

Innovation and business performance determinants of SMEs in the Adriatic region that introduced social innovation

Marta Begonja, Filip Čiček, Bernardo Balboni & Ani Gerbin

To cite this article: Marta Begonja, Filip Čiček, Bernardo Balboni & Ani Gerbin (2016) Innovation and business performance determinants of SMEs in the Adriatic region that introduced social innovation, Economic Research-Ekonomska Istraživanja, 29:1, 1136-1149, DOI: [10.1080/1331677X.2016.1213651](https://doi.org/10.1080/1331677X.2016.1213651)

To link to this article: <https://doi.org/10.1080/1331677X.2016.1213651>



© 2016 The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group



Published online: 22 Dec 2016.



[Submit your article to this journal](#)



Article views: 2154



[View related articles](#)



[View Crossmark data](#)



Citing articles: 2 [View citing articles](#)

Innovation and business performance determinants of SMEs in the Adriatic region that introduced social innovation

Marta Begonja^a, Filip Čiček^a, Bernardo Balboni^b and Ani Gerbin^a

^aFaculty of Medicine, Center for Proteomics, University of Rijeka, Rijeka, Croatia; ^bDepartment of Economics, Management, Mathematics, and Statistics 'Bruno de' Finetti', University of Trieste, Trieste, Italy

ABSTRACT

The objective of this study is to investigate innovation and business performance determinants of Small and Medium Enterprises (SMEs) located in the Adriatic region that introduced social innovation and to compare these SMEs with SMEs that did not introduce social innovation or did not innovate at all. This research is a part of wider research on innovation in the Adriatic Region conducted as part of the EU-funded project PACINNO. The results show that social innovators perceive their business performance to be higher than their competitors and are exporting significantly more than other firms. This study contributes to the under-researched area of social innovation in the Adriatic Region with quantitative empirical results. In addition, the results can serve as guidelines for policy makers and other stakeholders, particularly in the field of social innovation.

ARTICLE HISTORY

Received 24 April 2016
Accepted 8 July 2016

KEYWORDS

Social innovation; business performance; exporting firms; Survey; SMEs; Adriatic region

JEL CLASSIFICATIONS

M14; O1; P45; N5

1. Introduction

Empirical research on social innovation and social entrepreneurship is still in its early phase, with case studies holding a dominant position among the applied research methods (Alvord, 2004; Evers, Ewert, & Brandsen, 2014; Seelos & Mair, 2005; Spear, 2006). This is explained by the absence of consensus among authors regarding the definition and scope of these concepts and by the existence of the problem of measurement of the performance of social organisations, which has also been emphasised in literature review papers on the subject (Dart, Clow, & Armstrong, 2010; Short, Moss, & Lumpkin, 2009; Sullivan Mort, Weerawardena, & Carnegie, 2003). For example, the concept of social innovation has been used extensively along with the term of social entrepreneurship (Moulaert, MacCallum, Mehmood, & Hamdouch, 2013) as well as other related concepts, including social value creation, social value measure, social added value, and social responsibility (Defourny & Nyssens, 2010).

The studies that attempt to conceptualise social entrepreneurship and social innovation mostly focus on one of the following areas: characteristics of individual social entrepreneurs,

CONTACT Bernardo Balboni  bernardo.balboni@deams.units.it

The extended abstract of this paper was originally presented at The 7th International Scientific Conference 'European Union Future Perspectives: Innovation, Entrepreneurship and Economic Policy', Pula (Croatia), May 21–23, 2015.

© 2016 The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group.

This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0/>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

their operating sector, the processes and resources they use and mission and outcomes (Dacin, Dacin, & Matear, 2010). For example, when exploring the phenomena, Dees (2001) tries to define social entrepreneurship by focusing on the individual. Some scholars define social entrepreneurship as a process demonstrated when government or non-profit organisations operate using business principles (Dacin et al., 2010). The Global Entrepreneurship Monitor study (Terjesen, Lepoutre, Justo, & Bosma, 2012) designed the classification of four social enterprise types (non-profit, for-profit and two hybrid forms with different types of social and commercial goals) based on the percentage of social and environmental goals they are pursuing, the diversity of their income strategies and presence of innovation in these organisations. Evers and Laville (2004) also discussed the hybrid nature of the social enterprises, influenced by the goal sets and mixed resource structure (market, state, civil society). Despite the growing relevance of this concept, it remains unclear to what extent social enterprises differ from non-social enterprises with respect to their characteristics and business performance.

Finally, the empirical studies on social innovation and social entrepreneurship deploying larger sets of data have been scant. In line with this, the particular setting of the Adriatic region has so far received limited attention in the studies of social innovation, despite its increasing strategic importance, as recognised through the recent adoption of the European Union's Strategy for the Adriatic and Ionian Region (EUSAIR). In economic terms, the largest part of this region is characterised by transition economies, which significantly lag behind the rest of the EU countries in terms of innovation performance. This region is thus in strong need of new policy measures and instruments that will boost innovative economic activities. Putting the focus on social innovations represents a potentially valuable approach to tackling the innovation problems of the Adriatic region economies.

The aim of this paper is to address the identified research gaps by exploring the characteristics and business performance of SMEs identified as social innovators, in the specific context of the Adriatic region. By focusing on the relationship between social innovation, export and business performance we contribute to the existing theory on determinants and outcomes of social enterprises. Based on the definitions of the European Commission, we also propose a new construct for measuring social innovation in enterprises. Furthermore, within our study we deploy a survey approach and create a novel dataset that covers the companies from eight countries of the Adriatic region, some of which have been studied for the first time in the context of social innovation. Although we rely on the Community Innovation Survey (CIS) in developing the questionnaire, unlike CIS we also include micro enterprises into our empirical analysis, which brings additional value to our study. Finally, the analysed data enable us to develop some specific policy implications for the development of social entrepreneurship and social innovation in the Adriatic region.

The article is structured as follows: in Section 2 we present the conceptual background and research questions that are in the focus of our empirical analysis. In the third section we present the methodology, sampling and data analysis procedures. Section 4 shows the results of empirical research by discussing the relationship between social innovation and business performance and social innovation and export. In the final sections, theoretical and practical implications are pointed out, with reflections on the limitations of the research and propositions for future research endeavours.

2. Conceptual background and research questions

Attempts to define and conceptualise social innovation have been presented in various studies, creating academic disagreement over the scope that the concept explains. However, for the purpose of our study and measurement of the potential for social innovation in the countries of the Adriatic region, we have relied on the European Commission's definition of social innovation, by Caulier-Grice, Davies, Patrick, and Norman (2012), which states that social innovation represents:

new ideas – products, services and models – that simultaneously meet social needs (more effectively than alternatives) and create new social relationships or collaborations (i.e. providing social services and/or goods and services to vulnerable persons; giving access to employment for disadvantaged people, being environmentally friendly, etc.).

According to the European Union policy perspective, the concepts of social entrepreneurship and social innovation are important because they respond to the need for cohesion of a particular society, which is an objective for public policy as well as a civil society initiative. Policy makers can support social innovation in many ways, from the introduction of funding opportunities to the adoption of specific measures and instruments. Unfortunately, 'macro' data systems are not designed to review and assist such activity, tending to focus more on traditional forms and sectors of innovation (EU DG Enterprise & Industry, 2012). This calls for further efforts in this regard. In line with this, the countries of the Adriatic region have also begun acknowledging the concept and the need for implementing policies that support and drive social innovation, considering its many benefits, such as reducing unemployment and encouraging entrepreneurship.

This study builds on the previous scientific empirical discourse confirming the positive relationship between innovation and business performance (Bowen, Rostami, & Steel, 2010; Damanpour & Evan, 1984; Jiménez-Jiménez & Sanz-Valle, 2011; Thornhill, 2006). For example, Thornhill (2006) showed the positive correlation between product innovation and performance (measured by revenue growth) on a sample of Canadian manufacturing firms. Bowen et al. (2010) found that different types of innovation were positively correlated with accounting indicators of performance as well as the index of market performance. Jiménez-Jiménez and Sanz-Valle (2011) showed that innovation (observed as product, process and administrative innovation) influenced the firms' performance, measured by the four model indicators (human-relation model, internal process model, open-system model, rational goal model). Salvadó, de Castro, López, and Verde (2012) showed a relationship between environmental innovation, as a form of social innovation, and firm performance. The latter form of social innovation is also empirically examined in our study.

Previous studies on the social aspect of the companies' goals often measured corporate social responsibility (CSR) and its relation with profitability indicators. The concept of corporate social responsibility has been identified in the literature as stimulating for corporate social innovation (Defourny & Nyssens, 2010). There have been many attempts by researchers to describe and explore the relationship between CSR and business performance, but the results have been ambiguous, showing positive, negative and neutral relationships. For example, Aupperle (1985) did not prove any significant correlation between CSR and financial performance. Waddock and Graves (1997) found the positive correlation between CSR and financial performance, but were not able to confirm the causal relationship. Furthermore, McWilliams and Siegel (2000) claimed that research and development

(R&D) intensity (antecedent of product and process innovation) was highly correlated with better financial performance, and that the effect of R&D intensity undermined the influence of CSR on profitability. Therefore, the relationship between CSR and financial performance is not straightforward. Although these studies are not easily comparable due to different empirical settings, methodologies and measures of organisational performance, we observe that in most cases, there is a relationship between CSR and organisational performance, including both financial and non-financial measures. McGuire, Sundgren, and Schneeweis (1988) explain the impact of CSR on performance through correlation with financial risk, showing that firms with social responsibility score higher in financial performance measures such as ROA and stock-market returns. In addition, these researchers posed a question of whether socially responsible behaviour is exerted due to a prior better financial situation (McGuire et al., 1988), or if there was rather a connection between CSR and good management practices (McWilliams & Siegel, 2000). In line with this reasoning, Hull and Rothenberg (2008) assessed the relationship of collaboration, industry differentiation and CSR with innovation and financial performance (ROA), showing that CSR creates a positive influence on financial performance.

All of the presented concepts are related, and the presented relationships between various innovation concepts and corporate business and financial performance are the focus of attention of many studies due to their significant practical, both organisational and policy, implications.

The objective of this paper is to contribute to the ongoing discussion on the determinants and outcomes of social innovation, by considering the context of small and medium enterprises (SMEs) within the Adriatic region. The following three research questions are the focus of our exploratory analysis:

- Is the firm's industry (service versus other industries) connected to social innovation?
- What is the relationship between social innovations and the exporting activities of Adriatic SMEs?
- Do SMEs that introduced social innovations significantly differ, in terms of business performance, from companies that did not introduce social innovations or did not innovate at all?

By answering the above research questions this exploratory study provides several novel insights into the social innovation research field.

First, we compare service and manufacturing SMEs, examining a potential industry connection with introducing social innovation. EU DG Regional and Urban Policy (2013), in their document *Guide on Social Innovation*, state that there are many service activities that are social innovations. Given the lack of quantitative studies on the subject, our intention was to explore this relationship in the empirical setting of the Adriatic region.

Second, this paper focuses on social innovation introduced by SMEs in analysing its potential connection with exporting activities. Previous studies have explored the relationship between R&D and exports by considering the firms with R&D as an indicator of innovation. However, there are numerous other variants of innovation that should be taken into account when analysing their importance and connection with exporting activities. Wakelin (1998) showed, on a sample of UK firms (with different innovation types, taken from the Science and Policy Research Unit (SPRU) innovation survey), that innovating and non-innovating firms behaved differently, both in terms of the probability of exporting and the level of exports.

Roper and Love (2002) found, on a sample of UK and German manufacturing companies, that product innovators had more inclination towards exporting than non-innovating firms; however, the innovation factor was not in a statistically significant correlation with export propensity (growing scale of export). Basile (2001) showed, on a sample of Italian manufacturing firms, that innovation strategies positively influenced the export intensity, and also checked for the additional influence of firm size, ownership structure, location and labour cost per unit of product. On a sample of Chinese industrial firms Guan and Ma (2003) showed that export growth was closely related to improvement of innovation capabilities. They also elaborated that the core innovation assets (R&D, manufacturing, marketing) were not sufficient for the sustainability of innovation growth, but rather the other four innovation capabilities (learning capability, organisational capability, resource exploiting capability, strategic capability). Exporting activities also point to the technological superiority and capabilities of the exporting firms, those that are able to compete on more complex markets or those that have superior technology compared with the competition in the specific foreign market. In that sense, exploring the connection of social innovators and their export activities can serve us in two ways. First, it can give us an insight into whether these firms act locally and impact a closed community of national costumers. Second, it shows whether the firms have capabilities for performing in multiple markets with different economic conditions.

Third, this study analyses to what extent business performance achieved by social innovators differs from the performance of those SMEs that did not introduce social innovations or did not innovate at all. Damanpour, Walker, and Avellaneda (2009) showed that the combined effect of different types of innovation positively influenced organisational performance and pointed out the significance of non-technological innovation in service firms. Koellinger (2008) also confirmed the positive relationship of product and process e-business innovators with turnover and firm growth, showing that innovative firms are more likely to grow. Developing the prior work, we formed a research question to explore whether there is a significant difference between innovators, social innovators and non-innovators in terms of business performance in the sample of Adriatic-region based SMEs. A meta-analysis of empirical papers on this relationship (Rosenbusch, Brinckmann, & Bausch, 2011) shows that the results vary because of the influence of the contextual factors on the nature of the relationship (age of the firm, type of innovation, cultural context). In that sense, exploring this relationship between innovation and performance further, with an additional focus on social innovation specificities (prerequisites) can create relevant points for future research.

To our knowledge, this is the first study comprising the data on social innovation collected on the whole area of the Adriatic Region. With this study, we wish to contribute to the understanding of the potential and prerequisites for the development of social entrepreneurship and social innovation in the Adriatic Region.

3. Methodology

This study was conducted in the framework of the IPA Adriatic Cross-border Cooperation project 'Platform for trans-Academic Cooperation in Innovation – PACINNO'. For the empirical part of the research, a written survey was used, with in total 269 variables measured. The survey was distributed via an online form using the LimeSurvey platform, over the telephone or handed personally to the general manager of the firm or the person in charge of innovations. The data collection were conducted from July 2014 to December

2014 in eight project partner countries: Albania, Serbia, Bosnia and Herzegovina, Croatia, Greece, Italy, Montenegro and Slovenia. The questionnaire was created on the basis of the previous CIS instrument, with additional variables developed based on the literature review on firm-level innovation. An excerpt of the questionnaire with the questions used in the analysis in framework of this paper is provided in Appendix 1.

3.1. Sample

The sample used in this research was designed using the stratified sampling method. Altogether, 841 firms, divided into three categories based on their main business activity and firm size, completed more than 70% of the survey and hence were included in the sample for analysis. The overall response rate for the sample was 16.12%. The three categories of the business sector were (1) primary products (raw materials); (2) production; and (3) services. The sample was stratified on the basis of the firm size and according to the EU typology (EU DG Enterprise and Industry, 2005) of micro, small and medium enterprises. This typology classifies as micro enterprises those companies that have fewer than 10 employees, small enterprises as those with 10–49 employees and medium enterprises those with employee numbers ranging from 50 to 250. Importantly, although we relied on the Community Innovation Survey (CIS) in developing the questionnaire, unlike CIS we also included micro enterprises into our empirical analysis. Table 1 shows the distribution of the social innovators, product/process innovators and overall sample across the three identified categories of business activity and firm size.

The highest percentage of SMEs with social innovations belongs to small businesses (39.7%), followed by micro enterprises (31.6%) and medium enterprises at 28.8%. Furthermore, most of the social innovators (58.1%) are concentrated in the services sector, followed by a high percentage (39.1%) concentrated in the production sector and the lowest percentage (2.8%) active in the primary products sector. Product or process innovators share similar distributions. The highest share of firms that introduced product or process innovation refers to small businesses (43.6%), followed by micro businesses (31.3%) and medium enterprises (25.1%). Distributions are also similar when the business sector is taken into account. Again, the highest percentage is distributed towards the services sector (54%), then the production sector (42.8%) and, lastly, the primary products sector (3.2%).

3.2. Measurements

3.2.1. Social innovation

More than half of the sample (56.8%) falls into the category of social innovators. Social innovation was measured by four indicators developed based on the definition of social innovation provided by the European Commission (Caulier-Grice et al., 2012):

Table 1. Distribution of the sample across the categories of business activity and firm size (%).

		Social innovators (%)	Product/process innovators (%)	Overall sample (%)
Sectors	Primary products (raw materials)	2.8	3.2	3.4
	Production	39.1	42.8	36.7
	Services	58.1	54	56.8
Firm Size	Micro	31.57	31.32	35.96
	Small	39.65	43.63	40.16
	Medium	28.79	25.05	23.88

Source: Compiled by the authors.

- Introducing or improving products (goods and/or service) with asocial or societal objective;
- Introducing or improving a method of organisation or ownership system that reflects a firm's mission;
- Introducing or improving products (good and/or service) in terms of the environmental footprint;
- Reinvesting part of a firm's profits with a view to achieving a specific social, environmental, and/or community objective.

These indicators were used as statements to which subjects answered yes or no, indicating the presence or non-presence of the specified indicator. Later, these answers were joined together in a composite categorical variable of social innovation which includes all firms that scored positive on any of the four types of social innovation practices presented in the survey.

3.2.2. Business performance

The business performance variable was measured by adding together and averaging the results of five measured indicators: market share, revenues, profit, cash flow and decrease of costs. Subjects were asked to mark their performance using a 7-point Likert scale in relation to their direct industry competitors for each of the five indicators during the three-year period, from 2011–2013.¹

In this study, business performance was determined in relation to the subjects' competitors. If the functional imperative of the enterprises' existence is acquiring profit, then performing better than the competition can be considered one of the most important prerequisites for the above-noted goal.

3.2.3. Exporting firms

While measuring the connection between export and social innovation, the exporting firms were regarded as such if they selected any of the geographic areas where their company sold goods and/or services during the years of 2011, 2012 and 2013. Those that selected only the indicator 'national [your country]' were regarded as non-exporters.

4. Results

The first research question was aimed at analysing the potential relation between service SMEs, and the introduction of social innovation. This research aim was based on the assumption that Europe's economy is concentrated primarily on its service sector, while production keeps being delegated to places with lower costs. Although the sample provides some descriptive basis for this assumption, the noted relationship did not prove significant using a Chi-Square test ($\chi^2=3.648$, $df=2$, $p=0.161$). Therefore, it can be concluded that there is no statistically significant relation between the service sector operation and the introduction of social innovations.

The second research question was to explore the relationship between socially innovative SMEs and their exporting activities (Basile, 2001; Guan & Ma, 2003; Roper & Love, 2002; Wakelin, 1998). We assume that socially innovative firms will more frequently be exporters than firms that do not implement social innovations. This assumption was confirmed by the significant value of the Chi square test ($\chi^2=15.556$, $df=1$, $p<0.05$) and

the Phi test ($\phi=0.156$, $p<0.01$) of the association between the two variables. Based on these results and along with the descriptive interpretation of the accompanying cross tabulation of exports in socially innovative firms, it can be stated that social innovators are more frequently exporters than those companies that did not introduce any social innovation. A much higher percentage of exporters are social innovators (69.60%) compared with the 30.4% of exporters that are not social innovators. Regarding the non-exporting SMEs, 54.50% are social innovators compared with 45.50% of those that are not social innovators (see Figure 1).

The last research question was based on previous studies that showed a positive relationship between innovation and/or social innovation and business performance, as elaborated in the introductory section. In order to answer the third research question, independent groups were compiled:

- Social innovators, who are also product/process innovators;
- Product/process innovators only;
- Non-innovators.

When comparing the results of the noted groups, one-way ANOVA was used which showed a significant difference between groups ($F=11.079$; $df=2$; $p<0.01$). After that, Tukey's post hoc test was used, which showed the highest significance in the difference between non-innovators and social innovators ($M=0.72$; $s.d.=0.15$; $p<0.01$). The above-mentioned test also showed a significant difference between social innovators and product/process innovators ($M=0.28$; $s.d.=0.11$; $p<0.05$).

Since, as mentioned earlier, the business performance scale was a self-assessment 7-point Likert scale, a Kruskal-Wallis test was also performed in order to clear the results from any possible suspicion rising from the fact that an ordinal scale was used in a parametric test.² The result proved significant ($\chi^2=23.245$; $df=2$; $p<0.01$), thus additionally confirming the last research question.

As shown in Figure 2, social innovators scored the highest on a business performance scale, followed by product/process innovators, and non-innovators scored the lowest.

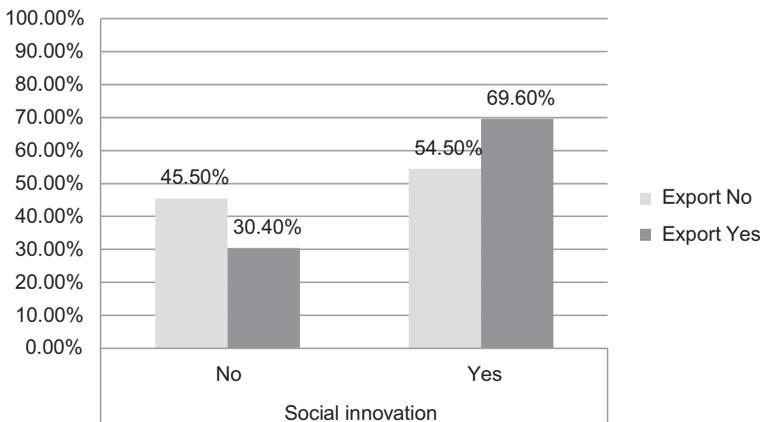


Figure 1. Relation between exporting behaviours and social innovation (%). Source: Compiled by the authors.

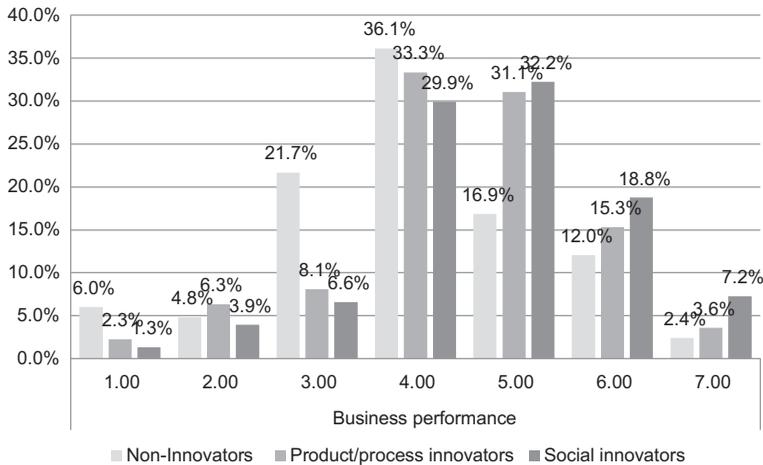


Figure 2. Relation between business performance and different types of innovation (%). Source: Compiled by the authors.

5. Discussion

The empirical investigation of social innovation in the Adriatic region points to several important findings. First, the results indicate a lack of a significant relationship between the service sector and the introduction of social innovation. Second, a significant Chi square test proves a significant relationship between social innovation and export. This implies that social innovators are more likely to export than the other two observed groups of business entities. Likewise, the results can be interpreted so as to imply that exporters are more likely to introduce social innovation than the rest of the sample. This reasoning draws from the very definition of social innovation, which implies that the nature of social innovation is to expand one's horizons in terms of intensifying and/or expanding social relations. Expanding social relations with different subjects over the borders of the mother country can be considered natural and a logical positive consequence of social innovation. It can also be viewed as a further step in the direction of adapting to the ever-changing environment of the global market.

Concerning the relationship between social innovation and business performance, we have shown that social innovators perform best on a business performance scale, followed by product/process innovators and finally, non-innovators. Although these results do not imply a causal relationship, they can serve as a solid ground for arguing that social innovators are able to achieve higher business performance results than traditional innovators and non-innovators. The finding showing that introducing product or process innovation and especially social innovation is significantly related to better business performance score and vice versa emphasises the reciprocity of the relationship between improvement of business performance and introduction of innovation. On the firm level, this requires constant evolution in terms of searching for new solutions and systems of doing business, which in turn should have a positive effect on business performance of the firm. We could also argue that the market knowledge accumulated by doing business in foreign markets, together with the achievement of positive performance, could lead the companies to better identification of their customers' needs, which their solutions and processes should be able to fulfil.

6. Conclusion

This research has sought to investigate innovation and business performance determinants of small and medium enterprises (SMEs) located in the Adriatic region that introduced social innovation, and to compare them with SMEs that did not introduce social innovation or did not innovate at all. The data that we obtained point to several important implications.

First, with our empirical study we contribute to the existing theory on the relationship between innovation, social innovation, export and business performance. We show that social innovation is significantly related to the probability to internationalise and the perception of company business performance. As such, social innovation should be considered as an explanatory variable in future empirical models aiming to assess the business performance determinants of innovative enterprises. Moreover, by introducing a specific composite measure of social innovation, we have attempted to contribute to the mitigation of the problem of ambiguous definitions, scope and measurement of this concept in future studies.

Second, a novel database that we generated within the PACINNO project covers the whole territory of the Adriatic region, a geographic area that has been characterised by significant lagging behind the EU average with respect to levels of innovative activities and innovation performance. Moreover, our database covers not only small and medium, but also micro enterprises, which represents an added value compared with the methodology deployed in the standard Community Innovation Survey. Our empirical results can therefore serve as a basis for development of specific guidelines for business entities, policy makers and other relevant stakeholders located in the Adriatic region. For example, future investments in policy measures and instruments should recognise social enterprises and particularly social innovators as important contributors to the economic performance of participating countries. Grants, subsidies and tax incentives targeting social innovators should positively affect the catching-up of the Adriatic region economies.

7. Limitations and future research

While reading the results and future results emerging from this project, one needs to be aware of some methodological limitations. First, there was an inconsistency in scales used in the questionnaire, thus limiting the possible analysis of the data. For some types of innovation nominal scales were used, while for the others (product and process innovation) an ordinal scale was applied. In order to ensure rigour, we have decided to limit our analysis to product and process innovators, excluding the organisational and marketing innovators. In addition, in some countries there were no comprehensive, suitable databases of all registered business entities, which is why the project research team members had to combine several available databases in order to obtain the sampling framework, which can be considered as a limitation for future analysis but not as much for the analysis presented in this paper.

This study is subject to some other limitations that also offer potential for future research. First, our findings are limited to a specific area, i.e. the Adriatic region, and to a specific firm size – micro, small- and medium-sized firms. Regarding the evident potential of the subject, some future research can be suggested. Considering the results and overall limitations of this research, it can be said that qualitative research on social innovation is needed

in order to make some conclusions on the causal effect of this specific type of innovation on business performance.

In addition, business performance could be measured more objectively in the future, preferably as a combination of a self-assessment scale and financial indicators (turnover, profit, etc.) of the company. Future studies should focus on different un-investigated areas, and organisational behaviour and outcomes in bigger companies. Finally, it can be said that our conceptualisation and measurement of social innovation relies heavily on the EC's definition. Future works could be aimed at development and validation of a multi-dimensional scale able to approximate the latent social innovation's constructs.

Notes

1. Scale taken from Auh and Merlo (2012). It is important to note that these results can be biased because one is more likely to say that he/she is ahead of their competitor, especially if he/she invested some time and money into innovation in his/her firm. Therefore, this scale measures subjects' opinion on their position against their direct competitor in the industry and should be regarded as such.
2. Although this practice can be seen in many cases, there is an ongoing debate about whether these types of scales should be used in parametric tests (Knapp, 1990).

Acknowledgements

This research was supported by the IPA Adriatic Cross-border Cooperation Programme; project 'Platform for trans-Academic Cooperation in Innovation – PACINNO' (str/0,003). The authors acknowledge the contribution of all partners in the PACINNO consortium in the empirical data collection process for each country of the Adriatic region. The authors also thank Prof. Dr. Stipan Jonjic for valuable help in the research process.

Disclosure statement

No potential conflict of interest was reported by the authors.

References

- Alvord, S. H. (2004). Social entrepreneurship and societal transformation: An exploratory study. *Journal of Applied Behavioral Science*, 40, 260–282. doi:10.1177/0021886304266847.
- Auh, S., & Merlo, O. (2012). The power of marketing within the firm: Its contribution to business performance and the effect of power asymmetry. *Industrial Marketing Management*, 41, 861–873.
- Aupperle, K. (1985). An empirical examination of the relationship between corporate social responsibility and profitability. *Academy of Management Journal*, 28, 446–463.
- Basile, R. (2001). Export behaviour of Italian manufacturing firms over the nineties: The role of innovation. *Research Policy*, 30, 1185–1201.
- Bowen, F. E., Rostami, M., & Steel, P. (2010). Timing is everything: A meta-analysis of the relationships between organizational performance and innovation. *Journal of Business Research*, 63, 1179–1185.
- Caulier-Grice, J., Davies, A., Patrick, R., & Norman, W. (2012). *Social innovation overview: a deliverable of the project: "The theoretical, empirical and policy foundations for building social innovation in Europe" (TEPSIE)*, European Commission–7th framework programme. Brussels: European Commission, DG Research.
- Dacin, P. A., Dacin, M. T., & Matear, M. (2010). Social entrepreneurship: Why we don't need a new theory and how we move forward from here. *Academy of Management Perspectives*, 24, 37–57.

- Damanpour, F., & Evan, W. M. (1984). Organizational innovation and performance: the problem of “organizational lag.” *Administrative Science Quarterly*, 29, 392–409.
- Damanpour, F., Walker, R. M., & Avellaneda, C. N. (2009). Combinative effects of innovation types and organizational performance: A longitudinal study of service organizations. *Journal of Management Studies*, 46, 650–675.
- Dart, R., Clow, E., & Armstrong, A. (2010). Meaningful difficulties in the mapping of social enterprises. *Social Enterprise Journal*, 6, 186–193.
- Dees, J. G. (2001). *The meaning of social entrepreneurship*. Kauffman Centre for Entrepreneurial Leadership. Retrieved from <https://csistg.gsb.stanford.edu/sites/csi.gsb.stanford.edu/files/TheMeaningofsocialEntrepreneurship.pdf>
- Defourny, J., & Nyssens, M. (2010). Conceptions of social enterprise and social entrepreneurship in Europe and the United States: Convergences and divergences. *Journal of Social entrepreneurship*, 1, 32–53.
- EU DG Enterprise and Industry. (2005). *The new SME definition: User guide and model declaration*. Luxembourg: Publications Office of the European Union.
- EU DG Enterprise and Industry. (2012). *Strengthening-Social-Innovation in EU*. Brussels: European Union.
- EU DG Regional and Urban Policy. (2013). *Guide to Social Innovation*. Brussels: European Union.
- Evers, A., Ewert, B., & Brandsen, T. (Eds.). (2014). *Social innovations for social cohesion. Transnational patterns and approaches from 20 European cities*. WILCO consortium. Liege: EMES European Research.Network asbl.
- Evers, A., & Laville, J. L. (2004). *The third sector in Europe*. Cheltenham: Edward Elgar.
- Guan, J., & Ma, N. (2003). Innovative capability and export performance of Chinese firms. *Technovation*, 23, 737–747.
- Hull, C. E., & Rothenberg, S. (2008). Firm performance: The interactions of corporate social performance with innovation and industry differentiation. *Strategic Management Journal*, 29, 781–789.
- Jiménez-Jiménez, D., & Sanz-Valle, R. (2011). Innovation, organizational learning, and performance. *Journal of Business Research*, 64, 408–417.
- Knapp, T. R. (1990). Treating ordinal scales as interval scales: An attempt to resolve the controversy. *Nursing Research*, 39, 121–23.
- Koellinger, P. (2008). The relationship between technology, innovation, and firm performance—empirical evidence from e-business in Europe. *Research Policy*, 37, 1317–1328.
- McGuire, J. B., Sundgren, A., & Schneeweis, T. (1988). Corporate social responsibility and firm financial performance. *Academy of Management Journal*, 31, 854–872.
- McWilliams, A., & Siegel, D. (2000). Corporate social responsibility and financial performance. *Strategic Management Journal*, 21, 603–609.
- Moulaert, F., MacCallum, D., Mehmood, A., & Hamdouch, A. (Eds.). (2013). *The international handbook on social innovation: collective action, social learning and transdisciplinary research*. Cheltenham: Edward Elgar Publishing.
- Roper, S., & Love, J. H. (2002). Innovation and export performance: Evidence from the UK and German manufacturing plants. *Research Policy*, 31, 1087–1102.
- Rosenbusch, N., Brinckmann, J., & Bausch, A. (2011). Is innovation always beneficial? A meta-analysis of the relationship between innovation and performance in SMEs. *Journal of Business Venturing*, 26, 441–457.
- Salvadó, J. A., de Castro, G. M., López, J. E. N., & Verde, M. D. (2012). *Environmental innovation and firm performance: A natural resource-based view*. New York, NY: Palgrave Macmillan.
- Seelos, C., & Mair, J. (2005). Social entrepreneurship: Creating new business models to serve the poor. *Business Horizons*, 48, 241–246.
- Short, J. C., Moss, T. W., & Lumpkin, G. T. (2009). Research in social entrepreneurship: Past contributions and future opportunities. *Strategic Entrepreneurship Journal*, 3, 161–194.
- Spear, R. (2006). Social entrepreneurship: a different model? *International Journal of Social Economics*, 33, 399–410.
- Sullivan Mort, G., Weerawardena, J., & Carnegie, K. (2003). Social entrepreneurship: Towards conceptualisation. *International Journal of Nonprofit and Voluntary Sector Marketing*, 8, 76–88.

- Terjesen, S., Lepoutre, J., Justo, R., & Bosma, N. (2012). *Report on social entrepreneurship*. London: GERA, Babson College.
- Thornhill, S. (2006). Knowledge, innovation and firm performance in high- and low-technology regimes. *Journal of Business Venturing*, 21, 687–703.
- Waddock, S. A., & Graves, S. B. (1997). The corporate social performance-financial performance link. *Strategic Management Journal*, 18, 303–319.
- Wakelin, K. (1998). Innovation and export behaviour at the firm level. *Research Policy*, 26, 829–841.

Appendix 1

1. Industry

Please briefly describe your enterprise's main products? (Only one option should be allowed)

- Primary Products MP1
- Manufacturing MP2
- Services MP3

Main Activity _____ NACE

2. Export Markets

In which geographic markets did your enterprise sell goods and/or services during the three years: 2011, 2012, and 2013?

A. National [your country]	(Yes, 1; No, 0)
B. Adriatic countries *	(Yes, 1; No, 0)
C. Western and Central Europe**	(Yes, 1; No, 0)
D. Eastern Europe***	(Yes, 1; No, 0)
E. North America	(Yes, 1; No, 0)
F. South and Central America	(Yes, 1; No, 0)
G. East Asia****	(Yes, 1; No, 0)
H. Middle East*****	(Yes, 1; No, 0)
I. North Africa	(Yes, 1; No, 0)
J. All other countries	(Yes, 1; No, 0)

3. Innovation

3.1. Product (good or service) innovation

A product innovation is the market introduction of a new or significantly improved good or service with respect to its capabilities, user friendliness, components or sub-systems.

- *Product innovations (new or improved) must be new to your enterprise, but they do not need to be new to your market.*
- *Product innovations could have been originally developed by your enterprise or by other enterprises or institutions.*

A good is usually a tangible object such as a smartphone, furniture, or packaged software, but downloadable software, music and film are also goods. A service is usually intangible, such as retailing, insurance, educational courses, air travel, consulting, etc.

During the three years: 2011, 2012 and 2013, did your enterprise introduce:

Product innovations: New or significantly improved goods or services (exclude the simple resale of new goods and changes of the solely aesthetic nature) (Yes, 1; No, 0)

3.2. Process innovation

A process innovation is the implementation of a new or significantly improved production process, distribution method, or supporting activity.

- *Process innovations must be new to your enterprise, but they do not need to be new to your market.*
- *The innovation could have been originally developed by your enterprise or by other enterprises or institutions.*

During 2011, 2012 and 2013, did your enterprise introduce?

New or significantly improved methods of manufacturing or producing goods or services (Yes, 1; No, 0)

New or significantly improved logistics, delivery or distribution methods for your inputs, goods or services (Yes, 1; No, 0)

New or significantly improved supporting activities for your processes, such as maintenance systems or operations for purchasing, accounting, or computing (Yes, 1; No, 0)

3.3. Social Innovation

The term 'social innovation' is used for those new ideas – products, services and models – that simultaneously meet social needs (more effectively than alternatives) and create new social relationships or collaborations (i.e. providing a social services and/or goods and services to vulnerable persons; giving access to employment for people disadvantaged, etc.).

During the three years: 2011, 2012 and 2013, did your enterprise:

Introduce or improve products (good and/or service) with social or societal objective (e.g. access to housing, health care, assistance for elderly or disabled persons, inclusion of vulnerable groups, child care, products addressed to disabled, etc.) (Yes, 1; No, 0)

Introduce or improve products (good and/or service) in terms of environmental footprint (e.g. product/service with low environmental footprint, eco-design products, etc.) (Yes, 1; No, 0)

Introduce or improve a method of organisation or ownership system that reflects their mission (e.g. access to employment and training for elderly or disables, dependency management, environmental technologies, use of clean energy, green procurement, etc.) (Yes, 1; No, 0)

Reinvest part of its profits with a view to achieving a specific social, environmental, and/or community objective (Yes, 1; No, 0)

4. Performances

Taking into account last three years (from 2010 to 2013), rate your overall business performance compared with your most direct competitor (1 = much worse, 4 = equal 7=much better)

Market share

Revenues

Profit

Cash flow

Decrease costs