

## **Helena Šlogar, PhD**

Assistant Professor  
Libertas International University, Croatia  
E-mail: [hslogar@libertas.hr](mailto:hslogar@libertas.hr)

## **Heri Bezić, PhD**

Full Professor  
University of Rijeka, Croatia  
Faculty of Economics  
E-mail: [heri.bezic@efri.hr](mailto:heri.bezic@efri.hr)

# **THE RELATIONSHIP BETWEEN INNOVATIVE ORIENTATIONS AND BUSINESS PERFORMANCE IN COMPANIES**

UDC / UDK: 005.342+ 658(497.5)

JEL classification / JEL klasifikacija: L26, L33, M40, M50, O31

Preliminary communication / Prethodno priopćenje

Received / Primitljeno: November, 20, 2019 / 20. studenoga 2019.

Accepted for publishing / Prihvaćeno za tisak: June 8, 2020 / 8. lipnja 2020.

### ***Abstract***

*In today's dynamic, uncertain and heterogeneous environment, innovativeness is the foundation for the survival and prosperity of every company. The aim of the research was to examine the relationship between entrepreneurial orientation, market orientation, learning orientation, innovativeness and business performance in companies. Data was collected from 303 Croatian companies using a questionnaire, with a response rate of 35.31%. The sampling method used for this research was stratified random sampling, and for data analysis canonical analysis and cluster analysis were used. In the context of this research it is likely that entrepreneurial orientation, market orientation and learning orientation will have a positive effect on the company's' innovation activities, causing business performance to likely increase their competitive advantage on the market.*

***Keywords: innovativeness, entrepreneurial orientation, market orientation, learning orientation, business performance***

## **1. INTRODUCTION**

With the emergence of globalization, new value systems are being created in which innovativeness, knowledge, information, innovation, quality and business flexibility become important factors of survival in the international

market. In such an environment, companies need to acquire new knowledge to develop new products in order to meet customer needs and enter new markets. From the perspective of core resources, entrepreneurial orientation, market orientation and learning orientation are separate but complementary strategic orientations. In fact, specific orientations proactively emphasize the effectiveness of the organizational level and the ability to create innovations in response to customers' needs and increasingly demanding markets.

The research analyzes different theoretical perspectives to develop a hypothesis that suggests that market orientation, entrepreneurial orientation and learning orientation are key antecedent to innovation. Given that the environments evolve, companies need to adopt innovation correspondingly, and the most important innovations are those that enable the company to achieve some kind of competitive advantage which contributes to its success. This research attempts to examine the relationship between entrepreneurial orientation, market orientation, learning orientation, innovativeness and business performance in order to determine the importance of the relationship between these variables and thus achieve the required level of performance. Research results can help companies better understand what kind of orientation should be encouraged to increase the level of innovativeness among Croatian companies.

## **2. LITERATURE REVIEW**

### **2.1. Innovativeness**

Some companies are more innovative and enjoy success within their industry, while others lack innovative capabilities. Some companies gladly accept innovative ideas, while others are reluctant to do so. This phenomenon is the focus of this research to help understand the determinants of innovativeness and its impact on business performance. Firstly, the concept of innovativeness and the role it plays in the company's innovation capability will be outlined. Innovativeness can be defined as the ability to introduce new processes, products and/or ideas into the organization (Hurley & Hult, 1998). Innovativeness is associated with the ability to engage in enterprise innovation by introducing new processes, products or ideas into the organization. Innovation capability is one of the most important factors that has an impact on business performance (Hult, Hurley & Knight, 2004).

In this paper, the innovativeness of a company is defined as a company's propensity to create and/or adopt new products, production processes and business systems (Nybakk, 2012, p. 4). Product innovation includes product development, product improvement and product adoption and is recognized as an important factor of manufacturing companies, but it is also often defined as the level of product durability in relation to other companies and markets (Nybakk, 2012, p. 5). Process innovativeness is defined as the innovation-driven activity and the process itself (e.g. technology and improvement used in production) that

constitutes innovation (Nybakk, 2012, p. 5). Business system innovativeness, that is needed to manage, structure and administer the business and its internal and external environment, can be applied to every aspect of the company (Nybakk, 2012, p. 5).

According to Hult et al. (2004), the key component in the success of industrial firms is the extent of their innovativeness. Hult et al. (2004) found that there is a positive relationship between innovativeness and business performance as well as between entrepreneurial orientation, market orientation, learning orientation and innovativeness. Furthermore, it got confirmed that innovativeness is an important determinant of business success, regardless of market turbulence in which the company operates. Consequently, it is proposed that managers enhance the innovation of their businesses to achieve superior business performance (Hult et al. 2004).

Possessing great potential to innovate allows the company to use and support new ideas and processes, which can lead to supplying new products, services and technologies (Ma'atoofi & Tajeddini, 2010). Rhee, Park & Lee (2010) found that there is a positive relationship between innovativeness and business performance. Innovativeness is probably useful for competing with new, improved products, diversifying products and broadening the company's activities. All of this helps to achieve sustainable competitive advantage.

In the study of Šlogar & Bezić (2019a) a positive relationship between the basic characteristics of a company and innovativeness was not established. Similarly, the auxiliary hypotheses show that there is no positive relationship between the number of employees and innovativeness, company age and innovativeness, or level of education and innovativeness (Šlogar & Bezić, 2019a).

## **2.2. Entrepreneurial orientation**

The conceptual meaning of entrepreneurial orientation is widely accepted and considered relevant in the scientific literature as highlighted by Covin & Wales (2012). Entrepreneurial orientation is one of the most widely used measuring instruments at the company level (Wales, Vishal & Mousa, 2011). The scale for measuring entrepreneurial orientation is largely based on Miller's work (1983) and supplemented by Covin & Slevin (1989). There are three dimensions of entrepreneurial orientation according to Miller (1983): innovativeness, risk-taking and proactiveness. Innovativeness refers to a tendency to support experimentation and creativity through the introduction of new products/services and technologies. Risk-taking is related to making reasonable decisions when faced with environmental uncertainties and systematically mitigating risk factors (Miller, 1983) by venturing into unknown new markets, difficult borrowing and/or executing extraordinary resources for ventures in unsafe conditions. Proactiveness refers to opportunity seeking and having a forward-looking perspective characterized by introducing new products and services ahead of the

competition and acting in anticipation of future demand (Rauch, Wiklund, Lumpkin & Frese, 2009).

Entrepreneurial orientation plays a key role in the development and maintenance of innovativeness, regardless of the level of market turbulence. The results indicate a positive relationship between entrepreneurial orientation and innovativeness (Hult et al., 2004). Entrepreneurial orientation is an important driver of a company's innovation and is of great importance to managers as it provides incentives to launch activities such as the development of ideas, superior products and processes. The reason for this lies in the fact that entrepreneurial orientation includes features such as proactivity, aggressiveness and initiative that can inspire managers to action when it comes to various innovative projects (Hult et al., 2004).

Most studies on entrepreneurial orientation show a positive relationship between entrepreneurial orientation and business performance (Covin & Slevin, 1991; Wiklund & Shepherd, 2005; Kraus, Coen Rigtering, Hughes & Hosman, 2012; Eggers, Kraus, Hughes, Laraway, & Snyckerski 2013; Messersmith & Wales, 2013). A significant positive relationship between entrepreneurial orientation and business performance was indicated in a meta-analysis study by Rauch et al. (2009). Although it is often believed that entrepreneurial orientation has a universally positive impact on company performance, it is established that existing studies only examine current or existing effects of entrepreneurial orientation, ignoring their long-term consequences (Wales, Vishal & Mousa, 2011). Wong (2014) explores the impact of environmental turbulence on entrepreneurial orientation and the success of new products in China. Environmental turbulence strongly influences all three dimensions of entrepreneurial orientation. Innovativeness has been found to be the most effective driver of new products' success in entrepreneurial orientation and is most associated with the success of new products. In the study of Šlogar, H., Šokčević, S. & Jerin, K. (2018) results suggest that there is a positive and statistically significant correlation between the innovativeness, the proactivity and the competitiveness of the company's business performance. Strengé & Rank, (2018), using data from 82 high-tech companies, show high levels of entrepreneurial orientation. They also find that network brokerage partially mediates the EO-performance relationship and represents a missing link when studying the performance-related effects of entrepreneurial orientation. In the study of Rua, França & Ortiz (2018) entrepreneurial orientation has a positive and significant impact on the export performance of Portuguese small and medium-sized enterprises (SMEs). Tajeddini & Mueller (2018), suggests the positive effect of an entrepreneurial orientation on financial performance is enhanced for Swiss firms competing in a highly dynamic environment.

### 2.3. Market orientation

The concept of market orientation is based on a marketing concept that is relatively new in scientific literature and indicates the application of the concept of marketing in business practice. Two of the most influential models which present the basic features of the concept of market orientation are Kohli & Jaworski (1990) and Narver & Slater (1990). The Narver & Slater (1990) study aims to develop measures and to evaluate the psychometric characteristics of the scale. The authors presented the three basic components of the MKTOR scale for measuring market orientation: consumer orientation, competition orientation and interfunctional coordination. Consumer orientation refers to knowledge of future and present customer needs in a target market, which enables the company to continuously offer top-quality products and services (Narver & Slater, 1990). Competitor orientation relates to the monitoring and understanding of short-term strengths and weaknesses of competition and its long-term abilities and strategies (Narver & Slater, 1990). Interfunctional coordination is the coordinated use of available resources in creating top-level value for targeted customers (Narver & Slater, 1990). Interfunctional coordination is an important aspect because it facilitates the transfer of experience and encourages organizational learning (Sinkula, 1994) and is very important for companies that want to achieve a high degree of market orientation. Hurley & Hult (1998) state that the market concept and culture are equally important in building a market orientation.

According to Hult et al. (2004), market orientation is considered to be the most important determinant of business success. Moreover, it seems to have a strong impact on innovativeness under high market turbulence, but not low. During high market turbulence, it is crucial to have a market orientation. Many studies show the existence of a positive relationship between market orientation and the profitability of the company, and point to the application of market orientation in companies (Slater & Narver, 2000; Narver, Slater & MacLachlan, 2004; Jaiyeoba & Amanze, 2014).

According to Boso, Story, Cadogan & Ashie (2015) results indicate that performance outcomes increase when high levels of market orientation and entrepreneurial orientation and networks of business and social ties are aligned in entrepreneurial firms operating in developing economies. In the study of Juhdi, Hong & Juhdi (2015) the findings show that market orientation, entrepreneurial learning intensity and entrepreneurial success are significantly related based on small and medium-sized service enterprises around Malaysia. Cai, Liu, Zhu, & Deng (2015) confirm that entrepreneurial support policies will strengthen the relationship between responsive market orientation and radical innovation in China companies. The findings show a significant change in innovation with different market orientation groups, as well as a significant impact of innovation on organization performance (Zayed & Alawad, 2017). On the other hand, Shariff, Ahmad & Hafeez (2017) have proposed a model that depicts the moderating effect of access to finance on the relationship between market

orientation, entrepreneurial orientation, learning orientation and SME performance.

Zehir, Karaboga, Karaboga & Uzmez (2019), explore the relationship between market orientation and the firm's entrepreneurial strategic attitude, which was treated as a strategic tendency of the firm to undertake entrepreneurial activities. The results of the Presutti & Odorici study (2019) show that previous entrepreneurial experience, when specific, can enhance the influence of market and entrepreneurial orientation on the growth of small and medium-sized electronic firms in Italy. The Nuvriasari, Ishak, Hidayat, Mustafa & Haryono (2020) study results show that entrepreneurial marketing plays an essential role in mediating market orientation based using data SME performance in Indonesian Batik Industries.

Overview market orientation decision which is a precursor for the creation of superior customer value will go a long way to enhance its performance in the market. Therefore, leadership can influence the market orientation decision of a firm with the provision of superior value which leads the firms to increase its performance.

## **2.4. Learning orientation**

Learning organizations are those in which people are continually building their capacity to produce the results they genuinely want to accomplish, where new thinking patterns are nurtured, and people are continually learning how to learn together (Senge, 2001). Calantone, Cavusgil & Zhao (2002) define learning orientation as an organization's use-based activity to improve competitiveness, especially if the process involves strategic planning in an organization. The authors state that market orientation is the fundamental set of organizational values from which the learning orientation has developed (Slater & Narver, 1994; Narver, Slater & Tietje, 1998). In addition to market orientation, entrepreneurial culture promotes organizational learning, and management that facilitates organizational learning should become a company's priority (Slater & Narver, 1994). Hurley & Hult (1998) concluded that organizational learning is of crucial importance for the innovation ability and performance of companies. Farrell (2000) emphasizes that learning ability becomes a priority for organizations that want to compete successfully.

The model by Calantone et al. (2002) was tested on American companies from a wide range of American industries. Learning orientation consists of four dimensions: commitment to learning, shared vision, open-mindedness, and intraorganizational knowledge sharing (Calantone et al., 2002). Commitment to learning is the degree to which a company promotes the value of learning and is associated with strategic commitment in the long term (Calantone et al., 2002). Shared vision relates to the level of the whole company with an emphasis on learning which leads to the strengthening of their purposefulness,

energy and commitment (Calantone et al., 2002). Open-mindedness is a willingness to critically evaluate company operating routines and accept new ideas (Calantone et al., 2002). Intraorganizational knowledge sharing within the company refers to collective beliefs or behavioural routines that relate to promoting learning among different units within a company (Calantone et al., 2002). The authors identify a positive relationship between learning orientation, company innovation capability, and company performance. Companies that continually increase the ability to learn, with a constant revision of existing market-based knowledge, customers and competitors, succeed in developing innovations (Calantone et al., 2002).

Learning orientation has been proven to have a significant impact on previous innovativeness. Accordingly, companies can take advantage of learning orientation to strengthen their innovative capabilities (Hult et al., 2004, p. 436). However, without a strong innovation capability, learning orientation provides little or no value when it comes to achieving the business goals of an industrial enterprise. Innovativeness supported by market orientation and learning orientation has a greater chance of efficiency, generating an additional competitive advantage (Hult et al., 2004). Nybakk (2012) examines the relationship between learning orientation, innovativeness and financial performance on a sample of executive directors of traditional Norwegian manufacturing companies. The results showed that learning orientation has a positive impact on the company's innovativeness in the traditional manufacturing industry. Moreover, the results obtained from the regression analysis further show indicative evidence of a significant positive relationship between the organization's commitment to learning, open-mindedness and shared vision and innovativeness of small enterprises (Ma'toufi & Tajeddini, 2015).

According to Real, Roldán & Leal (2014), the findings indicate that organizational learning partially mediates the relationship between entrepreneurial orientation and Spanish industrial companies' performance and fully mediates the link between learning orientation and performance. Baldwin & Hanel (2009) state that the process of creating and acquiring knowledge is at the heart of the company's innovative business. Likewise, generation knowledge is unique in several ways. First, imperfections in the knowledge market can cause companies not to produce knowledge in optimal quantities and, secondly, they believe knowledge transfer is difficult.

In the study of Ramlee & Bakar (2017), the results show that learning orientation, human capital, organizational capital and social capital have significant influence towards women owned SMEs performance. According to Hanafi, Yunus, Azmi & Mohdm (2017), there are positive relationships between learning orientation, entrepreneurial orientation, legal issues and business performance in companies. D'Angelo & Presutti (2019) confirm that SMEs that possess greater entrepreneurial orientations and learning orientations have higher international growth. In short, literature is inconsistent in terms of whether innovation plays a partial or full mediating role in the relationship between

learning orientation and firm performance (Calantone et al., 2002; Nybakk, 2012). Overall, it can be concluded that there is a lack of applicable research, given that learning orientation has a positive impact on the company's innovativeness.

## 2.5. Business performance

There is no consensus among scholars regarding the appropriate measures of performance indicators. This has led to a situation in which a large variety of objective and subjective performance measures have emerged which are widely accepted (Lumpkin & Dess, 2001; Calantone et al., 2002; Baker & Sinkula, 2009; Messersmith & Wales, 2013; Kraus et al. 2012). The reasons for the use of subjective performance measures are usually the lack of publicly available financial data (Kraus et al., 2012) or the fear of losing the respondents because the companies are reluctant to disclose financial data (Vij & Bedi, 2012; Messersmith & Wales, 2013). 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 (Stam & Elfring, 2008).

Rauch et al. (2009), in the meta-analysis of the entrepreneurial orientation study, have found that the concept of business performance was measured by archival financial measures in only seven studies. This confirms that archival measures of financial indicators are rarely used compared to different non-financial measures of subjective performance (Covin, Green & Slevin, 2006). Research finds that value innovation is only visible if companies link innovation with utility, price and cost condition (Chan Kim & Mauborgne, 2007, p. 26). Failing to maintain a secure position of innovation and value in the manner described, innovators in technology and market leaders often lay the foundations for the business success of other companies (Chan Kim & Mauborgne, 2007, p. 26). According to Covin & Slevin (1991), company performance is most often expressed through the dimensions of growth and profitability. The market share is also used as a growth indicator (Wiklund, 1999).

The relationship between entrepreneurial orientation and performance can depend on key business performance indicators (Lumpkin & Dess, 1996). The biggest drivers of success are market orientation, entrepreneurial orientation and innovativeness. This indicates that innovativeness is partly mediated between market orientation and business performance, and between entrepreneurial orientation and business performance. On the other hand, the direct impact of learning orientation on business performance is insignificant, suggesting that learning orientation must be associated with something like innovativeness to have an impact on business performance (Hult et al., 2004). In the study of Nybakk, (2012), the findings show that the company's innovativeness has an independent positive impact on the financial performance. No direct impact of



learning orientation on financial performance was found. Furthermore, Šlogar & Bezić (2019b) show that there is a positive relationship between innovativeness and export in Croatian companies. In the context of this research, it is likely that innovativeness influences a company's export activities, which can reflect positively in creating their competitive advantage on the international market.

### 3. RESEARCH METHODS

Based on the defined research goals, the following hypothesis was tested: There is a positive correlation between entrepreneurial orientation, market orientation and learning orientation, innovativeness and business performance. The research was conducted over the last three months of 2016 on a sample of Croatian export companies based on the survey method. The sampling method used for the purpose of this research was stratified random sampling and for data analysis multiple correlation analysis was used. The structure of correlation between individual responses and individual groups of responses was analyzed by Spearman correlation, canonical analysis and cluster analysis. Statistical testing was performed at a significance level of 95% ( $\alpha = 0.05$ ). Statistical analysis and data analysis were carried out by STATISTICA 6.1 StatSoft inc. 1983-2003.

The basic set from which the sample was chosen consists of registered companies that were actively carrying out their activities in 2016 throughout the Republic of Croatia. It is a three-stage stratified random sample that consists of 900 companies. For the first stratification level, the differential criterion is the division of counties according to three regions: 1. Northwestern Croatia 2. Central and Eastern (Panonian) Croatia and 3. Adriatic Croatia. For the second level of stratification, the differential criterion is the size of the company. The provisions of the Accounting Act (Official Gazette No. 78/15), which prescribe the conditions to be met by the company, are 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) categories are used, and target companies belong to the following areas: C - Processing industry, Section 10-33 and J - Information and Communication, Section 62 - Computer programming, consultancy and related activities.

Based on the pre-defined goals of the research, the survey questionnaire was developed consisting of 31 questions, divided into 6 groups: 1. basic information about the respondents and companies; 2. business performance; 3. entrepreneurial orientation; 4. market orientation; 5. learning orientation and 6. innovativeness. 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. Subsequently, the questionnaire was modified and revised. To measure the innovativeness, a customized Nybakk (2012) scale was used, consisting of three dimensions: product innovation, process innovativeness and business system innovativeness. Additionally, a 5-

point Likert scale was used: 1 – 'the claim does not refer to my company at all' to 5 – 'the claim is completely related to my company'.

To measure entrepreneurial orientation, the scale adapted from Covin & Slevin (1989) was used that consisted of three dimensions: innovativeness, risk-taking and proactiveness and autonomy adapted from Lumpkin & Dess (1996). Additionally, a 5-point Likert scale was used: 1 – 'the claim does not refer to my company at all' to 5 – 'the claim is completely related to my company'. To measure market orientation, the scale adapted from Narver & Slater (1990) was used that consisted of three dimensions: competitor orientation, customer orientation, and interfunctional coordination. Additionally, a 5-point Likert scale was used: 1 – 'the claim does not refer to my company at all to 5 – 'the claim is completely related to my company'.

To measure learning orientation, the scale adapted from Calantone et al. (2002) was used that consisted of four dimensions: commitment to learning, shared vision, open-mindedness and intraorganizational knowledge sharing. Additionally, a 5-point Likert scale was used: 1 – 'the claim does not refer to my company at all' to 5 – 'the claim is completely related to my company'. Business performance is measured by the quantitative effects including: product and/or sales/service growth, market share, productivity, overall liquidity, degree of total indebtedness, employee growth and flexibility company's. A 5-point Likert scale was used: 1 – 'very low' to 5 – 'very high'. Similarly, the qualitative effects within the company were measured: employees self-assessment of fluctuation, absenteeism, commitment, adaptability, number of new customers, the number of lost customers, product quality, the number of new products and company image. A 5-point Likert scale was used: 1 – 'strongly disagree' to 5 - 'strongly agree'.

In the process of data collection, e-mails were sent to 900 Croatian companies that were actively doing business on the domestic or international markets, selected from the online database, [www.biznet.hr](http://www.biznet.hr), i.e. 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 e-mail addresses of CEOs and executive managers of companies that are included in the sample. In November, a reminder and another questionnaire were sent to those who had not yet responded. Within the first three months, 303 questionnaires were properly filled out and sent back (out of 900), resulting in the response rate of 35.31%. Of 345 collected questionnaires, only 303 were used in the final analysis, as those with significant amounts of data missing were excluded.

#### **4. RESEARCH RESULTS**

The results have shown that under The National Classification of Territorial Units for Statistics NKPJS (2007), the largest number of companies, 52.1%, belongs to the Northwestern Croatia HR01, 33% is located in Central and

Eastern (Pannonian) Croatia HR02, while the smallest number of companies, 14.7%, are in 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% from HRK 30 million to 150 million and 27.7% more than HRK 150 million.

Table 1

## Spearman Rank Order Correlations

All correlations are significant at $p < 0.05$	
	Innovativeness
Business performance	0.724
Entrepreneurial orientation	0.723
Market orientation	0.698
Learning orientation	0.675

Source: Authors' research

In Table 1 Spearman ranking correlation shows a statistically significant positive relationship between business performance and innovativeness, entrepreneurial orientation and innovativeness, market orientation and innovativeness, learning orientation and innovativeness in companies.

Table 2

## 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: Authors' research

Table 2 shows the summary results of the Spearman rank correlation for the correlation between innovation and business performance in companies. An additional check was made using Canonical analysis where the results of the Spearman ranking correlation were confirmed.

Table 3

Canonical analysis of the correlations among entrepreneurial orientation, market orientation, learning orientation, innovativeness and business performance

Canonical Analysis Summary: Canonical R: 0.821, Chi2(4)=335.13, p<0.0001		
Number of questions	4	1
1	Business performance	Innovativeness
2	Entrepreneurial orientation	
3	Market orientation	
4	Learning orientation	

Source: Authors' research

In Table 3 Canonical analysis shows a statistically significant positive relationship between entrepreneurial orientation, market orientation, learning orientation and innovativeness and business performance ( $p < 0.0001$ ). The canonical coefficient of correlation (Canonical R) is 0.821, which represents a positive relationship, its statistical significance was tested by a Chi-square test ( $\chi^2$ ) showing significant statistical correlation ( $p < 0.0001$ ).

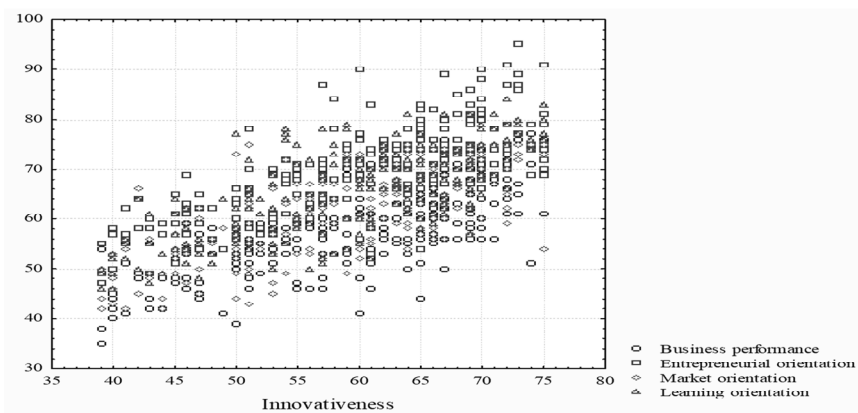


Figure 1 Canonical analysis of the correlations between entrepreneurial orientation, market orientation, learning orientation, innovativeness and business performance

Source: Authors' research

Figure 1 canonical analysis shows a statistically significant positive relationship between entrepreneurial orientation, market orientation, learning orientation and innovativeness and business performance ( $p < 0.0001$ ). Furthermore, Cluster analysis shows the structure of connectivity and is usually used for a graphic representation of the link structure in this case of entrepreneurial orientation, market orientation, learning orientation, innovativeness and business success. Cluster analysis is used to summarize a large amount of data overview. In this case, it more clearly shows the data statistically tested by Spearman ranking correlation and the canonical analysis. Although useful, the analysis of the individual dimensions of the three orientations does not enable a unique and complete insight into the factors. Therefore, a cluster analysis is used that will allow an unambiguous interpretation of results. The aim of the clustering method was to obtain a minimum number of clusters that differ in size, and because of the differences in these dimensions, they have different results when it comes to innovativeness.

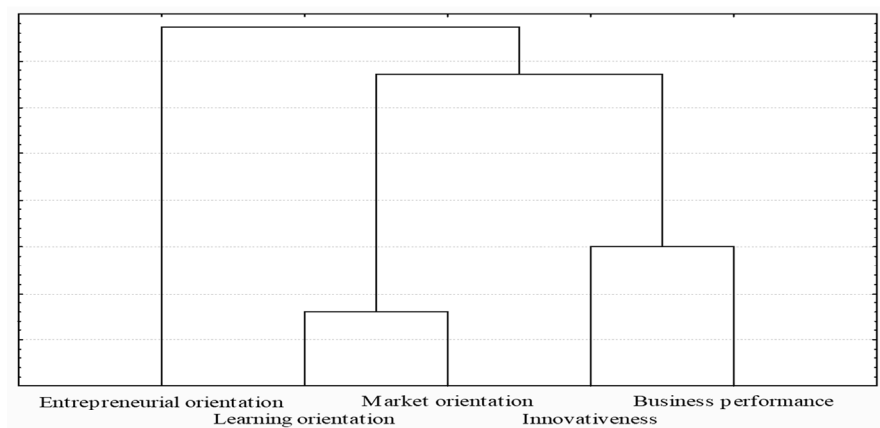


Figure 2 Cluster analysis of entrepreneurial orientation, market orientation, learning orientation, innovativeness and business performance

Source: Authors' research

In Figures 2 and 3, a cluster analysis of the observed dimensions shows the structure of the relationship between entrepreneurial orientation, market orientation, learning orientation, innovativeness and business performance. Based on empirical research assessing the importance of certain dimensions, it can be concluded that the most correlated are innovativeness and business performance, then learning orientation and market orientation.

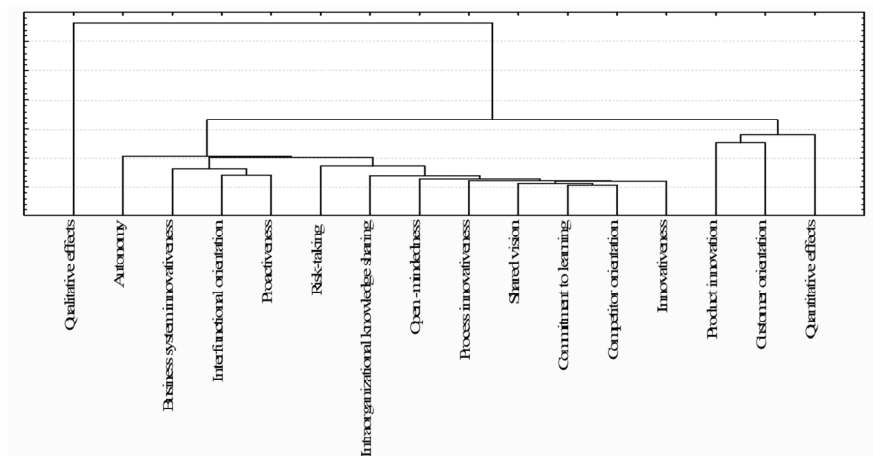


Figure 3 Cluster analysis of observed dimensions

Source: Authors' research

According to the results of the research it can be concluded that the hypothesis has been confirmed and is statistically significant at the level  $p < 0.0001$ . The cluster analysis shows that indicators for the positive connection between innovativeness and business performance are well identified.

## 6. DISCUSSION AND CONCLUSION

This research is based on different theoretical perspectives of entrepreneurial orientation, market orientation and learning orientation that are considered to be key innovation precursors (Calantone et al., 2002; Hult et al., 2004; Nybakk, 2012). Supporting the extant research (Hult et al. 2004), the results of this study imply the centrality of managerial commitment to develop innovative orientations that facilitate the formation of new products. Although scholars agree that entrepreneurial orientation and market orientation are critical to firms' performances, a better understanding is still needed about their development and impact on the growth of the business performance (Presutti & Odorici, 2019). Through innovation, industrial managers design solutions for business problems, which serves as the basis for survival and future business success. The research confirmed the hypothesis and proved that there is a positive relationship between innovativeness and entrepreneurial orientation, market orientation and learning orientation and business performance. The result is consistent with the results of other studies in the literature (Covin & Slevin, 1989; Narver & Slater, 1990; Calantone et al., 2002; Hult et al., 2004; Nybakk, 2012; Presutti & Odorici, 2019). This result shows that companies can improve

innovation performance with entrepreneurial and market-oriented activities. That way, companies can gain a greater competitive advantage in the market.

Although this study is able to achieve its research objectives, several limitations are noted.

First, the state of the economy might have influenced the survey results. Second, although the selection is based on the principle of impartiality in sample making, such a 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. Third, it would have been interesting to control our analysis. The fact that the research does not consider the effect of control variables such as location and target market of the respondents can be seen as a limitation. This research provides an overview of the role of entrepreneurial orientation learning orientation and market orientation in building business performance. For this reason, the leadership needs to build a learning-oriented, market-oriented and entrepreneurial spirit. Second, to improve the business performance, the leadership of companies needs to understand the marketing approach. Third, it is necessary to increase the competence of Human Resources through education and other development activities.

In conceptual terms, a contribution has been made to the development of scientific thinking about the existence of a positive relationship between entrepreneurial orientation, market orientation and learning orientation, innovativeness and business performance. Methodological contribution was made by developing a new instrument and developing and testing a new model on Croatian companies. Although many aspects and sources of innovativeness, entrepreneurial orientation, market orientation and learning orientation have not been studied here, the research seems to have obtained a fairly clear picture of the current state of affairs in Croatian companies. The question is whether these companies are ready to compete in the global market and whether they have the resources and potential for an increased presence in developed foreign markets. It is suggested that future research examines other business sectors in order to evaluate the results of this research, as well as to compare similarities and differences between individual business sectors. The results of the empirical research should be an incentive for similar research in the future.

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***Dr. sc. Helena Šlogar***

Docentica  
Libertas međunarodno sveučilište, Hrvatska  
E-mail: hslogar@libertas.hr

***Dr. sc. Heri Bezić***

Redoviti profesor  
Sveučilište u Rijeci, Hrvatska  
Ekonomski fakultet  
E-mail: heri.bezic@efri.hr

**ODNOS INOVATIVNIH ORIJENTACIJA I USPJEŠNOSTI  
POSLOVANJA U PODUZEĆU*****Sažetak***

*U današnjem dinamičnom, neizvjesnom i heterogenom okruženju, inovativnost je temelj za opstanak i prosperitet svakog poduzeća. Cilj istraživanja bio je ispitati odnos između poduzetničke orijentacije, tržišne orijentacije, orijentacije na učenje, inovativnosti i poslovnog uspjeha u poduzećima. Podaci su prikupljeni od 303 hrvatska poduzeća uz pomoć upitnika sa stopom odgovora od 35,31 %. Za potrebe istraživanja koristi se trostupanjski stratificirani slučajni uzorak, a za analizu podataka korištena je kanonska analiza i klaster analiza. U kontekstu ovog istraživanja vjerojatno je da će poduzetnička orijentacija, tržišna orijentacija i orijentacija na učenje pozitivno utjecati na inovacijske aktivnosti poduzeća, što će vjerojatno povećati njihovu konkurentsku prednost na tržištu.*

***Ključne riječi: inovativnost, poduzetnička orijentacija, tržišna orijentacija, orijentacija na učenje, poslovna uspješnost.***

***JEL klasifikacija: L26, L33, M40, M50, O31.***