020

programming period there was an objective problem that caused the somewhat slower preparation and delays in the implementation of EU regional policy projects, resulting in slower dynamics of cumulative disbursements of EU funds in comparison with other observed countries. Namely, before the start of the new (2014-2020) programming period, EU countries had already gained experience with the use of EU regional policy funds in the 2007-2013 programming period and had established management systems. In comparison, Croatia was at that time nearing the end of its accession negotiations with the EU and was using the Instrument for Pre-Accession Assistance (IPA). It started using the regional policy funds in the second half of 2013, while at the same time preparing for the new 2014-2020 programming period.

**Figure 1** Progress in the implementation of the European Structural and Investment Funds, paid out cumulatively, % compared to the planned (for the EU 2014-2020 programming period)



Source: European Commission (2020)<sup>3</sup>, processing and calculations by the author

The dynamics of ESI funds disbursements differ greatly between countries (Figure 1), which is not a surprise at the beginning of the programming period, however, the dynamics of disbursements in relation to the planned funds after the first two years became increasingly different between countries. At the end of 2019, the percentage ranged between 32.6% in Slovakia and 48.5% in Estonia. It should not be expected that the dynamics of the utilization of EU funds across states to be identical over time because different countries have different investment priorities and dissimilar investment intensity from individual funds, which also have different implementation rules and implementation dynamics. However, the data in Figure 1 and the table in Annex 2 provide a framework for possible management systems that, due to their effectiveness in advancing the implementation of EU funds, may be an experience applicable to Croatia. For example, the data from the previous Figure suggest that smaller countries, i.e. countries with smaller economies and smaller populations, and thus lower allocation of EU funds and smaller administration, in recent years have generally recorded a higher percentage of implementation of EU funds compared to slightly larger countries. For instance, at the end of 2017, 2018 and 2019, the Baltic states, Cyprus and Malta, were at the top of the performance table. In these countries, changes in the system of managing EU funds have generally led to a reduction in the number of operational programmes, the centralization of the system and clearer procedures for the implementation of EU regional policy programmes and projects (Figure 1).

### **3. Effects of institutional and regulatory framework quality variables on the absorption of EU funds**

To evaluate the effectiveness of the management system of EU regional policy funds in individual countries, an analysis was conducted in nine countries that have received EU grants since 2005, Croatia included. How much of the available grants from the EU budget each country, including Croatia, will ultimately use depends on its absorption capacity. The absorption capacity is determined by three main factors:

1. administrative (institutional) structure and capacities for implementation of operational programmes (strategic documents de-

fining national development needs for co-financing by EU funds);

2. financial capacity to co-finance projects financed from EU funds;
3. the macroeconomic capacity of the state to provide enough productive investment opportunities for the efficient use of EU funds.

More specifically, absorption capacities mostly depend on institutional factors, i.e. on the extent to which the authorities at the central (as well as regional and local) level can prepare consistent multi-annual plans for EU funds utilization, and consequently deal with a large amount of administrative work related to withdrawal of EU funds and successfully coordinate and monitor their use. Success can be partly attributed to the ability of employees/administration in the preparation and implementation of EU funds, but the key parameter for considering the intensity of the performance of the EU funds management system, while monitoring the dynamics of contracting, is primarily the dynamics of disbursements.

In addition to Croatia, the model included nine other EU countries, which are comparable to Croatia and which meet the criteria for selecting countries for comparison of the EU funds implementation system (Cyprus, Estonia, Hungary, Latvia, Lithuania, Malta, Slovakia, Slovenia and Poland) for the purpose of the analysis of the institutional framework. It is also necessary to keep in mind the specific long-term and structural problems that Croatia faced at the national level already at the beginning of the current (2014-2020) EU budget perspective:

- Ineffective functioning of the management and EU funds implementation system, including the insufficient administrative capacity (significant delays in defining and establishing the management system, lack of staff in the system of EU funds implementation).
- Non-compliance with strategic national decisions (agreed with the European Commission) on the definition of strategic documents for the use of EU regional policy funds and decisions on the establishment of the EU funds management system.

#### **4. Proposal for the institutional framework model for the management of EU regional policy funds in Croatia for 2021-2027**

New models of regional development seek to explain economic growth and innovation in some regions, while at the same time being tasked with creating and implementing policies to combat structural economic weakness in less developed regions. Overviews of the management systems of EU cohesion policy funds and the results of empirical research conducted on the example of nine EU Member States that meet the selection criteria for the purpose of comparing the EU funds implementation systems show that these management systems comply with the regulatory framework of the EU, but that system architectures visibly deviate between states.

Therefore, governance systems across countries are not identical but do have similarities that can be partly explained by the transfer of experiences between them (the example of Estonia). It is thus justified to conclude that it is possible to define an optimal and functional institutional system for the implementation of regional policy funds, based on the systems in comparable EU countries, and apply it in Croatia. However, the allocation of funds alone did not necessarily lead to an increase in the quality of the institutional framework and the competitiveness of the analysed countries.

From the current EU programming period (2014-2020), out of a total of 12.68 billion Euros of EU funds and national co-financing (that Croatia has at its disposal in this programming period) by November 2016, less than 0.4% was used, i.e. paid out for projects. According to this utilization indicator, Croatia ranked 22<sup>nd</sup> in the EU. Among the Central and Eastern European countries, only Slovenia and Romania were ranked lower. If we look at the allocated (and not yet paid) funds for projects, in relation to the total amount available, Croatia was in the 25<sup>th</sup> place with 9.1%. Given that this indicator of allocated, unpaid funds is indicative of future trends in actual payments, its low amount for Croatia suggests that Croatia's relative position will be among the worst in the EU for some time to come. Such trends are confirmed by later developments in the use of EU funds. Namely, at the end of 2019, in all EU countries, the disbursed funds from the European Structural and Investment Funds exceeded 30% of the allocation for the 2014-2020 programming period. Croatia, with just over 31% of disbursed

funds, was still at the bottom of the list of countries in terms of fund utilisation (disbursement of funds in relation to the total allocation). Compared to the nine countries of Central and Eastern Europe, Slovakia is ranked above Croatia (with 32.6%), while Hungary, Poland, Slovenia and Malta are somewhat more successful, with less than 45% of the utilised funds. Top-ranked are Cyprus, the three Baltic states and Malta.

It is important to emphasise that the dynamics of EU funds absorption since the beginning of the seven-year programming period of the EU (i.e. since 2014) is the fastest in the example of the Baltic states because for years they had been top-ranked in terms of utilization of EU funds. This is yet another reason to pay close attention to the EU fund management system in the Baltic states, in order to assess whether and to what extent the future EU fund management system in Croatia could rely on the experiences of these countries. The discussion of the institutional governance system for EU regional policy for political or interest reasons is usually focused on the topic of which ministry (or institution) should oversee coordination and management, including programme design and legal framework development. This question is pertinent, but the answers to the following two questions are of even greater importance:

- 1) Is the overall institutional structure more of a centralised or a decentralised system (or a combination of the two)?
- 2) How are responsibilities shared between the managing authorities (MAs) and intermediate bodies (IBs)?

Regarding the first question, considering the examples of countries that have joined the EU more recently, the basic institutional possibilities are the following:

- a) Centralised structure, as applied in the Baltic states, where a single managing authority has been established, with implementation delegated to line ministries and their agencies, as has been the case in Slovenia;
- b) Decentralised structure in which the managing authorities are placed within line ministries, with a relatively weak coordination function;

- c) Mixed structure, in which all or most of the managing authorities - although separate administrative units - are placed within the same ministry or agency, as in the case of Hungary 2007-2013.

The first solution is better suited to relatively small states with small administration systems. However, its overall philosophy of a strong coordination function can also be applied to larger Member States. The theoretical advantage of a decentralised system could be a strong synergy between sectoral policies and the use of EU grants. Regarding the distribution of responsibilities between the MAs and the IBs, the Member States that joined the EU in the last waves of enlargement have contributed to the great importance of control-driven programmes (due to the great fear of possible financial corrections). This has usually led to overly centralised programme management systems or, to a lesser extent, overly strict control of IB's activities by the Managing Authority. The logical consequence of this is a slowdown in programme implementation, increased bureaucracy (administrative burden), and lack of resources (because controls have consumed significant human and material capacities).

Based on the existing regulatory framework (regional fund policy management system in Croatia), the number and thematic scope of existing operational programmes (for the period 2014-2020), and the results and conclusions of the research in nine Central and Eastern European countries, an optimal and functional system for the implementation of regional policy funds and related operational programmes can be proposed: Model with one operational programme within the framework of the EU cohesion (regional) policy (multi-fund national operational programme - NOP) with two managing authorities (MA) and a coordinating authority (CA) (see Figure 2).

The National Operational Programme (NOP) would be a multi-fund operational programme consisting of the Cohesion Fund (CF), the European Regional Development Fund (ERDF) and the European Social Fund Plus (ESF +). The National Operational Programme (NOP) would represent a certain continuity in relation to the 2014-2020 financial period and would combine previous experiences and know-how within two operational programmes from that period ("Competitiveness and Cohesion" Operational Programme and "Efficient Human Resources" Operational Programme).

Unlike the two separate programmes in the 2014-2020 financial period, this new proposed approach with one operational programme offers greater opportunities for linking, complementing, controlling, monitoring, evaluating, but also for flexibility, i.e. adaptability. In the 2014-2020 financial period, there is no operational programme that specifically addresses problems at the regional level, which has reduced the possibility of taking preventive steps against external risks that occurred after the accession of the Republic of Croatia to the EU (in terms of demography, employment, etc.). By launching the NOP, and based on lessons learned related to territorial development, including those arising from the Slavonia, Baranja and Srijem<sup>4</sup> project, in the 2021-2027 programming period, the possibility for financing regional initiatives would be expanded. A multi-fund OP would also be the only EU regional policy programme and would represent an integrated territorial development tool such as integrated territorial investment (ITI)<sup>5</sup>. Additional benefits arising from having one operational programme, compared to two operational programmes in the 2014-2020 period, are the inclusion of development needs simultaneously at both the national and regional levels and comprehensive approach to development problems. In the context of national sectoral policies, a multi-fund operational programme would enable a unified management and more effective coordination of the sectoral investments implementation. In terms of preparation of the operational programme, the development of the national operational programme would be coordinated by the ministry in charge of regional development and EU funds. The advantages of having a single national multi-fund operational programme are as follows:

- it considers development needs at both national and regional level and takes a holistic approach to development issues;
- it enables unified management and more effective coordination of the implementation of sectoral investments;
- it encourages the development of territorial strategies, thus promoting the importance of the strategic framework at the regional level (greater focus on regional development);
- it affords greater ability to control double funding, irregularities and fraud;

- it ensures a single system for monitoring and evaluating EU regional policy;
- it enables more efficient planning and better monitoring and control of the execution of the state budget;
- it accelerates business processes - no deep operational programme management structure is required.

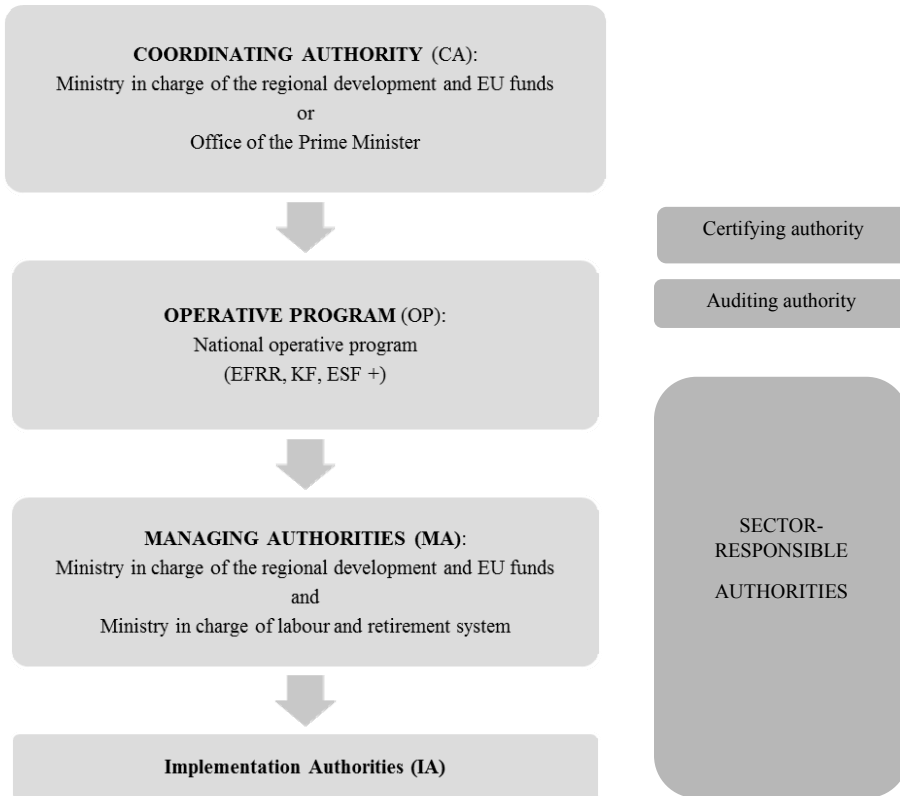
These advantages far outweigh the disadvantages of the proposed model, which should also be mentioned, and relate to the following:

- a possible temporary (short-term) downtime of the system that would be applied for the period 2021-2027, if the integration of the employees of the Managing Authority for ESF Operational

Programme “Efficient Human Resources 2014-2020” would follow (short-term);

- a potential risk of partial loss of Ministry of Labour’s institutional knowledge in the implementation of the ESF Operational Programme “Efficient Human Resources 2014-2020” due to changes in the institutional framework;
- the institutional framework becomes shallower vertically, but widens significantly horizontally, thus increasing the challenges and responsibilities in covering sectoral/sub-sectoral policies/ investments;
- the possible administrative burden of the management and control system, such as the issue of the number of MAs, reporting, implementation...)

Figure 2 Proposal for the institutional framework model in Croatia for the EU 2021-2027 regional (cohesion) policy (single operational programme)



Source: Author's work

Considering all the argumentation provided, the proposed institutional system for the implementation of regional policy funds in Croatia for the 2021-2027 EU programming period has only one operational programme that includes the following (Figure 2):

- **Coordinating authority:** Ministry in charge of regional development and EU funds (or the Office of the Prime Minister of the Republic of Croatia, which has even greater coordination power because all ministries report to it, and due to its long-term coordination role in other important processes of preparation and drafting of strategic documents, such as the National Reform Programme).
- **Managing authority:** Ministry in charge of regional development and EU funds and the ministry in charge of labour and pension system (i.e. the ministry in charge of the area within the scope of the European Social Fund).
- **Certifying authority:** Ministry of Finance, which would continue to certify at the national level the statement of expenditure and requests for payments before sending them to the European Commission.
- **Auditing authority:** The Agency for Audit of European Union Programmes Implementation System (ARPA), which would continue (as a national body functionally separate from the managing authority and the certifying authority) to be responsible for the external audit of the regularity and efficiency of the system.

Sectoral authorities in the system of management and implementation of EU regional policy funds are also listed in the proposal for the model (framework) to emphasise that these bodies (primarily ministries) include institutions that create sectoral policy. More specifically, the managing authority should have full and well-defined powers to ensure strong coordination and management of intermediate bodies, to enable the concentration and to improve the coordination of programmes and their effective implementation. The proposed institutional system for the implementation of regional policy funds in Croatia for the 2021-2027 EU programming period is partly based on the experiences of other countries that have adjusted their governance systems to increase efficiency. The proposed system (Figure 2) is fully in line with the 2021-2027 policy objectives in terms of the application of the new

thematic concentration rules based on the 2021-2027 Multiannual Financial Framework (MFF)<sup>6</sup>. Specifically, the thematic concentration rules for allocation of regional policy funds for the 2021-2027 EU programming period must be followed at the level of the Partnership Agreement, i.e. they must be harmonised between operational programmes.

## 5. Conclusion

Although the EU regulations define the necessary framework and institutions that must exist in the system for management and implementation of EU regional policy in Member States, the margin for the existence of different systems is considerable. Therefore, national experiences differ due to several factors, such as the intensity and type of EU funding, the coherence of the area to which EU funds are directed, the relative strength of national and regional administration, and national economic and regional traditions. For similar reasons, the implementation system architectures can vary significantly between countries.

The analysis of the EU funds management system across individual countries did not show that the change or adjustment of the management system in any of the countries analysed was completely or even largely influenced by theoretical knowledge related to regional development and management systems of EU funds; rather, it was mostly influenced by previous experiences and practical problems, which prompted them to adapt the management system.

The research has shown that changes in the system for managing EU regional policy funds, i.e. changes in the implementation structure of countries are not frequent because the moment of transition from one programming period to another was used to adjust the system to needs (for example, from 2007-2013 into the 2014-2020 period), so that the change would have as little negative impact as possible. The quality of the institutional framework was analysed in nine countries that have been benefitting from EU funds since 2005, and compared against that of the Republic of Croatia. The management and allocation of EU regional policy funds require a developed institutional structure and a clear division of roles in the system of governance and implementation of regional policy in the beneficiary country. Therefore, in terms of how to manage regional policy funds, each EU Member State has developed its

own management system. It should be emphasised that management systems differ in the extent to which they are integrated into the national administrative system. In addition, the level of system complexity is different, and the management systems of national and regional programmes are different too. More specifically, reviews of the EU cohesion policy funds management system (attachments) on the example of nine EU Member States that meet the selection criteria, which were performed in order to compare the systems for implementation of EU funds, show that these management systems are in line with EU regulatory framework, but architectures of the systems visibly diverge between states.

Therefore, governance systems between countries are not identical but do have similarities that can be partly explained by the transfer of experiences between countries (the example of Estonia). However, the allocation of funds alone did not necessarily lead to an increase in the quality of the institutional framework and the competitiveness of the analysed countries. This reaffirms the importance

of establishing an effective institutional framework for the management of EU funds, as it will not only increase the absorption but will also improve the overall efficiency of public sector operations and the competitiveness of the state. It is important to emphasise that if EU funds are not used appropriately and purposefully, the assistance itself may produce long-term negative effects on the development of recipient countries. Thus, evidence suggests that to use the funding provided by the three regional policy funds efficiently and effectively, a Member State must be able to analyse and adequately organise a national management system, taking into consideration its administrative capacity and institutional interrelations, as well as drawing on the experience of comparable countries. The combination of these two factors will maximise the effectiveness of regional policy in supporting the economic and social development of any EU Member State, Croatia included.



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# MODEL INSTITUCIONALNOG OKVIRA ZA PROVEDBU FONDOVA KOHEZIJSKE POLITIKE EU 2021. - 2027. U HRVATSKOJ

## SAŽETAK

Kohezijska politika EU smatra se jednom od najznačajnijih politika koja se provodi i financira kroz zajednički proračun EU, jer oko trećine proračuna EU se usmjerava na fondove koji su instrumenti te politike (Kohezijski fond, Europski fond za regionalni razvoj te Europski socijalni fond). Cilj regionalne politike EU je smanjivanje razvojnih razlika u regijama EU putem sufinanciranja razvojnih projekata. S obzirom da najviše koristi od navedene politike imaju manje razvijene regije, koje se, u pravilu nalaze u manje razvijenim državama EU (pretežito države središnje i istočne Europe), za Hrvatsku je navedena politika od iznimne važnosti, jer izravno djeluje na gospodarsko-socijalni razvoj i približavanje prosjeku razvijenosti EU. U tom kontekstu, znanstveno se istraživanje izdiže iznad vremenskih ograničenja proračunskih razdoblja jer analizira problematiku korištenja sredstava regionalne politike u kontekstu znanstvenog doprinosa predlaganju modela institucionalnog okvira sustava upravljanja instrumentima (fondovima) regionalne politike EU u Hrvatskoj. Kako bi se iz postojećih sustava upravljanja odabranih država EU empirijski mogli utvrditi ključni institucionalni čimbenici apsorpcije fondova EU, uzimaju se u obzir postojeći sustavi upravljanja. Znanstvenim istraživanjem i komparativnom analizom sustava upravljanja fondovima regionalne politike EU u devet država središnje i istočne Europe te iskustvima funkcioniranja hrvatskog sustava, formuliran je optimalni model nacionalnog sustava upravljanja fondovima regionalne politike EU koji bi mogao omogućiti donošenje kvalitetnijih strateških odluka izvršnoj vlasti kako bi se isti, u što je moguće većoj mjeri, odrazio na gospodarski rast putem učinkovitosti korištenja sredstava fondova regionalne politike EU.

**Ključne riječi:** regionalna politika EU, fondovi regionalne politike EU, model institucionalnog sustava za provedbu instrumenata regionalne politike EU u RH

## Annexes

### Annex 1 EU Cohesion Policy absorption for the 2014-2020 programming period

Absorption by fund*	Country									
	HR	PL	SK	LV	LT	EE	MT	CY	SI	H
<b>Cohesion Fund</b>										
Planned, m EUR	2,953	27,300	5,010	1,588	2,410	1,515	256	347	1,075	7,089
Decided, m EUR	3,772	26,096	4,578	1,555	2,200	1,314	285	301	1,097	8,189
Decided in %	127.7%	95.6%	91.4%	98.0%	91.3%	86.7%	111.4%	86.6%	102.0%	115.5%
Decided - rank	1/10	6/10	7/10	5/10	8/10	9/10	3/10	10/10	4/10	2/10
Paid, m EUR	559	11,863	2,187	509	1,296	896	123	119	530	3,193
Paid in %	18.9%	43.5%	43.7%	32.1%	53.8%	59.1%	48.0%	34.3%	49.3%	45.0%
Paid - rank	10/10	7/10	6/10	9/10	2/10	1/10	4/10	8/10	3/10	5/10
<b>ERDF</b>										
Planned, m EUR	5,084	47,502	12,995	2,825	4,119	2,459	475	353	1,824	12,612
Decided, m EUR	4,816	46,121	7,147	2,873	3,823	2,057	464	378	1,610	13,104
Decided in %	94.7%	97.1%	55.0%	101.7%	92.8%	83.7%	97.7%	107.0%	88.3%	103.9%
Decided - rank	6/10	5/10	10/10	3/10	7/10	9/10	4/10	1/10	8/10	2/10
Paid, m EUR	1,732	19,433	1,966	1,174	1,702	984	214	195	675	4,593
Paid in %	34.1%	40.9%	15.1%	41.5%	41.3%	40.0%	45.1%	55.2%	37.0%	36.4%
Paid - rank	9/10	5/10	10/10	3/10	4/10	6/10	2/10	1/10	7/10	8/10
<b>ESF</b>										
Planned, m EUR	1,664	15,206	2,479	717	1,289	682	132	134	898	5,611
Decided, m EUR	1,155	11,267	2,604	638	1,052	611	139	156	823	5,390
Decided in %	69.4%	74.1%	105.0%	88.9%	81.6%	89.6%	105.1%	116.3%	91.6%	96.1%
Decided - rank	10/10	9/10	3/10	7/10	8/10	6/10	2/10	1/10	5/10	4/10
Paid, m EUR	371	5,549	945	254	508	302	58	72	370	2,367
Paid in %	22.3%	36.5%	38.1%	35.4%	39.4%	44.3%	43.8%	53.5%	41.1%	42.2%
Paid - rank	10/10	8/10	7/10	9/10	6/10	2/10	3/10	1/10	5/10	4/10

\* Financial data as of 31 December 2019

Source: European Commission, available at: <https://cohesiondata.ec.europa.eu/countries/>, graph: Total cumulative EU payments by fund, author's processing

Annex 2 Criteria for comparison of EU funds implementation systems

No.	Criteria	Country																		
		HR	PL	SK	LV	LT	EE	MT	CY	SI	HU									
1	Latest EU enlargement waves countries (year of enlargement)	2013					2004*													
2	Countries similar in size to Croatia (000 km2)	57	312	49*	65*	65*	45*	0.3	9.2	20	93*									
3	Countries similar in size to Croatia (population in millions, 2015)	4.2	38.5	5.5*	1.9*	2.9*	1.3*	0.4	1.2	2.0*	9.8*									
4	Number of NUTS regions (NUTS1/NUTS2/NUTS3)	1/2/21	7/17/73	1/4/8*	1/1/6*	1/1/10*	1/1/5*	1/1/2*	1/1/1*	1/2/12*	3/7/20									
5	Countries with similar Cohesion Policy allocation as Croatia (2014-2020 period, bn EUR)	8.6	77.6	14.0*	4.5*	6.8*	3.6*	0.7	0.7	3.1	21.9									
6	Countries with similar Cohesion Policy allocation as Croatia (2014-2020, per capita, 000 EUR)	2.5	2.3*	2.8*	2.8*	2.8*	3.4*	1.9*	1.0	1.9*	2.5*									
7	Cohesion Fund recipient countries [1]	YES					YES*													
8	Countries with similar level of development as Croatia (GDO p/c, 2008/2018) [2]	64 / 53	56 / 71*	73 / 74*	60 / 69*	64 / 81*	70 / 82*	80 / 99*	107 / 90*	91 / 88*	64 / 71*									
9	Criteria fulfilled / Total number of criteria		4/8	8/8	8/8	8/8	8/8	5/8	4/8	6/8	5/8									

\* Number of criteria fulfilled (indicators of comparable value with Croatian indicators)

Note [1]: For the 2014-2020 period, the Cohesion Fund recipient countries are Bulgaria, Croatia, Cyprus, Czechia, Estonia, Greece, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovakia and Slovenia, source: [http://ec.europa.eu/regional\\_policy/en/funding/cohesion-fund/](http://ec.europa.eu/regional_policy/en/funding/cohesion-fund/)

Note [2]: For GDP p/c, source: <http://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&language=en&pcode=tec00114&plugin=1> (Accessed on: 24 May 2020)

Source: Eurostat, European Commission (2016), author's processing



# PROFESSIONAL PAPERS

## STRUČNI RADOVI

*Mircea Georgescu, Codrin Teiu:*  
*Email marketing reach in the European Union*

*Ivana Jobst:*  
*Populariziranje uloge kreativnih djelatnika: slučaj kreativne  
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# EMAIL MARKETING REACH IN THE EUROPEAN UNION\*

## ABSTRACT

Marketing automation is a relatively new area within the online marketing landscape. Marketing automation systems are a type of management information systems (MIS) used in customer relationship management (CRM). These systems have gained popularity with large clients who are looking to develop their online strategy. There are several large vendors of marketing automation software. The aim of the paper is to present the evolution of usage of one of the top software tools in the email marketing area, looking for correlations between database sizes and sending volumes, as well as identifying sending volume patterns depending on the calendar. The focus is on a specific software tool used for marketing automation and its largest EU customers by email marketing database size. The core feature of such a tool is sending emails; therefore, this will be our prime indicator of reach that will be presented in correlation to database size, email open and email click rates. Data interpretation and the research implications will be included in the conclusion and will show an important increase in the use of email marketing and strong correlations amongst used indicators.

**Keywords:** Marketing, automation, customer

## 1. Introduction

Marketing automation is an area that emerged as an evolution of offline marketing in the new landscape that developed alongside the Internet. Starting with simple web pages, then blogs, and then social media or video platforms, the online presence of companies has become indispensable.

Email emerged soon after the first networks started working. This new and cheap means of sending messages through a computer network proved to be an efficient channel of communication and had a great appeal for the public. It was a desired tech-

nology, once the public was granted free access to create email addresses for themselves – and many have chosen to do so.

Email in itself is a form of communication primarily between two people, while email marketing is most often communication between a company and a lead (potential customer) with the purpose of stimulating that lead towards making a purchase. As technology evolved and companies were already managing their customers in a CRM (customer relationship management) system, a new software category started to emerge around the email-sending engine: MAS, i.e. marketing automation systems. These are enterprise level software tools designed to market to the existing customer base via email, while also providing the opportunity to add more contacts to it and market to those as well in a

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campaign managed in a way that would allow businesses to score and increase their contacts' interest in their products (Boykin, 2017).

Marketing automation reach is an important topic in assessing the success of online marketing campaigns. By investing in marketing automation tools, companies expect their message to reach potential future customers and keep in touch with current customers who, at some point, will have to renew or upgrade their purchase.

The aim of this paper is to gauge evolution in the usage of a major marketing automation tool over the last two years for its largest customer in the European Union (EU). This paper will present and analyze the aggregated email sending volumes that customers sent using this tool and correlate that with the evolution in terms of database size over the same period. The analysis of sending volumes reported to database size is done because of both a constraining factor and a behavioral factor. The constraint is that a company cannot send emails if it does not have a database of contacts. Moreover, the bigger the database the larger the choice of contacts to whom to send e-mails. The behavioral factor is that the company is not constrained to send emails depending on the size of the database as in practice there are high variations in sending volumes for similar database size companies for reasons like targeted segmentation, changing of email marketing strategies, reducing excessive messaging, etc. Another observation that can be drawn from the database size evolution is the measure in which these new contacts are put to use. These numbers will be put into context with email opening rates and click rates to see if there are correlations between them. Looking for similar academic endeavors, there was no success in finding similar research providing and analyzing large volume marketing data from another vendor.

This paper will address the following questions:

1. How has email-marketing usage changed in terms of sending volume over the last two years?

2. Is the number of sent emails correlated with database size?
3. Do email open rates and email click rates follow the same trend as sent emails?
4. Are there specific periods when email activity follows a trend that differs from the average for the last two years?

Research goals are oriented towards professional conclusions and the ambition is provide the basis for a more thorough study of the topic in future research.

The necessary data for this research will be collected from a primary source, i.e. direct reporting for the email usage activity from the European Oracle Eloqua server. All numbers will be aggregated as totals and will be a sum of all customer activities recorded on that particular European server.

## 2. Marketing automation

One can approach the notion of marketing automation from two perspectives. It can be looked at either operationally or strategically.

From an operational point of view, we can look at it as being technology-based in the form of a software tool that can be used to put marketing processes into practice over the Internet. This technology would enable its user to automate administration and reporting tasks in order to contact its database of possible customers for the purpose of making a sale, while also increasing the efficiency of the marketing operation (Marketo, 2018).

From a strategic perspective, it is a foundational element of the marketing campaign strategy. Instead of being merely a tool, it is viewed as a strategic resource for customer relationship management. It finds itself at the center of a company's efforts to build relationships with potential customers and to manage online interactions with them (Jenkins, 2008).

**Table 1 Marketing automation perspectives**

Operational	Strategic
Software tool for supporting operational marketing efforts.	Foundational strategic element in managing client relations.

Source: Sheikh et al. (2016)

It is interesting to see how the largest vendors of today have defined marketing automation.

In Oracle's definition, "Marketing automation is the type of software that automates, streamlines, and manages marketing communications tasks throughout the buyer's journey. Basically, it replaces manual and repetitive tasks and makes the entire process more efficient... Marketing automation consists of cross-channel marketing software that customizes content and automates the targeting, timing, and content of outbound marketing messages in concert with prospect actions and behaviors." (Oracle, 2019). This vendor focuses on the operational aspect and puts emphasis on automation, which leads to cost reduction.

In Salesforce's definition, "Marketing automation is technology that manages marketing processes and multifunctional campaigns, across multiple channels, automatically... Marketing automation lets you implement a digital marketing strategy without having to manually press "send" on each and every email, message, campaign, or post you create." (Salesforce, 2019). This vendor does not directly refer to it as a tool, but rather as technology that enables an efficient implementation of a strategy.

### 2.1 From email marketing to marketing automation

The road from email marketing to marketing automation follows the evolution of email technology. The first email services emerged in the late 1970s,

and the first email marketing campaign in history, dating back to 1978, had an unexpected success.

Hotmail opened the doors for wide audiences in 1990 upon launching the first free email service. Being a new thing, it was also an unregulated environment and email activity was not controlled. That time is characterized by email blast campaigns, whereby a company would send the same email to all the contacts in its database (SmartInsights, 2013).

Email marketing evolved towards marketing automation between 2005 and 2010. With the launch of the first iPhone in 2007 (Michalowski et al., 2008) and Facebook in 2006, communication channels became more ample, including in-store, website, social media, video platforms, and the number of potential customers who were present online increased dramatically. The amount of data and contacts recorded during online interaction started to make the email blast technique obsolete; meanwhile, a need emerged for more refined tools, that could manage communication across all channels and would also play the game of lead nurturing in the long term (a process whereby a contact, referred to as a *sales lead*, is informed about and stimulated to buy a product or service).

These evolved marketing automation software tools started to have a few common traits in terms of what they are able to manage (Hubspot, 2019).

**Table 2 Common features of marketing automation platforms**

Feature	Description
Email marketing	Ability to send emails
Campaign management	Ability to create a structure/journey around a specific set of emails
Web/Social media marketing	Ability to serve content to social media platforms, custom dynamic content based on contact, landing pages
Lead management	Scoring engine to score contacts through their journey, ability to segment the database and to integrate with CRM
Reporting	In order to report and improve

Source: Oracle (2019)

In order to better grasp the journey of a contact, the depiction of the marketing automation journey would help.

Figure 1 Marketing Automation Plan

Software	Contact status in the marketing automation journey	Marketing automation journey stage
Website, Social Media	Prospect	Inquiry/Inform
Eloqua	Contact	
	Lead	Analysis
	MQL	
CRM	SQL	Decision
	Opportunity	
	Client	Retention

Source: Authors' adaptation after 4ThoughtMarketing

Based on the Figure 1, the data capture strategy is the starting point for a marketing automation plan. Such data can be obtained from various channels, such as one's website, the current customer contacts from one's CRM, from events, etc., and can be collected on a marketing automation platform, in this case Oracle Eloqua. Such contacts go through various phases during which they are scored; depending on their score, they either get nurtured some more or sent to the CRM in order to push a sale. These phases start by talking about a need or problem with an unknown prospect in places like the website or social media. Once this prospect becomes known by submitting a form or by other means of providing personal data, he becomes a contact in the company's marketing database. If this contact shows interest in specific products or services by accessing them online, he becomes a lead and will receive more targeted communications. Moving on to MQL (marketing qualified lead), the recipients are educated about the company's products, then to SAL (sales accepted lead) where the company contacts them for a sale and, if that is successful, then they become a SQL (sales qualified lead), i.e. a customer (Girdhar, 2013). As they start adopting the product, good service is the key to the loyalty that would drive a client to renew or extend their contracts, and a factor

that ensures customer retention. As customers are increasingly satisfied with the product, their use case can be presented as a success story, thus advocating for your good service.

### 2.2 What is market reach?

At its simplest, market reach in marketing automation is a number of potential customers you could reach out to via an email campaign. This allows you to determine a return on investment for that campaign, as the costs will be known for sending that campaign to a particular number of contacts, and also to the customers attracted via that campaign (Tasner, 2010).

In order to keep a proper balance in reach, companies seek to make their product stand out, put together profiles of potential buyers and look for reasons as to why those potential buyers should buy their service. These three aspects can be evaluated broadly or in great detail, and their evaluation works towards a company finding its primary market. Depending on how broad or specific the answers are to these questions, the risk also changes (lower or higher risk to execute a campaign with no return), planning can be improved and proper messages can be sent to the right people (Holliman, Rowley, 2014).

Market reach is a sensitive topic because of its two approaches that involve different strategies, and keeping it as real as possible involves different costs.

One of them is about the temptation to reach out as widely as possible, which means contacting as many contacts as possible and presenting them with content about the challenges they are faced with or about the problems they would seek to solve before presenting them your actual products or, in order for them to identify your products or services as solutions to those problems or needs. When reaching wide, most often the strategy is to reach out about discussing a problem or a need, in order to entice the contact to follow through and read some more. Reaching wide comes with costs such as larger databases and the need to use more expensive tools to manage the process. It also comes with less engagement from the contacts you are marketing to, as well as with costs for additional content as you need to create more diverse content to lure the contacts.

The other approach is to reach close, to filter your potential contacts as much as possible in order to increase the likelihood of them being interested in your products or services. This would mean discovering the features that would identify those contacts as potential clients. Given that there is a greater likelihood of them being interested, you need less content as you can speak to them directly about products or services, you will need less database capacity as your contact numbers will be lower, and you might not need the most expensive tools to manage your email sending and lead nurturing needs. The approach to reach close can also entail buying more precise contact lists from vendors providing such lists, which may vary in price, but as with all other things, quality comes at a price.

### 2.3 *The Oracle Eloqua marketing automation platform*

In more recent years, many software applications have adapted to technological changes. One of these changes is part of cloud computing. Cloud computing is a general term and covers any technology delivered by hosted services over the Internet. Software as a Service (SaaS) is a software de-

livery model wherein the software itself is neither located on site (in clients' premises), nor installed on their machines; instead, it is provided by a third-party provider hosting the application, thus making that application available for customer use over the Internet.

Oracle Eloqua is a SaaS where the provider, Oracle, is giving network-based access to a series of copies of the application (depending on licensing) to a number of approved end-users (Griffith, 2013). The application is the same for all customers, but each customer has a standalone copy that can be customized (integrated with different CRM systems, adding or removing apps, or even enabling or disabling parts of the application). Updates to the application are rolled out every 3 months to all customers at once. The customers' data are stored on a number of servers across the globe. Customers are usually assigned to servers depending on their geographic location and data residency laws. In the EU, there is only one server.

This marketing solution by Oracle is best suited for large enterprises that are primarily marketing to the business sector. The platforms support companies carrying out B2B (business to business) marketing and looking for the right platform to manage their marketing campaigns and lead-generation strategy. Regardless of the licensing package, which can be basic, standard or enterprise, Oracle Eloqua comes with a reporting platform based on Oracle BI (business intelligence) called Oracle Eloqua Insight, which promises advanced analytics and understanding of customers. At an enterprise licensing level, a customer can enable 20 such platforms (Oracle, 2019).

At the core of the Eloqua application lies a marketing campaign planner called Canvas, whereby complex successions of emails can be set up automatically. A customer can build an unrestricted number of such canvases. This canvas runs on top of Oracle's email sending engine. Eloqua has a series of personalization modules in order to simulate one-to-one communication, such as the ability to include contact info within emails or landing pages or to display/hide parts of emails or pages based on previous activity or contact information.

Besides the foundation infrastructure that enables the creation of responsive emails and landing pages, both using an editor or just your own html, Eloqua has a built-in lead scoring engine that can be used to run several models at the same time and score the database contacts based on the information present about them in the database so far and based on their activity. This lead scoring model can be used as integration criteria with a CRM, for example Salesforce.

Website and social media data play an important role in this tool. A company's website can be integrated with Eloqua in order to obtain information about known and unknown visitors to your website. They can be segmented and used in marketing campaigns. A wide variety of Oracle built free apps is also available to integrate with social media platforms like WeChat, Facebook, YouTube, and LinkedIn.

Customers generally use more than one instance to separate their traffic. Usually, they use one instance for marketing automation campaigns, while using a different one for transactional emails (purchase receipts, password change emails, etc.) or for internal communications or human resources emails.

### 3. Methodology

The data were collected during March 2019 and include all Enterprise-level licensing clients that are hosted on the Eloqua EU server. The data were aggregated by month and by metric (total emails sent, database size, total email opens, total email clicks) and presented in the form of tables and charts. Correlation coefficients are calculated using the automated Excel function.

Here are some major considerations about the data:

- The data are from customers that host their database on, and are provided SaaS services from the server located in the EU. This means that any metric provided corresponds to those customers. This does not mean that customers hosting their data elsewhere (e.g. US-based server) do not send

marketing emails to European customers, but that activity is not considered in this paper;

- Eloqua was initially founded in Canada, where the initial server is located, and additional servers were set up in the US. The EU server is a later addition to the ecosystem;
- While the bulk of the customers was initially located in North America, newer customers from the EU or Middle East made it necessary to have a server located closer in the EU. This new server was made available in mid-2016. New customers in the EU were automatically provisioned under this server, but some previous EU customers have remained on their initial servers in the US or Canada or are in a slow process of transitioning their data;

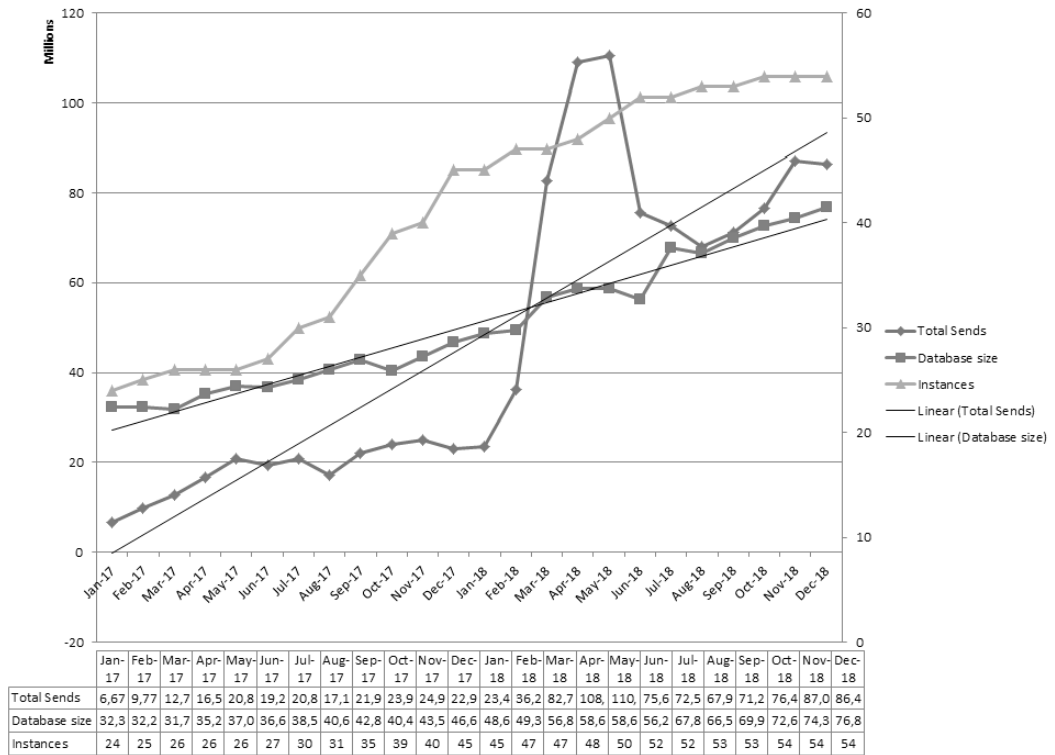
The data will be discussed so as to gain a broader perspective on the evolution of usage of these platforms, in order to determine whether companies still see marketing automation via email as a good channel to invest in. Database size will be a key factor here as changes in database size in SaaS go hand in hand with pricing changes. Email open and click rates will provide us with a sense of the reach of these marketing campaigns.

### 4. Results

First, a comparative review of the evolution in terms of the total sends and database size will be provided. Total sends are shown as millions of emails, while database size is presented in millions of contacts. The "instances" metric refers to the number of standalone Oracle Eloqua platforms present on the server.

For example, if we were to read the data for January 2017, we would see that there were 24 Eloqua instances adding up to 32.3 million hosted contacts and all those 24 instances have sent a grand total of 6.67 million emails.

Figure 1 Database size, total sends and number of instances used per month



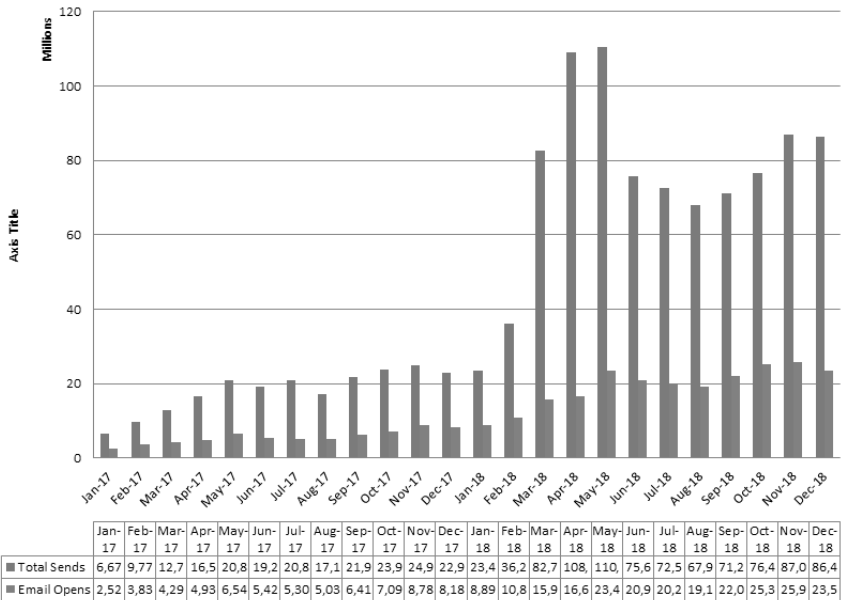
Source: Authors' presentation of the collected data

Our best indicator for investment is database size, followed by the number of instances. Database size is the deciding factor in pricing. We can see that it went from 32.3 million to 76.8 million in two years (that is more than double), steadily growing at a rate of 5% per month.

The number of instances grew from 24 (corresponding to 20 actual customers) to 54 separate instances, which indicates both the addition of new customers and the existing customers provisioning new instances. The number of instances is a deciding factor in terms of the number of potential emails sent, as one instance of the platform has a total number of emails it can send in a month, thus more instances means more sending capacity. An important observation is that the spike in the number of instances follows the spike in email sends.

The most unexpected evolution is that of email sends. The lowest number over the two years' period was 6.67 million emails in January 2017; the series closed with a total of 86.4 million in December 2018, peaked at 110 million in May 2018, and had an average of 46.5 million across the entire period. Although the sends were following a steady pattern for more than a year, the big change occurred in March 2018, when a single customer sent 53 million emails, followed by 75, 60 and 40 million emails in the following months. The peak value in May is justified by this customer sending the majority of emails (while other customers were sending about 1-5 million emails a month), as well as by the enforcement of the GDPR regulation which required contacts hosted in the EU that were not opted-in to be contacted for opt-in request purposes.

Figure 2 Total sends and email opens per month

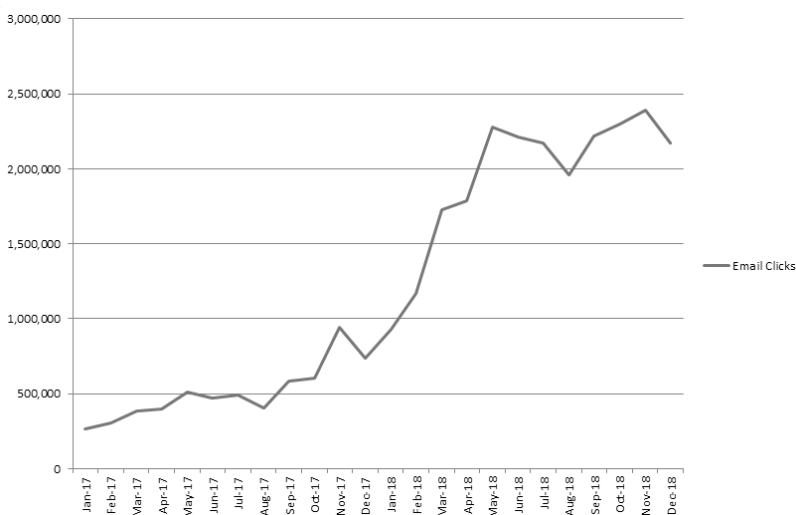


Source: Authors' presentation of the collected data

In Figure 2, we can see the number of email opens compared to the total email sends. We can notice the red bar following a similar trend as the blue one, though not as steeply. Looking at February and March 2018, we can see that email sends saw a more

than twofold increase, while email opens increased by just 50% in March compared to February. The average email open rate for the whole period was 29%, with a minimum of 15% in April 2018 and a maximum of 39% in February 2017.

Figure 3 Evolution of email clicks



Source: Authors' presentation of the collected data



The number of clicks per month can be seen in the figure above. In comparison, we can see that this number follows a similar path to the total monthly sends (Figure 1). Both lines have a similar pattern and a strong increase. The number of clicks is in the hundreds of thousands to low million numbers. On

average, the click rate is 2.8% (of total sends) and the click to open rate is 9.5% (from email opens).

The calculation of the Pearson correlation coefficient (Pearson's r) for these metrics is done in Excel in order to determine whether there is a linear relationship between them.

**Table 3 Pearson correlation coefficients**

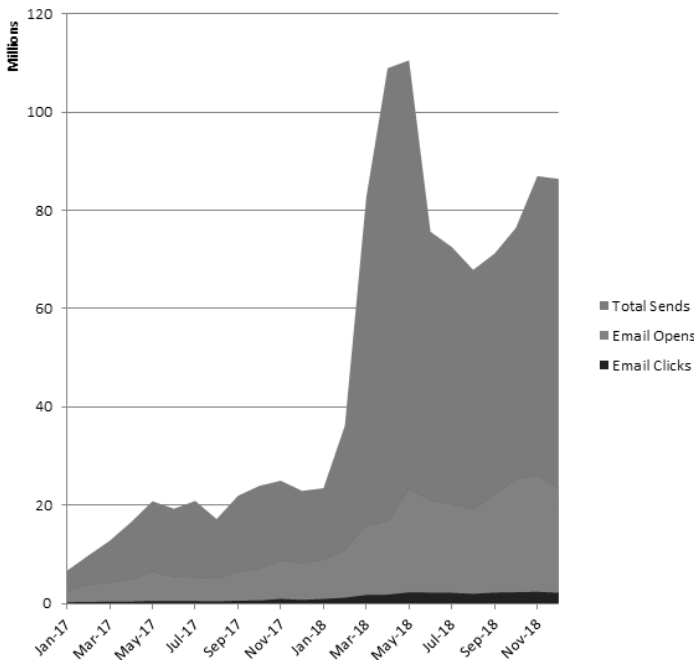
Between database size and total sends	Between total sends and email opens	Between email opens and email clicks	Between email clicks and total sends
0.85	0.91	0.99	0.93

Source: Based on the collected data

All coefficients are positive and going towards a value of 1, meaning that they influence one another in the same direction. A coefficient of 0.8 shows a fairly strong positive relationship. It means that the increase in one of them affects the other one in the same way. As for email open and email click rates, they have a 0.99 value, being the strongest of the three. While an email click cannot exist without an email open, their correlation in this case is specific to this particular dataset for this particular 2017 and 2018 period. We are saying this because an email

open does not mandate an email click and the most common behavior is that most recipients who open an email do not click on it too (as the data shows clicks to have significantly lower numbers than opens). While the open rate of the email is an indicator for the success of the subject line, the click is an indicator for the content. In the present case, it is safe to conclude that both the subject line and the content of the email were in good sync with the recipients' expectations.

**Figure 4 Overall views of sends, opens and clicks**



Source: Authors' presentation of the collected data

When putting it all into perspective in an area chart (Figure 4), we can see that all the effort going towards email sends represented by the blue area is for the results illustrated in the red area corresponding to email opens and in the black area corresponding to email clicks.

Email opens are considered an actionable response, as a contact opening different emails is indicative of the kind of product line emails that contact is interested in, as well as of the success of the email subject line. Email open is one of the major routing criteria in contact journeys in the Eloqua campaign canvas.

Email clicks already show an increased interest, and most clicks are usually directed to a landing page that would require the contact to submit a form in order to see the information they were seeking.

## 5. Conclusions

The use of marketing automation has had a positive evolution for the sample server that was chosen for this research. Overall industry trends (Forbes, 2018) confirm that the industry is going the same direction. In terms of costs, database size has more than doubled over the last two years, which corresponds to higher financial investments, as database size in SaaS is an indicator for cost.

The sending volume increased as well, but it has some outliers. As database size increased and the number of instances employed also increased, the number of email sends grew even more because of outlier events. One of these events cannot be controlled; it is a customer or a group of customers sending very large numbers of emails compared to other server tenants, while still hanging below the sending limit. Due to large variations in marketing strategy, a tenant could be sending 3 million emails a month and going to 53 million or even more the following month. Another outlier event was the onset of the GDPR regulation, when they had to send emails to confirm opt-in for contacts that had not confirmed their inclusion in the database.

Correlation analysis has shown that there is a strong positive, almost linear correlation between

email opens and email clicks. On the other hand, although positive, the correlation was not as strong between the other metrics. These findings are limited to the particular period in question and to the dataset that was analyzed.

The above findings should be interpreted in the context of their limitations regarding the data that we used, which is just from one of the B2B marketing automation tool leaders and for the years of 2017 and 2018. The specific characteristics of the customers (line of business) and the communication type (B2B, B2C, etc.) can result in different trends and correlations. While it may be that similar B2B data from other marketing automation leaders could have similar results, we cannot universally say so until analyzed. One of the most interesting open questions in this case would be whether marketing data from other B2B leaders like Adobe or Salesforce (Gartner, 2019) would have similar results if analyzed, and if we would have the same results regarding business-to-consumer email communications.

Looking at the average numbers for our metrics over the last two years, the observation is that the periods of the year did not have a great influence on total sends or database size. There have been outlier events that did not depend on the time of the year. However, events like Christmas, Easter or Black Friday were not found to stand out significantly in terms of sending volumes. This may be due to the nature of these email communications, as these email sends are designed for the B2B sector, not for the B2C sector.

Future research on this topic could include an analysis of data obtained from a majority of the leaders in B2B marketing automation software, which would allow us to generalize the results for the whole sector.

Marketing automation is an area with an interesting development (Sirius Decisions, 2014) and a more in-depth analysis could be performed at a global level so as to include all clients and all servers, while also going deeper into statistical analysis so as to get more data connection points.

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Mircea Georgescu

Codrin Teiu

## DOSEG MARKETINGA PUTEM E-POŠTE U EUROPSKOJ UNIJI

### SAŽETAK

Automatizacija marketinga je relativno novo područje u online marketing. Sustavi automatizacije marketinga su vrsta upravljačkih informacijskih sustava (MIS) koji se koriste u upravljanju odnosa s kupcima (CRM). Ti su sustavi postali popularni kod velikih klijenata koji traže način kako razviti svoju online strategiju. Trenutačno postoji nekoliko velikih dobavljača softvera za automatizaciju marketinga. Cilj je rada prikazati evoluciju upotrebe jednog od najkorištenijih softverskih alata u području marketinga putem e-pošte tako što će se istražiti korelacije između veličine baza podataka i količine poslanih poruka, te utvrditi sezonska kretanja u količini poslanih poruka. Naglasak je na posebnom softverskom alatu koji se koristi za automatizaciju marketinga i njegovim najvećim klijentima u EU-u prema veličini baze podataka za marketing putem e-pošte. Osnovna je funkcija takvog alata slanje poruka e-pošte, stoga će to biti glavni pokazatelj dosega koji će se prikazati u korelaciji s veličinom baze podataka, brojem otvorenih poruka e-pošte i brojem klikova na e-poštu. Interpretacija podataka i implikacije za istraživanje uključeni su u zaključke koji pokazuju značajno povećanje upotrebe marketinga putem e-pošte i snažne korelacije među primijenjenim pokazateljima.

**Ključne riječi:** marketing, automatizacija, klijent

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# POPULARIZIRANJE ULOGE KREATIVNIH DJELATNIKA: SLUČAJ KREATIVNE INDUSTRIJE U REPUBLICI HRVATSKOJ

## SAŽETAK

Kreativni je sektor u Republici Hrvatskoj ekonomski i pravno nedovoljno uređen što je posljedica njegove višegodišnje neinstitucionaliziranosti. Osnivanjem Hrvatskog klastera kreativnih i kulturnih industrija 2013. godine na poticaj Ministarstva gospodarstva te provedbom projektne studije Rašić Bakarić, Bačić i Božić *Mapiranje kreativnih i kulturnih industrija* iz 2015. godine započinje razdoblje postojećeg stanja kreativne industrije u Republici Hrvatskoj čime se nastoji poticati sektorska i međusektorska umrežavanja.

Namjera je ovog rada prikazati studiju slučaja u području kreativne ekonomije, a na primjeru popularizacijskog simpozija *Kreativna riznica* čija je misija populariziranje kreativne industrije s ciljem uspostavljanja 12 sektora kreativne industrije. U radu su opisana ograničenja kako samog simpozija tako i institucionaliziranja kreativne industrije u Republici Hrvatskoj. Pojašnjen je idejni koncept simpozija te njegova usmjerenost na uporabu digitalnih i komunikacijskih tehnologija u susretanjima, dijalozima i suradnji dionika kreativne industrije, izlagača, posjetitelja i organizatora. Kako je kreativna industrija projektna industrija te industrija znanja i inovacija, praktični eksperiment obuhvatio je nove komunikacijske strategije u uspostavljanju mreže heterogenih kreativaca te u oblikovanju i razvoju publike. Opisano je i ostvarivanje timskog rada u organiziranju simpozija *Kreativna riznica* kojim je upravljano uz pomoć digitalne podrške.

**Ključne riječi:** kreativna riznica, kreativna sila, ekonomija, autorska prava, sektorski model

## 1. Uvod

Kreativna ekonomija naziva se i „nova ekonomija“ (Cunningham, 2002; Flew, 2002; Hutton, 2004; Wang, 2004; Flew, 2005; Ilozor et al., 2006), a veže se uz kreativnost i inovativnost s naglaskom na stvaranje proizvoda i usluga koji posjeduju ekonomski, kulturni i društveni utjecaj. Kreativna je industrija temeljna odrednica kreativne ekonomije, a kao nositeljica kreativnog i kulturnog rasta te razvoja, dominantno je područje interesa dvadeset i prvog stoljeća.

Prva definicija koja se smatra zaslužnom za promicanje koncepta kreativne industrije veže se uz 1997. godinu i Veliku Britaniju kada je osnovan britanski Ured za kreativne industrije Odjela za kulturu, medije i sport (DCMS). U svom prvom dokumentu *Mapiranje kreativne industrije (Creative Industries Mapping Document)* iz 1998. godine, navodi se sveopće prihvaćena definicija kreativne industrije: „One djelatnosti koje proizlaze iz kreativnosti, vještina i talenata pojedinaca, a koje imaju potencijale za stvaranje bogatstva i radnih mjesta kroz proi-

zvodnju i eksploataciju intelektualnog vlasništva“ (Rašić Bakarić et al., 2015: 24). Spomenute se djelatnosti kategoriziraju unutar 12 sektora kreativne industrije za koje ne postoji jedinstvena i općeprihvaćena nomenklatura na međunarodnoj razini, odnosno postoji različit obuhvat sektora ovisno o njihovoj razvijenosti i zastupljenosti u pojedinim državama (Jobst, 2019).

Jedan od mogućih prijedloga klasifikacije sektora kreativne industrije u Republici Hrvatskoj upućuje na podjelu prema njihovoj sadržajnoj prepoznatljivosti na sljedeći način: Arhitektura, Audiovizualne umjetnosti, Baština, Dizajn, Glazba, Izvedbene umjetnosti, Knjiga/nakladništvo, Mediji, Oglašavanje, Tržišne komunikacije, Primijenjene umjetnosti, Računalne igre/novi mediji, Vizualne umjetnosti (Horvat et al., 2018: 15). Na isti način sektore raščlanjuje i Hrvatski klaster kreativnih i kulturnih industrija (HKKKKI) uspostavljen 2013. godine na poticaj Ministarstva gospodarstva Republike Hrvatske, a s ciljem uspostavljanja sektorskih i međusektorskih umrežavanja te promicanja kreativnih i kulturnih proizvoda.

## 2. Kreativna radna snaga

Kreativna djelatnost ima važnu ulogu u kreativnoj ekonomiji, a posljedično je vidljiv njezin ekonomski utjecaj na bruto domaći proizvod, stopu zaposlenosti, brendiranje i ulaganje u kreativne gradove, ali i na vanjsko-trgovinsko okruženje.

Glavni nositelji zaslužni za rast i razvoj kreativne industrije jesu kreativni djelatnici, odnosno kreativna radna snaga. Prema KEA-inoj studiji pripremljenoj za Europsku komisiju, razlikuju se različite vrste kreativnih djelatnika: zaposlene u kreativnoj industriji (primjerice, dizajner u modnoj industriji); zaposlene izvan kreativne industrije (primjerice, dizajner u automobilske industriji); ostale profesije zaposlene u kreativnoj industriji (primjerice, administrativni službenik u modnoj industriji) (KEA, 2006: 75). U posebnu kategoriju kreativnih djelatnika ubrajaju se umjetnici zaposleni u kreativnoj industriji, ali s izraženim specifičnim uvjetima kreativnog djelovanja među kojima se ističu nesigurne (honorarne) plaće, budućnosti karijera te neredoviti rad (Hesmondhalgh, 2007: 61). U studiji o razvoju radnog potencijala kulturnog sektora Europske unije u doba digitalizacije, navodi se kako u kreativnoj industriji najčešći načini zapošljavanja pripadaju atipičnom obliku zaposlenosti, u koje se ubrajaju: „fleksibilnost, mo-

bilnost, rad na projektima, kratkoročni ugovori, honorarni rad, volonterske i nisko plaćene aktivnosti, pseudozapošljavanje, pseudosamozapošljavanje“ (MKW, 2001: 25). U atipičan oblik zaposlenosti kreativnih djelatnika može se spomenuti i nestandardni tip zaposlenosti iz perspektive radnog vremena, lokacije te raspodjele rada kreativnog djelovanja. Za zamijetiti je kako kreativni djelatnici zahtijevaju posebnu pozornost nositelja javnih politika čak i u onim zemljama u kojima je kreativna industrija institucionalizirana, a autorska i radna prava kreativnih djelatnika uređena propisima.

## 3. Kreativna industrija u Republici Hrvatskoj

Kreativna industrija u Republici Hrvatskoj nalazi se u fazi formalnog ustroja, ali se nastoji prepoznati njezina važnost. Prvi i jedini sistematizirani pregled *Mapiranje kulturnih i kreativnih industrija u Republici Hrvatskoj* (Rašić Bakarić et al., 2015) prikazao je ekonomske učinke kreativne industrije ostvarene (ne)formalnim djelovanjem kreativne radne snage. Prema podacima iz navedene studije *Mapiranje*, u Republici je Hrvatskoj prema procjeni za 2012. godinu od kreativne djelatnosti ostvareno 6,3 milijarde kuna prihoda što je posljedično 2,3% udjela u BDP-u Republike Hrvatske uz zaposlenih 124 tisuća zaposlenih kreativnih djelatnika (Rašić Bakarić et al., 2015).

Za zamijetiti je da unatoč svojevrsnim naporima kreativne radne snage, nepozicioniranost kreativne industrije u Republici Hrvatskoj ogleda se i u nedovoljnoj pravnoj uređenosti, odnosno nepostojanju krovnog tijela sa sustavnim i strukturiranim načinom praćenja i sistematiziranja ključnih pokazatelja i aktivnosti njezine opstojnosti (Jobst, 2019). Shodno tome, Horvat (2019: 10) navodi kako „(...) na domaku 2020. godine kreativna industrija u Republici Hrvatskoj nije institucionalizirana, ne postoje analize kreativne radne snage, prijedlozi nomenklatura niti burze kulturnih i kreativnih proizvoda/usluga“.

Glazbeni sektor kreativne industrije Republike Hrvatske izdvaja se po svojoj organiziranosti kojom „više od pola stoljeća ostvaruje interese glazbenih autora na području naše države, a temeljem ugovora s nizom stranih autorskih društava i u svijetu“ (Služba zaštite autorskih muzičkih prava, dostupno na: <https://www.zamp.hr>). Na temelju punomoći, HDS ZAMP za članove svoga društva daje odobrenje za javno korištenje autorskih djela, ugovara, propisuje i provodi naplatu autorskih naknada, pokreće postupke i obavlja druge poslove za zaštitu kolektivnog ostvarivanja prava. S

obzirom da je HDS ZAMP iznimka, a ne pravilo, u Republici Hrvatskoj ne postoje podatci o broju djelatnika koji bi prema opisima svojih radnih mjesta pripadali jednom od 12 sektora kreativne industrije. Zbog ograničenja kvantitativnih podataka o kreativnoj industriji u Republici Hrvatskoj, važno je stvoriti razvojne mjere na razini države, ali i na manjim pod-razinama kojima će se umanjiti nejednakosti u razvoju kreativne industrije te provesti sveobuhvatno primarno istraživanje analizirajući cjelokupni kreativni sektor i kreativno zapošljavanje (Harc et al., 2019).

Na istom tragu Horvat (2019: 25) naznačuje „kako bi se ostvarila sektorska i međusektorska suradnja nužno je potaknuti institucionaliziranje kreativne industrije, a u proces institucionaliziranja kreativne industrije uključiti sveučilišta, društvene znanosti (pravne i ekonomske), istraživače znanstvenih i umjetničkih procesa te heterogene praktičare”. Potrebno je razviti analize, strategije te kratkoročne i dugoročne planove za rast i napredovanje kreativne industrije i brendiranje kreativnosti, ali i procijeniti kvantitativne podatke te ekonomski utjecaj na BDP i zaposlenost u Republici Hrvatskoj. Republika Hrvatska na tom planu značajno zaostaje budući da zadnji službeni dokument i projektna studija *Mapiranje kreativnih i kulturnih industrija* (Rašić Bakarić et al., 2015) provedena je u lipnju 2015. godine, a obuhvaća analize iz 2012. i 2013. godine.

#### 4. Populariziranje u funkciji uspostavljanja kreativne industrije u Republici Hrvatskoj

Najveći sustavni financijski poticaj kreativnoj industriji osiguran je kroz europski fond *Kreativna Europa*<sup>1</sup> za razdoblje 2014. – 2020. godine te 2021. – 2027. godine. Ono podupire (među)sektorsku suradnju kreativnog sektora iz različitih zemalja, a uključuje potporu u potprogramu Kultura i MEDIA. Za prethodno razdoblje (2014. – 2020.) Europska je unija ponudila zemljama članicama EU unutar sedmogodišnjeg razdoblja bespovratna sredstva u iznosu od 1,46 milijardi eura. Tako je Republici Hrvatskoj u istom razdoblju stavljeno na raspolaganje 10,7 milijardi eura bespovratnih sredstava. U razdoblju 2014. – 2020. godine hrvatska iskorištenost u odnosu na dodijeljena sredstva iznimno je niska te se Republika Hrvatska nalazi na 25. mjestu iskorištenosti sredstava jer je ostvarila stopu iskorištenosti sredstava od 9,1% dok je stopa od 19,4% prosjek europskih zemalja. Za novo sedmogodišnje razdoblje od 2021. do 2027. godine Europskoj je uniji na raspolaganje stavljeno 2,20 milijardi eura, a stimulirat će se projekti kojima se

promiču europska umjetnost, jezične raznolikosti, baština i mediji čime se doprinosi europskoj kulturi i identitetu.

Ubrzan razvoj informatičke i komunikacijske tehnologije uz proces digitalizacije otvorili su niz pitanja vezanih uz prava intelektualnog vlasništva, ponajviše autorsko pravo, patente, zaštitne znakove i dizajn. Budući da je kreativna industrija izložena riziku plaganja i zloupotrebljavanja kreativnog sadržaja, zaštita intelektualnog vlasništva ima izniman utjecaj na kreativnost i inovativnost. Važan korak pri regulaciji stanja na tržištu kreativne industrije donosi *Direktiva o autorskim pravima*<sup>2</sup> (ožujak, 2019.) prihvaćena na razini Europske unije i s obvezom implementiranja u nacionalna zakonodavstva unutar 24 mjeseca. Primarni je cilj *Direktive* zaštita sadržaja kreativnih radnika koja je prema podacima iz 2016. godine na razini Europske unije zapošljavala 12 milijuna ljudi i generala preko pola milijardi eura prinosa godišnje (Europska komisija, [https://ec.europa.eu/growth/content/boosting-competitiveness-cultural-and-creative-industries-growth-and-jobs-0\\_en](https://ec.europa.eu/growth/content/boosting-competitiveness-cultural-and-creative-industries-growth-and-jobs-0_en)). Na taj se način ponajprije nastoji utjecati na velike internetske platforme koje će imati obvezu plaćanja odgovarajuće novčane naknade za sadržaje koje distribuiraju u komercijalne svrhe.

U nastavku se iznosi primjer pozitivne prakse kojom visokoobrazovna ustanova Ekonomski fakultet u Osijeku u suradnji s Institutom Andizet od 2015. godine organizira popularizacijski simpozij *Kreativna riznica*, a u funkciji uspostavljanja kreativne industrije u Republici Hrvatskoj.

#### 5. Popularizacijski simpozij *Kreativna riznica*

Šesta *Kreativna riznica* – popularizacijski simpozij<sup>3</sup> kreativne industrije 2020. godine izvedbu programskog sadržaja realizirala je na dva načina: u zatvorenim i otvorenim prostorima Ekonomskog fakulteta u Osijeku te izlaganjima na daljinu – digitalnim i komunikacijskim tehnologijama.

Prvi dio *Kreativne riznice* održan je 23. travnja 2020. godine kada je provedeno međunarodno 2. Milenijsko natjecanje iz kreativne industrije. Na natjecanju je sudjelovalo 20 timova i 78 natjecatelja, a tema je bila *OSvajanje glagoljicom* u dvjema kategorijama – Kreativni sat (kategorija za srednje škole) i Kreativni planet (kategorija za visoko obrazovne ustanove). Obje kategorije su međunarodne i okupile su natjecatelje iz Hrvatske i inozemstva, a proglašenje pobjednika održano je uz pomoć mrežne aplikacije Zoom (Slika 1).

### Slika 1. Proglašenje pobjednika na 2. Milenijskom natjecanju iz kreativne industrije putem aplikacije Zoom



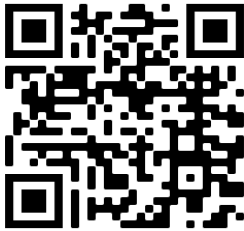
Izvor: <http://milenijsko.efos.hr/> (pristupljeno: 10. studenog 2020.)

Drugi dio *Kreativne riznice* održan je od 21. do 24. listopada 2020. godine pod krovnom temom *Kreativna sila* i propituje ulogu kreativne radne snage u institucionaliziranju kreativne industrije Republike Hrvatske. Riječ je o nacionalnom događanju koje od 2015. godine jednom godišnje okuplja znanstvenike i praktičare oko milenijske uloge kreativne industrije kao najmlađe industrije i industrije u institucionaliziranju. U 32 programska sadržaja s 54 izlagača govorilo se o mladima u kreativnoj industriji, o potrebama heterogenih kreativaca, a organizirane su radionice, okrugli stolovi, paneli, izložbe, te glazbene i scenske izvedbe. S obzirom na ugrozu od COVID-19, na šestoj Kreativnoj riznici događaji su se održavali četiri dana na Ekonomskom fakultetu u Osijeku, a uz pridržavanje epidemioloških mjera koje je propisao Stožer civilne zaštite. Zainteresiranoj je javnosti osiguran javni uvid u rasprave okruglih stolova, izlaganja uglednih predavača, uvide u izložbe kao i u stručne i umjetničke radionice jer su organizatori (Ekonomski fakultet u Osijeku i Institut Andizet) cjelokupni program oglašavali online na mrežnim stranicama Kreativne riznice. Jednako tako, posjetitelji koji nisu bili u mogućnosti nazočiti pozvani su da se izravno uključe

preko Facebook stranice Kreativne riznice i YouTube kanala Andizet.

Simpozij je otpočeo 21. listopada 2020. sektorskom raspravom projekta Mladi u kulturi (MUK) koja će biti podlogom budućih strategija Grada Osijeka usmjerenih na uključivanje mladih dobrih skupina u djelatnosti kreativne industrije Grada Osijeka. Na svečanom zatvorenju 23. listopada 2020. u sklopu gala Vodikove svečanosti u Auli glagoljice Ekonomskog fakulteta u Osijeku ugošćeni su dobitnici Vodikove nagrade u kategoriji najboljeg izlaganja koja je pripala prošlogodišnjem izlagачu prof. dr. sc. Aleksandru Durmanu za predavanje *Astralni simbolizam vučedolske kulture*. Nagrade su dodijeljene i u dvije kategorije osvajača prvih mjesta na ovogodišnjem međunarodnom 2. Milenijskom natjecanju iz kreativne industrije s predstavnicima Ekonomske i upravne škole Osijek uz mentorstvo profesorice Antonije Čalić i visoko obrazovna ustanova Edward Bernays Visoka škola za komunikacijski menadžment pod mentorstvom profesorice Romane Lekić. Na svečanosti je uprizorena izvedba poeme *Ars Meandrum*<sup>4</sup> kao i najavni film poeme *Ars Meandrum* (Slika 2), a glumačku izvedbu su posjetitelji nakon projekcije filma pratili uživo i putem društvenih mreža (Slika 3).



Slika 2. Najavni film poeme *Ars Meandrum*

Izvor: <https://www.youtube.com/watch?v=Gy4FmxD8ymI> (pristupljeno: 10. studenog 2020.)

Slika 3. Glumačka izvedba poeme *Ars Meandrum*

Izvor: <https://www.facebook.com/kreativna.riznica> (pristupljeno: 10. studenog 2020.)

Specifičnost organiziranja *Kreativne riznice* u iza-zovnim vremenima ugroze od COVID-19 vidljiva je u uključivanju volonterskih snaga – Rizničara. Ove su godine Rizničari volontirali na daljinu i uživo, bez ustaljene prakse suočavajući se s novim okolnostima i zahtjevima organizacije, a njihove su aktivnosti institucionalizirane unutar Programskog (13 članova) i Organizacijskog odbora (20 članova).

Digitalnim komunikacijskim tehnologijama nastojalo se prevladati ograničenja povezana s okupljanjem većeg broja osoba te su se načinima digitalne distribucije izloženih sadržaja 2020. ostvarili drugačiji oblici susretanja i suradnje, s naglaskom na čuvanje i zaštitu izlagača i posjetitelja. Time se Kreativna riznica po prvi puta otvorila za globalni pristup praćenja i umrežavanja, ali i trajnog doku-

mentiranja i pohranjivanja svih prezentiranih sadržaja. Uvidom u analitiku društvene mreže Facebook utvrđeno je 11.702 pregleda video-sadržaja uz doseg veći od 74.000 gledatelja. Najveći broj pregleda i dosega ostvaren je prilikom prijenosa sektorske rasprave *Mladi u kulturi: Sektorska rasprava Primijenjene umjetnosti* (veći od 13.800 gledatelja), radionice *Snaga kreativnosti u procesu učenja* (veći od 8.100 gledatelja) te radionice *Epidemija straha – kako pobijediti strah? Tehnike suočavanja sa strahom* (veći od 5.700 gledatelja).

Uspješno izgrađena i potvrđena reputacija simpozija *Kreativne riznice* ostvarena je i kroz velik broj medijskih objava. U više od 40 medijski popraćanih tiskanih, audiovizualnih i elektroničkih objava, ističu se Hrvatska radiotelevizija, Osječka televizija,

Televizija Slavonije i Baranje, Glas Slavonije, Turistička zajednica Grada Osijeka, Osijek.hr, SiB.hr, Osijek031, Sveučilišni glasnik, Culturenet.hr, Osijeknews.hr i ostali. Ostvarena je i suradnja s dvije lokalne medijske kuće čiji izvjestitelji prikazuju izradu medijskog izvještavanja na temelju programskih sadržaja *Kreativne riznice*.

## 6. Rasprava

Dvojaka je uloga *Kreativne riznice*, a vidljiva kroz znanstveno-istraživačke i popularizacijske aktivnosti. Time se znanstvenoj teoriji otvara put za analize utemeljene na eksperimentima provedenim na *Kreativnoj riznici*. Eksperimenti obuhvaćaju nove komunikacijske strategije, oblikovanje i razvoj publike, timski rad kojim je upravljano uz pomoć digitalne podrške kao i brojne druge izazove. Kroz godine razvoja *Kreativne riznice*, njezine idejne začetni-

ce ponudile su definiciju kreativne industrije koja „podrazumijeva proizvodnju zaštićenu autorskim pravima, a obuhvaćenu projektima koji stvaraju (ne) materijalne proizvode i usluge namijenjene razmjeni na tržištu“ (Horvat et al., 2018: 14).

Ugroza od COVID-19 dodatno je naglasila ugroženost kreativnih djelatnika jer su dodatno otežani načini njihova privređivanja, posebice u onim kreativnim djelatnostima koje su usmjerene na kontaktiranje s publikom (muzeji, glazbenici, izvedbene umjetnosti itd.). Novi životni uvjeti prisilili su organizatore na usavršavanje u novim tehnologijama, ali uz zadržavanje idejnog koncepta simpozija. Inovativnim eksperimentima šesta *Kreativna riznica* potvrdila je važnost kreativnih djelatnika, a po završetku ove, organizatori su najavili novu Kreativnu riznicu uz krovnu temu *Meandrirana kreativnost* u svom tradicionalnom terminu - mjesecu travnju.

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- 3 „Popularizacijski simpozij javna je manifestacija na kojoj su izlagači svi zainteresirani dionici (amateri, profesionalci, znanstvenici i stručnjaci), a njihova su izlaganja otvorena cjelokupnoj društvenoj zajednici. Za razliku od drugih srodnih manifestacija (kongresi, znanstveni i/ili stručni simpoziji, sajmovi, festivali) popularizacijski simpozij ne predviđa naplaćivanje kotizacija izlagačima kao ni ulaznica posjetiteljima” (Mijoč et al., 2016: 260).
- 4 U glumačkoj izvedbi poeme Ars Meandrum sudjelovali su Filip Sever (Dravus), Meri Andraković (Tihe), Luka Gotovac (skladatelj), Jasna Horvat (tekstopisac) i Robert Raponja (redatelj).

# BOOK REVIEW

## PRIKAZ KNJIGE

*Tihana Škrinjaric:*  
*Prikaz knjige "Introduction to Econometrics, fourth edition"*





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# PRIKAZ KNJIGE „INTRODUCTION TO ECONOMETRICS, FOURTH EDITION“

**Autori:** Stock, J. H., Watson, M. W.  
**Izdavač:** Pearson Education Limited, Harlow, UK  
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Poznavanje kvantitativnih metoda u ekonomiji i poslovanju postalo je dijelom osnovne pismenosti u tim područjima. Kvalitetno savladavanje osnove iz matematike i statistike predstavlja temelje za daljnju nadogradnju znanja u području kvantitativnih metoda i modela. Danas postoji velik broj udžbenika iz područja ekonometrije koji predstavljaju uvod u tu tematiku te se postavlja pitanje koji odabrati kako bi se temeljito kvalitetno izgradili, a da se pritom ne izgubi u „moru“ različitih publikacija. Ono što većina traži prilikom učenja određenog gradiva jest kvalitetan materijal u terminima jasnog razjašnjavanja pojmova, modela i metoda, mogućnost primjene u praksi i kvalitetno povezivanje teorije sa samom praksom. Knjiga „*Introduction to Econometrics, Fourth edition*“ pruža upravo to. Ne iznenađuje da se već radi o četvrtom izdanju ove knjige. Svako poglavlje sadrži, uz teoriju, mnoštvo primjera, i to ekonomskih. Većina je knjige pisana na vrlo razumljiv način, dok su matematički izvodi u pojedinim poglavljima navedeni u obliku dodataka na to poglavlje. Iako praktičari često zanemaruju teoriju u ekonometriji, misleći da im nije potrebna jer se ne bave teorijskim razvojem modela i metoda, za kvalitetnu primjenu ekonomskih modela i metoda u praksi, nužno je kvalitetno vladati teorijom. Zato se preporučuje da se prilikom čitanja ove knjige prođu i dodatci poglavljima, kako bi se doista kvalitetno savladalo gradivo. Čak je osamnaesto poglavlje posvećeno pojašnjenju čitateljima zašto bi oni, kao praktičari, trebali znati teoriju ekonometrije. Kako se u prak-

si češće javljaju problemi s podacima, obradom i procjenom, nedovoljno poznavanje spomenute teorije vodi k tome da kao analitičar ili praktičar druge vrste, sam neće moći napraviti ništa bez tuđe pomoći.

Knjiga je podijeljena na pet cjelina: prva je uvodna u kojoj se ponavljaju temelji iz vjerojatnosti i statistike koje je nužno poznavati kako bi se razumio ostatak knjige. To je učestali pristup u ovakvoj literaturi, postoji razlog zašto se nalazi i u ovoj knjizi. Druga cjelina posvećena je temeljima iz regresijske analize, koja je sama temelj bilo kakve daljnje ekonometrijske analize. Treća se cjelina bavi temama koje se nadograđuju na osnovicu iz druge cjeline (binarne varijable, panel analiza, itd.), dok se četvrta i peta bave temama vremenskih serija. Ono što sigurno znači čitatelju koji se prvi puta susreće s ovakvim gradivom jest što svako poglavlje na kraju ima sam sažetak najvažnijih pojmova kojima je trebao savladati, kao i brojna pitanja za ponavljanje. Knjiga sadrži mnoštvo primjera, većinom iz područja ekonomije i poslovanja, što bi čitateljima trebalo biti veoma blisko i korisno. Uz pitanja za ponavljanje, često se nalaze i upute za *online* podatke i kako ih obraditi i analizirati kako bi čitatelj sam proveo analizu čiji su rezultati dani kao primjeri u poglavlju.

Detaljnije gledajući, prva cjelina sastoji se od uvoda u terminologiju ekonometrije, tipovima podataka, ponavljanjem teorije vjerojatnosti i osnovnim pojmovima iz statistike. Autori na početku pojašnjavaju kakva si pitanja ekonomisti mogu postavljati i kako će na njih odgovoriti numeričkim odgovorom. Kroz mnoštvo ekonomskih primjera uvode čitatelje u terminologiju kauzalnosti (uzročnosti) tipova podataka (vremenske serije ili presječni podatci), te se potom u drugom i trećem poglavlju ponavljaju po-

jmovi poput slučajnih varijabli, tipovi distribucija, procjena trenutaka distribucije, intervalne procjene, itd. Druga cjelina započinje regresijskom analizom s jednom nezavisnom varijablom. Nakon uvođenja osnovne terminologije, daju se svi temelji za regresijsku analizu (metoda najmanjih kvadrata, interpretacije rezultata, mjere kvalitete modela, pretpostavke regresijskog modela). Potom se analiziraju testiranja hipoteza u regresijskom modelu, intervalne procjene, binarne nezavisne varijable, narušavanje pretpostavki regresijskog modela. Idući korak u analizi i učenju jest višestruka linearna regresija i određeni pojmovi koji su vezani uz nju. Kako se rijetko u ekonomiji varijabla može opisati samo jednom nezavisnom varijablom, potrebno je dobro savladati gradivo vezano uz višestruku linearnu regresiju. Dakle, poglavlja 4 - 7 preporučavaju se obavezno savladati i proći kao uvod u ekonometrijsku analizu za one koji se prvi puta susreću s ekonometrijom. Kako se često ekonomski procesi ponašaju nelinearno, osmo poglavlje obrađuje nelinearne funkcije između zavisnih i nezavisnih varijabli, te interpretacije procjena koje se mijenjaju s obzirom na prethodno obrađene linearne modele. Dodatno se ovdje nalazi potpoglavlje koje je u cijelosti obrađen primjer. Dodatak ovom poglavlju obrađuje modele koji nisu linearni u parametrima te nelinearnu metodu najmanjih kvadrata. Dok su se takvi pojmovi prije rjeđe obrađivali u nastavi, shvaćena je potreba korištenja nelinearnog pristupa u modeliranju ekonomskih pojmova. Deveto poglavlje se bavi savjetima kako riješiti određene probleme u praksi s kojima se nerijetko susrećemo, kada podatci nemaju sve karakteristike koje su pogodne za određene vrste analize. Pojašnjavaju se posljedice ignoriranja takvih problema i kako ih ublažiti ili ukloniti. Čak se i empirijski primjeri obrađuju za njegovo lakše shvaćanje.

Treća cjelina započinje analizom panel podatka. Danas je dostupnost podataka veća nego ikada i često je korisnije analizirati vremenske serije i presječne podatke istovremeno, u obliku panel podatka. Tako se obrađuju tipične uvodne teme vezane uz panel analizu (*fixed* i *random effects* i slično). Potom se obrađuju modeli u kojima je zavisna varijabla binarna, s obzirom na specifičnost karakteristika takvih podataka. Sve učestaliji problem u analizi ekonomskih podataka jest i problem nemogućnosti prikupljanja podataka o nekoj varijabli koja utječe na zavisnu i nezavisne varijable. Stoga se u idućem poglavlju obrađuje regresija s instrumentalnim varijablama. Autori su svjesni da je čitateljima često teže shvatiti ovo gradivo, stoga se u ovome poglavlju nalazi nešto više primjera kako bi se lakše savladalo. Nadalje, često se u ekonomiji i politici postavljaju

upiti vezani uz promjenu određenih mjera i zakona i kako bi utjecali na cijelu ekonomiju, ili određen dio populacije. No, teško je provoditi eksperimente kao u području kemije i medicine. Stoga se trinaesto poglavlje posvetilo eksperimentima i kvazi-eksperimentima. Sve veću popularnost u posljednjih nekoliko godina zato dobiva metodologija koja to pokušava analizirati u ekonomiji (kauzalni učinci, procjenitelj razlika (engl. *difference estimator*), procjenitelj razlika u razlikama (engl. *difference in differences estimator*)). Za vjerovati je da će ovakva poglavlja u novijim knjigama i novim izdanjima ove knjige postati dio redovitoga gradiva. Dodatno, s obzirom na spomenutu sve veću dostupnost podatka, sljedeće poglavlje obrađuje tzv. *big data*, tj. kada se razmatra jako velik obujam podataka u analizi. Stoga se obrađuju problemi metode najmanjih kvadrata kada se barata s puno podataka i varijabli, te što učiniti u takvim slučajevima.

Posljednje dvije, četvrta i peta cjelina bave se vremenskim serijama. Započinju s osnovnim pojmovima analize vremenskih serija, karakteristikama vremenskih serija, stacionarnosti, lomovima u podatcima, ADL (engl. *autoregressive distributed lads*), VAR (engl. *vector autoregression*) modelima, kointegracijom, te uvodom u GARCH (engl. *generalized autoregressive conditional heteroskedasticity*) modele. Već je spomenuto kako je potrebno poznavati određen dio ekonometrijske teorije. Stoga su osamnaesto i devetnaesto poglavlje posvećeni teoriji za koju autori dobro znaju da treba znati bez obzira na to tko je čitatelj knjige. Ova dva poglavlja nisu namijenjena za „mučenje“ čitatelja, već da stvore dobre temelje onima koji na svom radnom mjestu rade analizu podataka da svako malo ne traže tuđu pomoć za ono što sami trebaju znati i napraviti.

Konačno, može se zaključiti da je knjiga namijenjena studentima ekonomije i srodnih disciplina s obzirom na način pisanja samog teksta, brojnih ekonomskih primjera. Dodatno, može predstavljati i podsjetnik onima koji na radnom mjestu moraju obrađivati podatke, te odraditi ekonometrijske analize. Nadalje, knjiga predstavlja uvod u ekonometriju, stoga je dovoljna za one koji se prvi puta susreću s tom tematikom, a da se ne prestraše brojnih formula i izvoda. Mnoštvo primjera olakšat će inicijalno shvaćanje materije, koje će se lakše nadograditi knjigama koje su više tehnički pisane (s više izvoda, teorema i formula). Iako knjiga ne ide u dubinu većine gradiva, što nije ni nužno jer joj je sam naziv *Uvod u ekonometriju*, predstavlja dobar temelj za kretanje u to područje.



# CONFERENCE REVIEW

## PRIKAZ KONFERENCIJE

*Jerko Glavaš, Ivana Unukić, Bruno Budimir:  
Interdisciplinary Management Research Conference – IMR 2020*





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# INTERDISCIPLINARY MANAGEMENT RESEARCH CONFERENCE – IMR 2020

The IMR 2020: 16th International Conference on Interdisciplinary Management Research aims to bring together academic scientists, research scholars, and practitioners to exchange and share their research results and (business) experiences on all aspects of Management and related fields. It is an interdisciplinary platform for academic scholars, practitioners, and educators to present and discuss the most recent trends and concerns, as well as practical challenges encountered and solutions adopted in the field of Management as well as in the areas such as Economics, Financial Economics, Industrial Organization, Law & Economics, etc. The IMR 2020 particularly welcomes the PhD students in order to provide them an opportunity to present and discuss their research as well as to get a reaction on the work they are doing by fellow PhD students, as well as academic scholars and practitioners. The conference's environment is friendly and relaxed and offers a chance for PhD students to network with academics and practitioners to develop their professional relationships. This year, the 16th Conference was held, which had special significance because of the COVID-19 pandemic situation.

## *1st day of the Conference*

The Conference began on Thursday (September 24<sup>th</sup>, 2020) at 5.00 PM with the Doctoral Workshop. On this workshop, our doctoral students were able to expose their own doctoral dissertation topics, as well as to conduct workshops with mentors related to the dissertation itself.

## *2nd day of the Conference*

The second day of the conference (September 25<sup>th</sup>, 2020) started at 10.00 AM with the opening ceremony of the Interdisciplinary Management Research XVI. The program was hosted by Ivana Unukić from Faculty of Economics in Osijek. The speakers were distinguished leaders of the doctoral study and conference, the Faculty of Economics, as well as essential "friends" of the conference: Boris Crnković, PhD, Full Professor, Dean, Faculty of Economics in Osijek, Josip Juraj Strossmayer University of Osijek, Željko Turkalj, PhD, Full Professor, President of Programme Committee and Head of Doctoral Programme "Management", and Ivan Miloloža, PhD, Vice dean for inter-institutional collaboration and development, Faculty of Dental Medicine and

Health Osijek, Josip Juraj Strossmayer University of Osijek. Also, a presentation of one European Union project - INTERREG MED WINTER MED was held by Kristina Brščić PhD (Institute of Agriculture and Tourism Poreč). From 11.00 AM and 4.00 PM parallel sessions were held on different platforms: four of them were held online via Zoom platform, and one was held live in the conference hall. 36 participants held their presentations via Zoom platform, and 12 of them live at the conference hall.

### *3rd day of the Conference*

The third day of the conference (September 26<sup>th</sup>, 2020) was scheduled/reserved one more PhD Workshop was held at 10.00 AM in the conference hall.

The Conference has been supported by Ministry of Science and Education of the Republic of Croatia, Ministry of Regional Development and EU Funds of the Republic of Croatia, Ministry of Economy, Entrepreneurship and Crafts, Ministry of Foreign and European Affairs. In addition, the conference is supported by various donors, who this year, due to the epidemiological situation, were mostly moral support for this scientific gathering: ADRIATIC Osiguranje d.d., Association PRO HOMINE Vukovar, Atlantic Grupa, Barjak, Cedevita i Cockta, Dobro (Žito Grupa), Drvo – trgovina d.o.o. Slatina, Glas Slavonije, Housing department Osijek, KANAAN, Lider, Mentos, Pinkert Winery, Večernji list.

The latest edition of the Conference Proceedings, i.e., "Interdisciplinary Management Research XVI" (ISSN 1847-0408), encompasses 100 papers written by 245 authors from different countries. The Proceedings sections and the articles were divided into the fourteen thematic areas such as: General Management (3 papers), Finance Management (3 papers), Marketing and Marketing Management (19 papers), Strategy Management (3 papers), Hu-

man Resources Management (7 papers), Operations Management (2 papers), Project Management (2 papers), Resource Management (2 papers), Performance Management (2 papers), Knowledge Management (2 papers), Information Technology Management – Geographic Information System (GIS) (9 papers), General Economics (4 papers), Microeconomics, Macroeconomics and Monetary Economics (4 papers), Financial Economics (3 papers), Public Economics (4 papers), Law & Economics (4 papers), Accounting (9 papers), Economics Development, Technological Change and Growth (9 papers), Urban, Rural and Regional Economics (6 papers), Miscellaneous Categories (3 papers); and it has been divided into two parts (two books). Proceedings were published by Josip Juraj Strossmayer University of Osijek, Faculty of Economics in Osijek, Croatia, Postgraduate doctoral Study Program in Management, Hochschule Pforzheim University, Germany, Croatian Academy of Sciences and Arts; for the Publishers: Boris Crnković, PhD (Dean, Josip Juraj Strossmayer University of Osijek, Faculty of Economics in Osijek, Croatia), and Thomas Cleff, PhD (Dean, Hochschule Pforzheim University, Germany); with the following editors: Dražen Barković, PhD (Faculty of Economics in Osijek), Karl – Heinz Dernoscheg, PhD (International Business School Styria, Austria), Aleksandar Erceg, PhD (Faculty of Economics in Osijek), Jerko Glavaš, PhD (Faculty of Economics in Osijek), Norbert Pap, PhD (University of Pecs, Hungary), Bodo Runzheimer, PhD (Pforzheim University, Business School, Germany), and Dirk Wentzel, PhD (Hochschule Pforzheim University, Germany). IMR Conferences' proceedings are listed in the following databases: Web of Science, RePEc, EconPapers, Clarivate Analytics, National and university library in Zagreb; which makes the IMR Conference even more important and exciting to a large number of scientists, entrepreneurs, business people, researchers, and visitors.

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## UPUTE AUTORIMA

### **Opis časopisa**

Ekonomski vjesnik / Econviews - Review of Contemporary Business, Entrepreneurship and Economic Issues usmjeren je znanstvenicima i praktičarima. Objavljuje radove koji doprinose teorijskim, metodološkim i empirijskim spoznajama u kompleksnom području ekonomije. Radovi se mogu temeljiti na kvantitativnim i na kvalitativnim analizama, mogu predstavljati sinteze dosadašnjih istraživanja i ukazivati na otvorena pitanja u posebnim područjima društveno-ekonomske prakse. Prihvaćaju se radovi usmjereni na različite razine istraživanja (od pojedinačnih slučajeva do manjih ili velikih uzoraka) i različite kontekstualne okvire (mala, srednja i velika poduzeća, industrijski sektori, lokalna, regionalna i nacionalna gospodarstva, međunarodna ekonomija, gospodarske grane, zdravstvo i obrazovanje, rad i demografija, prirodni potencijali i drugi društveno-ekonomski okviri).

Časopis je usmjeren na znanstvena područja ekonomije, poslovne ekonomije i poduzetništva, a zbog njihove neodvojive povezanosti s drugim disciplinama - informacijskim i tehničkim znanostima, pravom, sociologijom, psihologijom i drugima, objavljuju se i radovi s multidisciplinarnim sadržajima.

### **Vrste radova**

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