Export Activity of Croatian Companies: Does Innovation Matter?

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Abstract
The Republic of Croatia is geographically part of Eastern Europe. On this market, Croatia has accomplished the best results in export. The structure and the amount of foreign trade of the national economy depend on technological achievements, organizational superiority and managerial skills, and on that basis, lower costs, with an emphasis on high quality and differentiation of products and services. Following the aforementioned, in the modern economy, innovation often represents the key competence of a company. However, the complex nature of innovation is evident in the theoretical approach to innovation, contradictory results of studies and distinctive analyses of the impact of innovation on certain economic aspects. Therefore, the goal of this paper is to examine the innovations of goods and services in service of increasing the export in Eastern Europe on the sample of Croatian companies engaged in export activities. Results of the survey showed that innovation activities of companies, directed at the Eastern European market, have a negative impact on export activities in these markets. This result indicates actually that Croatian companies participate in foreign markets with already tested, well-established and well-known products.

Keywords: innovation of products and services, entrepreneurship, internationalization, Croatian export, Eastern Europe  
JEL classification: O30, F14

Paper type: Research article  
Received: Apr 4, 2020  
Accepted: Jun 4, 2020
Introduction

Small countries can maintain international competitiveness only by using extensive economic politics. As a part of the European Union, Croatia is achieving somewhat easier integration on an international scale. However, numerous harsh circumstances visibly impair the outcome of a successful business. Still, for many years Croatia has pursued a very open policy of doing business with Eastern European countries. Cooperation has been very intensive and Eastern Europe represents an important trading partner of the Republic of Croatia. Eastern Europe has been growing progressively in Croatian exports and has reached a share of around 40% (Croatian Bureau of Statistics, 2019). But, the distribution of exports is not even. However, Croatian companies are successfully exploring market potentials and improving the marketing of their products and services by gradually developing trade relations with lesser-known Eastern European markets. It is important to note that co-operation has intensified despite the global recessionary impacts and structural changes that have plagued Croatia since joining the European Union. In addition, the assumptions are that perspectives for Croatian export to Eastern European countries are significant (Croatian Chamber of Commerce, 2019). However, the underutilization of potential is the reality of Croatia's ongoing co-operation. It is necessary to improve the quality of the industrial sector in terms of available quantities. Reaching that goal, Croatia is going to be able to meet the demand from the Eastern European market.

Innovation is indispensability of the modern economic system. The innovativeness of the company is conditioned by numerous internal and external factors. Using modern technology, implementing revolutionary proposals, with the help of human capital, companies seek to establish a connection between the participants of the social system (Rogers, 2010). However, the goal of every innovation is, besides attracting new buyers, improving the existing business and creating a sustainable competitive advantage (Damanpour & Gopalakrishnan, 2001). The ability to innovate indicates organizational flexibility, cross-functional coordination, quality leadership, possession of authentic information and adequate resources (Stanković & Đukić, 2004).

During the examination of the research so far on innovations, a lot of studies confirmed the existence of a positive correlation between innovation and business results of a company (Brown & Eisenhard, 1995; Caves & Ghemawat, 1992; Damanpour & Evan, 1984; Damanpour et al., 1989; Roberts, 1999; Thornhill, 2006). In literature though, innovations are theoretically explained in numerous ways such as innovation of new goods, processes, marketing or organizational innovations (Baker & Sinkula, 2002; Balkin et al., 2000; Lyon & Ferrier, 2002; Wolfe, 1994). In any case, it is indisputable that innovations, in essence, condition the survival of the enterprise in the long run. They also indicate the ability to identify new opportunities in a timely manner and effectively manage and overcome environmental challenges.

With the lack of a systematic approach to measuring the export activities of Croatian enterprises (regardless of size or activity) on the export result on a larger sample of countries, there is also a lack of research that would focus solely on the impact of product and service innovation intended for export on the export result. Moreover, there is an insignificant number of researches that identify innovations intended for a particular export market as well as researches that examine the impact of that important determinant on export activities, and ultimately, their impact on a firm's business performance.

Based on the problem situation, the question was raised to what extent Croatian exporting companies are innovative and how innovations of products and services intended for a particular export market affect their export performance. Therefore,
the aim of the paper was to examine the existence of a positive link between product and service innovation intended for export and the export performance of companies in the Eastern European market.

The paper is structured as follows; after the introduction part, a link between entrepreneurship and internationalization was made. Third part represented the methodology of the research. Chapter 4 showed the results of the research. Concluding considerations were presented at the end of the paper.

**From entrepreneurship to internationalization**

Internationalization is driven by a national economy which is in turn ruled by entrepreneurial activities. It is making its contribution through strengthening social and economic cohesion and through innovation that builds competitiveness. Innovation seeks to create clusters. Therefore, it is extremely important that the political, economic, legal and cultural environment synergistically form the basis for the development of an entrepreneurial climate (Masovic, 2018; Nogal-Meger, 2018).

Entrepreneurship is a challenging and very complex dimension that requires a completely innovative approach. Within entrepreneurial activities, it is necessary to step out of the existing business frameworks, to enter into the sphere of risk, to be confident and to act proactively towards the future. Entrepreneurship enables the development of innovation. Innovation creates conditions for competitive advantage leading to internationalization of business.

In the Republic of Croatia, a small number of companies are engaged in export activities (Croatian Exporters, 2019). This leads to the conclusion that entrepreneurship is not sufficiently developed, which is confirmed by statistics. Namely, according to the latest complete data on the trading business of entrepreneurs (data from 2016), it can be seen that the highest entrepreneur’s income is recorded in trade. However, revenues recorded a downward trend. Every fourth entrepreneur operates in trade, and the number of entrepreneurs decreased from 2010 to 2015 (FINA, 2018). This confirms the longstanding unsatisfactory support to the entrepreneurial sector by the state and the unwillingness to take risks by potential entrepreneurs (FINA, 2018). Nevertheless, through integration and a modern approach to economic activities, internationalization is certainly accelerating. Accordingly, numerous entrepreneurship development programs have been launched in Croatia. Therefore, it can be speculated that the situation has improved significantly since 2016, although no official data are available yet.

When it comes to internationalization, it can be said that it is a result of the linear and sequential interest of companies to enter the foreign market. Internationalization always takes place in stages, and according to French authors, there are two fundamental analytical models: the Uppsala model and the innovation model (Ageron, 1998).

The Uppsala model is based on learning about the market of interest and the direct way in which that knowledge influences behaviour when entering other markets. The key is to gradually acquire experience. Experience is the foundation. It contributes to decision-making and increasing foreign liabilities. Internationalization is carried out through four stages: from irregular and opportunistic export activities, through intermediary exports and the implementation of a subsidiary, to launching own production abroad (Vahlne & Johanson, 2013). The second model is an innovation model that takes the internationalization through phases that are the same as when adopting a new product. In other words, it is believed that every internationalization process is an innovative step for the company. It goes through five complex phases. After responding to orders from the market, new opportunities
for developing export activity and export business are actively being explored. These innovative activities usually end with experimental exports. This is followed by feedback from the market and adaptation of the business to the optimum level. The final step is a further exploration of export opportunities to more distant psychological markets (Stremtan et al., 2009).

However, it is important to emphasize that there are other models for internationalization analytics (such as economic model or network model). However, their foundation is most often derived from the main models. Why is the approach to this topic so complex? Because it is simply impossible to create a universal internationalization model applicable to all enterprises. Each entrepreneur is an individual for himself. He strives to implement his own unique ideas in business. On the other hand, each export business is complex and unique because export partners are also diversified in their characteristics. Therefore, it must be accepted that although there are some globally accepted models (such as the Uppsala model), there are still exceptions to these models.

**Methodology**

The analysis of the impact of innovation of products and services intended for export on the export performance of Croatian companies on the Eastern European market started from the theory of the positivist approach. The research had two stages. The first stage considered a pilot survey in order to determine the uniqueness and comprehensibility of the statistical questionnaire. After correction, a reliability analysis of the measurement scales was performed using the Cronbach’s alpha coefficient. Also, verification of the collected data was performed, using tests to test atypical values in the data, as well as testing assumptions about the normal distribution of manifested variables. Finally, an analysis of the data collected by the survey was performed using the structural equation modelling method.

The target population consisted of small, medium and large Croatian exporting companies. The sample selection framework consisted of the Register of Croatian Exporters, available at the Croatian Chamber of Commerce, which encompasses Croatian exporting companies according to the definition within the target population. According to the Croatian Exporters Register, the numerical predominance of small enterprises over medium and large enterprises has been observed. However, the impact of medium and large enterprises on the Croatian economy is much greater than their numerical representation. Due to the argument above (uneven distribution of enterprises in terms of size), the paper applied a stratified random systematic sample, using three strata: for small, medium and large Croatian export companies. The model of a stratified random systematic sample of firms was based on the criteria of the Accounting Act: a number of employees and total pre-tax income, with equal allocation by strata to ensure controlled representation of all enterprises.

A total of 200 small, 200 medium and 200 large enterprises were selected for the sample using the step method. In doing so, businesses were alphabetized to avoid periodic repetitions. This approach provided an equal probability to every company in the population in the sample and guaranteed the representativeness of the sample while respecting the even stratum representation. The survey was conducted between February and May of 2015, using an online questionnaire.

After the research, the control of the collected answers was conducted in the direction of the structure of the organizations that participated in the research, as well as in the direction of completeness of the survey research instrument. In
addition, the information legitimizing the surveys was checked, such as Timestamp and the identification number of each survey questionnaire.

The dependent variable was made from the export result on the market of Eastern European countries, which represented the share of exports on the market of Eastern European countries in the total income of the company (%). The classification of the territorial orientation of Eastern Europe is made according to the European Union Glossary. On the other hand, the questionnaire for testing the innovation of products and services intended for export, as independent variables, was formed in a way where known measurement methods were used that were available and used in the scientific literature.

The scale measured enterprise innovation as well as active support in enterprise innovation. Particular emphasis was placed on the fact that the measurement scale included observation of both products and services developed by Croatian companies for the Eastern European market. In doing so, product and service innovation must have been new to the enterprise, but not necessarily to the market. The scale consisted of nine statements and the respondents’ agreement with the statements was measured using the Likert scale (1-7) (Jambulingam et al., 2005; Keskin, 2006). These nine variables were related to innovation in the business activity, leadership in the provision of new services, promotion of innovative services, constant work on new services, creativity in work operations and methods.

The paper sought to examine the existence of a positive link between product and service innovation intended for export and the export performance of companies in the Eastern European market. Therefore, the hypothesis was: Innovations in products and services intended for export have a positive impact on the export performance of Croatian companies in the Eastern European market.

The hypothesis was tested using regression model, which has the share of exports to Eastern European countries as a dependent variable (expressed as %) and nine individual variables of innovation activities as independent variables.

Results
Out of a total of 130 companies, mostly large companies (48%) registered for the manufacturing industry (33%) approached the survey. Most represented companies are predominantly privately-domestically owned (67%) and the least represented are domestic state-owned companies (3%). The dominance of independent companies (85%) is pronounced, while there are far fewer ones that are operating as a subsidiary of some multinational company (15%). In assessing the representativeness of the sample, a study was used by the author Anseel et al. (2010), which indicate that the expected response rate for comparable organizational research is 14%, which is less than the achieved response rate for all three strata in the sample. Accordingly, it can be concluded that the selected research sample is representative.

The questionnaire was distributed to company directors, board members and people in charge of international business in the company. So, the characteristics of the respondents were as follows: male population dominates the leading and managerial functions (60%), the degree of higher education is in line with the function in the company (64% of the respondents have university education), as is the more mature age (56% of the respondents are over 40 years old) reflecting years of work experience and acquired international business skills.

Concerning the share of export to Eastern European countries among research participants, it accounts for an average of 15% of total corporate income. However, there are some variations in shares with respect to the individual characteristics of
the companies from the sample. Precisely, it was noticed that for large enterprises, export is one of the primary strategic approaches and accordingly, the share of export in the total revenue is somewhat higher (18%). However, more than 50% of small and medium-sized enterprises were involved in the survey. They are much less active on an international scale and to them, exports represent usually only secondary activity.

On the other hand, domestic companies in mixed (privately owned and state-owned) ownerships dominate the Croatian economy and have been able to develop a competitive advantage that enables them to survive in the international market. In line with a strong and stable market position, they also achieve the most notable results and have the largest share of export in the Eastern European market in total revenues (23.5%). The average share of export in total revenue is lowest for privately owned foreign companies (5%). The reason lies in the fact that these are foreign companies that are oriented towards developing their own business in the Republic of Croatia and strengthening their share on the Croatian market. Based on company ownership and revenue share, distribution is expected with respect to the enterprise grouping. The average rating for independent companies is 17%, while for affiliates of multinational companies equals to only 5%.

However, irrespective of the characteristics of the companies, the share of 15% leads to the conclusion that Croatian companies are globally inactive and uncompetitive and that exports do not allow long-term sustainability.

Evaluating innovations, the highest average rating is given to the promotion of innovative services and the constant introduction and testing of new services. When looking at enterprise innovation, respondents differ significantly in terms of company size and form of ownership. Significant discrepancies were expressed in terms of risk preferences, which is inevitable in innovation processes. Also, the great discrepancy was noticed in the way of implementing product and service innovations in the international market.

For small businesses, the internationalization of business itself is a major challenge. In the absence of human resources, which will devote their time to the development of innovation, they also face a lack of materialistic and financial resources for more intensive innovation activities. Aware of the difficult circumstances of implementing a differentiation strategy, it is easier and more efficient for small businesses with entrepreneurial and innovative ideas to be a market follower than to expose themselves to the additional financial costs for innovation with questionable efficiency. However, small businesses strive to innovate in the service segment, which does not require extensive and cost-exhaustive testing. Medium-sized enterprises, same as small businesses, approach innovation with caution but seek to promote innovative services which don’t bring high risks with them. In contrast to small and medium-sized enterprises, large enterprises have seen a significant increase in innovation activities in the last five years of operation. Big companies aim to take on the position of the market leader, that is, to create the image of innovators in the business they are engaged in. In doing so, they are able to conquer new markets and expand their businesses. Nonetheless, large companies in the Republic of Croatia have not yet taken the lead in innovating in the international market. In fact, they are not characterized by the introduction and definition of new trends in the segment of products and services.

Domestic privately-owned companies are very cautious when transforming a particular idea into an innovation, while state-owned enterprises are characterized by a noticeable increase in product and service innovation over the last five years. Foreign private companies’ access to innovation varies significantly. To foreign
companies, innovation activities represent a daily business. Specifically, these are companies that are constantly introducing and testing new services but are not market leaders in launching new products and/or services on the market. Independent companies are exploring new ways and opportunities for doing business. However, they do not practice testing and implementing new ideas often. Affiliates, on the other hand, are actively involved in service innovation. The assumption of higher risk appetite for innovation is that the subsidiaries have a stable, reputable and financially strong background behind them, in the form of a parent company, which, in the case of misjudgment of risks and losses, can sustain the operations of its subsidiary. Spearman correlation coefficients of the share of export to Eastern European countries in total enterprise income and enterprise innovation activities (group variable) showed that there was no statistically significant positive relationship between the analyzed variables. The Breusch-Pagan test indicated (Test statistic: $\text{LM} = 57,8292; \ p\text{-value}=\text{P}(\text{Chi-square}(9)>57,8292)<0,000$) that the heteroscedasticity is present; therefore, regression model was estimated using heteroskedasticity-robust standard errors, variant HC.

Table 1

Regression model of the relationship between the share of export to Eastern European countries in total enterprise income and enterprise innovation activities

<table>
<thead>
<tr>
<th>Model: OLS, using observations 1-120</th>
<th>Dependent variable: EXPORT_SHARE</th>
</tr>
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<tbody>
<tr>
<td>Heteroskedasticity-robust standard errors, variant HC1</td>
<td></td>
</tr>
<tr>
<td>**</td>
<td>Coefficient</td>
</tr>
<tr>
<td>Const.</td>
<td>15.7758</td>
</tr>
<tr>
<td>Innovation in the industry in which company operates</td>
<td>0.956214</td>
</tr>
<tr>
<td>Company is the leader in the innovation of new services</td>
<td>-0.528264</td>
</tr>
<tr>
<td>Promotion of innovative services</td>
<td>-5.60638</td>
</tr>
<tr>
<td>Intensive introduction and testing of new services</td>
<td>2.42416</td>
</tr>
<tr>
<td>Company is the first one to launch new product or service</td>
<td>0.579566</td>
</tr>
<tr>
<td>Company often tests new ideas</td>
<td>-2.27638</td>
</tr>
<tr>
<td>Company tests new ways of doing things</td>
<td>2.26883</td>
</tr>
<tr>
<td>We are creative in our operations and methods</td>
<td>-0.094158</td>
</tr>
<tr>
<td>Introduction of new products/services has increased in the last five years</td>
<td>2.01228</td>
</tr>
<tr>
<td></td>
<td>R-squared</td>
</tr>
<tr>
<td></td>
<td>Adjusted R-squared</td>
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Note: *** statistically significant with 1% probability, ** 5% probability, * 10% probability

Source: Author's research

Table 1 shows the regression model of the correlation between the share of export to Eastern European countries in total enterprise income and enterprise innovation activities. The adjusted coefficient of determination indicates that this regression model can interpret 8.52% of the deviation of the dependent variable, and the VIF
coefficients do not indicate a multicollinearity problem because they are all less than five. It has been shown that the share of exports to Eastern European countries in the total income of enterprises is statistically significantly negatively influenced by the promotion of new services, i.e. the variable INOV_3 with a probability level of 5% (p-value=0.01648). Although this result is, at first sight, counterintuitive, it indicates that Croatian companies participate in foreign markets with already tested, well-established and well-known products.

**Conclusion**

International exchange is essential for the long-term viability of business subjects and the prosperity of the entire national economy. Developing countries have a more pronounced growth rate than first-tier countries. Therefore, Croatian should focus its internationalization on developing countries. However, the problem of Croatian productivity lag, relative to the developed world economies, is clearly expressed. Still, compared to the encirclement, Croatia is a relatively developed country, so it has the potential to declare itself as one of the innovators in particular industries.

The effects of innovation activities are difficult to generalize with regard to conceptual complexity and complex applicability. Nevertheless, the irrefutable fact is that any implementation of an innovation idea carries risk, requires costs and impacts the business of the company. Therefore, the paper sought to examine the degree of innovation awareness of Croatian enterprises and the direction and strength of the impact of innovation of products and services intended for the Eastern European market on the export performance of Croatian companies on the same market.

Regression Model indicated that one innovation activity variable (INOV_3) had, at the same time, a statistically significant negative impact. In fact, the constant new service advancement has shown a negative impact on export activities to Eastern European countries. At first, the results are unexpected. However, these results can be interpreted by the fact that Eastern European countries are mainly less developed (according to certain economic models). Thus, they are directed towards products and services that do not represent innovation for Croatian companies but are relatively new and interesting on the markets of Eastern Europe. Therefore, Croatian companies do not have to invest significant resources in implementing new products and services in the Eastern European market.

Eastern European Market is a market of post-transition countries that are in the process of conducting industrialization and internationalization of their business. Given the level of development of Croatia in comparison to other Eastern European countries, the needs of the Eastern European market and the untapped potential of the Republic of Croatia, the emphasis should solely be on investments in the technological advancement of the industrial sector in terms of securing larger quantities of launched products and services for which there is high demand in the Eastern European market. Surely, there is also considerable human capital in the Republic of Croatia, which is mostly tied to trade and services. Emphasis should, therefore, be placed on small and medium-sized enterprises, which are faced with insufficient and inadequate inputs, with the aim of creating predispositions for enhancing their competitive advantage. This way, they can secure economic growth.

The biggest opportunity for the Croatian industry is to own more small niches and high-quality products. Through state support in government procurement projects for high-tech infrastructure equipment, Croatia will be able to preserve and increase
jobs, reduce technological dependency and foreign trade deficits, as well as meet the demand from the Eastern European market with minimal risks.

References


About the authors
Helena Nikolić was born December 27th, 1987 in Zagreb, Croatia, where she finished elementary school and gymnasium. She graduated at the Faculty of Economics and Business of the University of Zagreb, where she also received her PhD degree on “Determinants of export activities of Croatian companies in the Eastern Europe countries” in July 2015. Helena holds a position of Assistant Professor at the Faculty of Economics and Business Zagreb, Department of Trade and International Business. Previously, she had been working in Croatian Bank for Reconstruction and Development, in the Export Credit Insurance Department, for two years. The author can be contacted at hnikolic@efzg.hr

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