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Do SME's innovation strategies influence their effectiveness of innovation? Some evidence from the case of Podkarpackie as peripheral region in Poland

JEL Classification: L11; L25; O31

Keywords: *innovation strategy; SMEs; entrepreneurship; peripheral region*

Abstract

Research background: Innovation is a very important pillar within a knowledge-based economy, in the regional and local perspective as well. A literature review on innovation and SME innovation strategies to their correlation and the possibility of their joint examination.

Purpose of the article: The aim of this paper is to explore the SME's innovation strategies and their impact on effectiveness of innovation in a peripheral region. We investigate the effects of innovation activities not only among small and medium, but also micro firms which are not covered in official innovation surveys by the national statistical offices. We proposed a model of implementing innovation, and tested our hypotheses.

Methods: Research was based on data drawn from CATIs carried out among 419 firms, therefore making a conceptual contribution to the knowledge on innovation strategy. The main statistical test for relationships and dependencies was the chi-square independence test. To arbitrate whether there were statistically significant differences between medians due to different factors among enterprises, analysis for variance (H Kruskal-Wallis' test for k independent samples) procedure was implemented.

Findings & Value added: The results of our research show that among SMEs in peripheral regions dominated those which we call 'pragmatists' and 'imitators' in context of their approach towards innovation. The significance of objective factors showed that there was a lack of enterprises that could play the role of 'creators of innovation' in the peripheral region. However, the

examined firms more often noticed positive than negative aspects of introduced innovations, which is determined by the scale of enterprise; they were focused mainly on the consequences of innovation for their products and services.

Introduction

Studies on the effectiveness of innovation in the small and medium-sized enterprise sector (SMEs) in peripheral regions are scarce (see Lejpras, 2015, pp. 734–754; Lewandowska & Stopa, 2013, pp. 1049–1055; Inzelt & Szerb, 2006, pp. 279–299). In particular, there is a need to empirically test where differences occur across the spectrum of innovation activity. These studies are aimed at making sure that future government policy and support is effectively directed towards regional market activity (or inactivity). Similar studies to ours are carried out (Grillitsch & Nilsson, 2015, pp. 299–321; Eiriz, *et al.*, 2013, pp. 97–111), but there are no significant results for small firms. Moreover, their research was not conducted in a peripheral region, therefore we expected different results.

The aim of this paper is to explore the SME's innovation strategies and their impact on effectiveness of innovation in a region that is considered dormant and less developed. Moreover, we investigate the effects of innovation activities not only among small and medium, but also micro firms which are not covered in official innovation surveys (e.g. Community Innovation Survey — CIS) by the national statistical offices. In other words, we treat Podkarpackie as a special context, in which micro, small and medium enterprises function, being subjects to growth and development policy based on innovation. Based on the results of our survey, we propose classification of SMEs with reference to innovation, and test for any differences in innovation strategies: both objective and subjective.

In the study quantitative, a computer-assisted telephone interview (CATI) with key individuals in SMEs (419 firms) that introduced at least one innovation between 2004–2011 was used as a research technique.

The article is organized as follows. The first section of the paper defines innovation in the context of the study. The next section is devoted to the issue of innovation in peripheral regions. This section covers innovation strategies and approaches to innovation in peripheral regions, and then focuses on the Podkarpackie region context. The main section consists of the presentation and discussion of the results. The paper ends with concluding remarks.

Literature review

There are different concepts of and perspectives on what makes activities innovative and what stimulates them, especially in peripheral regions. Some authors (e.g., Yang & Ying, 2016, pp. 159–171; Vaz *et al.*, 2014, pp. 23–46; Acs *et al.*, 2013, pp. 757–774, Harris & Trainor, 2011, pp. 367–385; Doloreux & Dionne, 2008, pp. 259–283) point out that understanding of “knowledge and innovation” is essential in developing effective innovation strategies and approaches. On the other hand, Nazarov and Akhmedjonov (2012, pp. 28–56) attempted an analysis of the effect of human capital on a firm’s decision to innovate in transition economies of Eastern Europe. Their main findings shed light on how local authorities may allocate scarce resources if their main goal is to boost innovation activities in their countries. This understanding is key, if more localised and specific interventions are to be made within the “regional systems of innovation”. Smith and Waters (2011, pp. 961–976) show the need for horizontal networks between firms, an institutional system of vocational training, and substantial public and private investment in innovation in peripheral regions.

Thus, regions need to develop a unique innovation policy, rather than be subject to, or part of, a national system in relation to innovation development (Woźniak *et al.*, 2015; Rodríguez-Pose *et al.*, 2014; Fritsch & Slavtchev, 2011, pp. 905–918). An example is the Regional Innovation System (RIS), which has been created as a product of decentralization of decision-making structures, from the EU to national and then to regional level. In this approach, different actors — organisations and their stakeholders within the region — have great input into innovation plans at both strategic and operational levels (Asheim *et al.*, 2011, pp. 875–891; Harris *et al.*, 2005, pp. 431–450). Innovation approaches should be seen as beneficial to business performance, rather than as impositions linked to institutional support.

Key features of the peripheral regional approach to innovation are networks and partnerships where innovation can be rapidly and effectively disseminated (see Cooke, 1996, pp. 159–172). Cooke indicates that existing sectoral competences are suited to this type of development. The example is Podkarpackie, where the competency in manufacturing has resulted in the “Aviation Valley cluster” project, in which manufacturing small businesses are linked to institutional support in the region. This support helps to develop competency, create critical mass and collect resources. The subject literature suggests that innovation depends to a large extent on firms’ abilities and opportunities to access firm-external knowledge. According to Grillitsch and Nilsson (2015, pp. 299–321), innovative firms with a low

level of technological competencies collaborate more nationally than with foreign and global partners. They find that large firms and firms with a high level of technological competencies collaborate significantly more at all geographical scales if located in the knowledge periphery.

Buhalis and Main (1998, pp. 198–202) find that there is a tendency for peripheral SMEs “to maintain a traditional management approach”, as distinct from embracing innovative best practices. Anderson *et al.* (2001, pp. 26–34) even indicates that peripheral regions can be “hostile environments for new and small firms”. The peripheral firms must pay extra costs to manufacture or to service (Anderson, 2000, pp. 91–109). Local markets are limited, hence limiting the scale of production. Access to professional labor, advice and skilled labor is limited.

Podkarpackie is one of the less developed regions in Poland in terms of GDP *per capita*, labour productivity, wages, and infrastructure. The challenge to SMEs in Podkarpackie is stated by the Board of the Podkarpackie Region (2013): “*developing the advantages of the region on the basis of creative specializations as an expression of building of the domestic and international competitiveness.*” The authors of Strategy of Development of Podkarpackie region (2013) considered the successful development of the regional economy to depend on “*competitive, innovative, indigenous firms, most of which will have started as SMEs*”. The region is classified as an EU peripheral or tertiary region, where the effects of economic disadvantage have led to an EU modernisation policy to “counteract the effects of peripherality” (Adair *et al.*, 1995, pp. 43–55). This policy outlines the need for innovation within indigenous SMEs to overcome peripheral barriers.

Barriers to SME innovations and competitiveness must be addressed if SMEs in Podkarpackie region are to grow and develop innovation potential. The Podkarpackie region was ranked particularly high in terms of innovation activities of enterprises. It was ranked 65 in the RIS 2016 (Regional Innovation Scoreboard 2016), which surveyed 214 European regions; Podkarpackie was evaluated as a “moderate innovator”. Innovation performance increased (+3%) compared to two years earlier. The RIS 2016 emphasises that relative strengths in the regional innovation system — compared to the EU28 — are in Non-R&D innovation expenditures, tertiary education attainment, and exports of medium and high tech products. Relative weaknesses are in the SME sector: marketing or organisational innovations, public R&D expenditures, and EPO patent applications.

The Podkarpackie region is among the nine best Polish regions with a high level of innovation (Regional Innovation Scoreboard 2016). In comparison to 2004 (a “modest innovator”), the position of Podkarpackie has improved significantly. From 2004 to 2010 the Podkarpackie was one of

the three regions of Poland, together with Małopolskie and Zachodniopomorskie, which has improved in terms of innovation indicators. Noticeably, the changes of innovativeness in the Podkarpackie region are also assessed positively in comparison to other Polish regions. In seven regions, the level of innovativeness declined during 2011–2016. The European Commission's 2019 Regional Innovation Scoreboard show that the Podkarpackie's innovation performance has been improving for four years in a row. RIS 2019 shows that in the Podkarpackie region innovation performance has increased over time (14% — change between 2011 and 2019; 11% — change between 2014 and 2019). It coincided with the increase in regional public funds for innovation. These funds were gathered within Regional Innovation Strategy of the Podkarpackie Region. The region is characterized, as well in the background of the country as in the EU, by some very innovative areas (aviation sector). It is related to innovativeness of industry (R&D expenditures business sector, Non-R&D innovation expenditures) and relative number of people with higher education. However, the Podkarpackie region continues to lose some ground to others of Polish regions (e.g. Małopolskie). This is another reason why research conducted in the Podkarpackie region adds to the knowledge on the institutional factors that determine innovation. It is done in a unique and dynamic economic environment, where innovation sparks despite a national-level institutional framework that allows only for modest innovation.

Research methodology

The key research questions addressed here are: how do the SMEs in Podkarpackie region judge the effectiveness of their innovations? Are there any differences in the innovation effectiveness evaluation because of small businesses, scale of activities and amount of money invested in innovation (we call them “hard” factors)? Does interest in research and development, cooperation with external R&D or other subjects of environment and institutional support in innovation (we call them “soft” factors) differentiate the perception of innovation effectiveness? Finally, how is the innovation effectiveness perceived in perspective of SMEs’ innovation strategies? Such concepts as “hard/soft” factors, their relation to specific types of innovation strategy, and types of innovation strategies themselves are explained in a further part of the article.

In this study, we use data from the research project entitled “The Study of the Impact of Investments in Innovation on the Competitiveness of the SMEs sector in Podkarpackie Region” conducted in 2014, financed within

the statutory means of UITM. The research was complex, so the analysis of all data and publication of results took a few years. A major advantage of using such data is that the sample is statistically representative on a regional level. A computer-assisted telephone interview (CATI) was conducted among 419 firms that introduced at least one innovation between 2004–2011. Firms were selected in a random way, however within strata because micro-sized enterprises represent the vast majority in the structure of the SME sector in Poland. The maximum error for interpretations and conclusions is 5% (at confidence level $\alpha=0.95$ and 0.50 fraction — unknown distribution of characteristics).

The main statistical test for relationships and dependencies was the chi-square independence test. To arbitrate whether there were statistically significant differences between medians due to different factors among enterprises, analysis for variance (H Kruskal-Wallis' test for k independent samples) procedure was implemented.

Results and discussion

By discussing how firms' innovation decisions impact the effectiveness of their innovation, we add to the literature on innovation and strategy by proposing a typology of innovation strategy. In this original contribution, innovation strategies are categorized in terms of the SME's innovation activities (scale of activities, value of investment, number of employees) and the SME's environment (engagement in R&D, cooperation, and institutional support) (Lewandowska & Stopa, 2016, pp. 147–158; Eiriz *et al.*, 2013, pp. 97–111). We identify three innovation strategies: 'creators,' 'pragmatists' and 'imitators.'

This typology is a result of a willingness to present a more complex picture of innovation: the definition includes both a patent solution and an imported, well known solution that is unique only in a local, usually peripheral context. Actually, this is the very core of our typology — peripheries are more likely to be the space where centres export their innovations than places where innovation is being developed (these are the basis of the definition of the peripheries). In our opinion, the statistics of innovativeness for peripheral regions are kind of misleading: they present major growth, but the starting point is lower, therefore solutions well-known elsewhere are usually treated as innovation. That is why it is so important to distinguish between different types of innovation strategies, especially when innovation is the basis for growth and development policy.

‘Creators’ are firms that are interested in constantly creating new original innovations, based on internal R&D and/or cooperation with external R&D institutions. They also use external support of institutional system strengthening innovativeness. In theory, such firms are concentrated on the wider SME environment, changing relations with customers and cooperatives as well as with the institutional environment.

‘Imitators’ randomly use additional public financial support to introduce innovation(s) whose novelty applies only to the enterprise level. The quantity and quality of innovations are secondary characteristics. Financial support is usually used for purchasing innovations created by others. There is no ongoing cooperation with external R&D institutions and innovation itself is useful in categories of survival on the market. What is even more important, innovation is perceived in categories of additional costs.

Somewhere between these two extremes are ‘pragmatists,’ meaning firms that do not treat innovativeness as the main paradigm, but important enough to be developed and supported by occasional cooperation with external R&D institutions and using a utilitarian approach towards public financing of the innovation. The main difference between ‘pragmatists’ and ‘creators’ is that the former are not that interested in creating new interactions within wider surrounding of the enterprise (‘pragmatists’ are more focused on internal consequences of innovations). On the other hand, ‘pragmatists’ do not only imitate innovations, “forced” by their closest competitors and/or customers (as ‘imitators’ do). They treat innovation as an important, but expensive, aspect of doing business.

According to the above considerations, it is possible to present the following theoretical model of innovation strategies concentrated on the main aspects of an enterprise’s functioning (see Table 1).

Our previous analysis of determinants influencing the choice of a particular innovation strategy showed that the quantity of innovations implemented in SMEs (26 actions that respondents could choose from) depended on the range/scale of activities, the value of investment in 2011/2012 and the number of employees in 2011/2012 (Lewandowska & Stopa, 2016, pp. 147–158). It led to quite an obvious conclusion that the greater and stronger an enterprise is, the more innovations it implements. At the same time, the quality of innovations (understood as originality of product/service innovations) depended only on the engagement in R&D and the range/scale of activities. In other words, enterprises that did have their own R&D section or cooperated with external R&D institutions and operated on a wider level than local or regional, more often introduced original product/service innovation.

In practice, it meant that among the 419 firms studied, we identified 86 possible ‘creators:’ enterprises that introduced numerous and original innovations (product and process) in the researched period of time. The word “possible” indicates that from a theoretical point of view there should also be statistical significance of the condition of the wide aspect of the enterprise’s strategy of innovation (as in the Table 1).

The present analysis concentrates on answers to the question: “Please, indicate whether, due to investment between 2004–2011, the following events took place in your firm and (if yes) how they influenced the functioning of your firm”. The closed range of possible answers contained: “in large scale”, “in medium scale”, “in small scale”, “not revealed” and “don’t know”. There were 14 positive statements and 14 their opposites about the rank of a new/improved product/service, firm’s income, costs of new/improved products/services (depreciation, costs of production, costs of work, amount of materials and energy), change in the share of the market, gaining new market, change in a firm’s external network (cooperatives, subcontractors), safety and standards of work, change of new/improved product/service environmental influence, change in the level of employment, customers’ opinions on quality of new/improved products/services. The table 2 presents the assumed model of possible innovation effects.

All innovation consequences were presented in random order to respondents. It is worth noting once again that this question was asked only of these SMEs that implemented innovation between 2004 and 2011.

The answers were indexed for each respondent to receive the quantity scale of positive and negative consequences of innovation in the respondents’ perspective: categories “large”, “medium” and “small” were recoded into “revealed” with value 1, while categories “not revealed” and “don’t know” were combined into “not revealed” (value 0), due to the focus on existing and noticed consequences. In other words, we were interested in these effects of innovation that had been noticed and valued somehow by the respondents.

Theoretical distribution of both Innovation Positive Effects Index (IPEI) and Innovation Negative Effects Index (INEI) is between 0 (no effects revealed) and 14 (each effect revealed), with a theoretical mean of 7. Table 3 presents the distribution of both indexes.

The most important information is that 2/3 of SMEs pointed out between 1 and 9 positive effects (however, 50% of them up to 5 positive effects) whilst 2/3 of the SMEs admitted to between 0 and 3 negative effects of innovations they had introduced in the firm (50% of them up to 1 negative effect). Nonetheless, 48 (11.5%) representatives of the researched

SMEs could not point to either positive or negative effects of innovation in their firms.

Among positive effects, the most frequently chosen were: “the rank of new/improved product/service had increased among other SME’s products or services” (71.6%), “customers had appreciated the higher quality of the new/improved product/service” (66.3%) and “the SME’s share of the market had increased” (58.9%). On the other hand, only 1/5 or even fewer of them, chose: “the amount of materials and energy attributable to one product had decreased”, “activity harmful to health and environment had been reduced” (both 20%) and “new market structures had been created” (15.8%). In other words, respondents concentrated on innovative product or service themselves and their perception by customers that influenced the share of the market.

As for negative effects, the ones mostly chosen were: “the prices of products/services had increased due to the depreciation costs of new equipment” (39.6%), “operating costs had increased” (32.9%). One out of ten (or even less) chose other negative consequences. In other words, innovation resulted negatively mostly in the increase of direct and indirect costs of new/improved products or services.

In our opinion, such a distribution of answers proves rather the weakness of SMEs’ innovativeness in peripheral region. Categories describing wide innovation’s potential influence on an enterprise’s environment and relations with other market participants were rarely noticed by the respondents. At the same time respondents were concentrated mostly on new or improved product/services, noticing both positive and negative consequences of innovation.

In the next step of analysis, we decided to confront both indexes (IPEI and INEI) with independent factors that described the researched enterprises in two dimensions: on the one hand, the size of the enterprise (number of employees), its scale of activities (local vs. global) and the amount of money invested in 2011/2012 (“hard” factors), and on the other hand — engagement in research and development (whether the enterprise had any R&D cooperation, and if yes — if it was external institution(s) or internal department), cooperation index (the number of parties in research and development cooperation) and institutional support index (the number of institutions supporting innovation in researched enterprises), which we called “soft” factors. As both IPEI and INEI indexes had chi-square distribution, H Kruskal-Wallis’ test for k independent samples was used to test whether there were any significant differences. The results are presented in Table 4.

The results show that the assessment of positive effects of innovation depended on objective characteristics of the enterprise — the bigger it was, the more it invested and the more international were its activities, the more positive effects of innovation were observed (the higher average rank). Institutional support was important too, having statistically significant influence on the innovation effects assessment.

On the other hand, enterprises that acted locally, but across borders, pointed to statistically more negative effects of the innovation, however if there had been institutional support, the scale of the dissatisfaction with the implemented innovation was smaller. In other words, institutional support served as a buffer in the assessment of the effects of the innovation in researched enterprises that had implemented innovation. This empirical finding is an interesting contribution to the extant literature, because it proves Lewandowska's & Stopa's argument that institutional support system is important driver of a firm's growth and its innovativeness (Lewandowska & Stopa, 2018, pp. 333–351). Innovation is too costly, and SMEs are too weak in peripheral regions, therefore there is great need for reasonable and flexible institutional support system. A similar conclusion was expressed by Zajkowski and Domańska (2019, pp. 359–384) who investigated differences in a perception of regional pro-entrepreneurial institutions between businesses that obtained or did not obtain support. According to them, support from Business Support Institutions (BSI) increases opportunities to survive in the market. Moreover, supported enterprises perceived better aspects, such as positive influence on enterprises' innovativeness thanks to BSI.

In the last step of analysis, we confronted enterprises identified as 'possible creators' (86) with all others to verify whether there was a statistically significant relation between the number and originality of innovations and concentration on a wide perspective of innovation strategy (see Table 5).

There was no statistically significant difference in assessment of innovation effectiveness on different levels between enterprises that introduced original innovations and those that introduced innovative product or service solutions already known to other enterprises.

Conclusions

In the light of current EU debate about the effectiveness of innovation strategies in SMEs, with very little empirical work addressing small firm-level assessment, this summary of findings can clarify how SME's innovation strategies influence effectiveness of innovation in the companies in

peripheral regions. We show the case where effectiveness of innovation had a different quantity depending on an SME's innovation strategies. The research was conducted in a peripheral region that a few years back was not only poor, but also dormant in terms of innovation — now, however, the same region starts to be innovative.

This study finds evidence that pragmatists and imitators dominate among small businesses in peripheral regions. Generally, the examined firms focused mainly on the consequences of innovation for their products and services. They more often notice positive than negative aspects of introduced innovations, which is determined by the scale of the enterprise. Negative consequences are more often pointed out by smaller and locally focused enterprises. However, institutional support for innovation functions is a mitigating factor.

The significance of objective factors shows that there is a lack of enterprises (among SMEs) that may play the role of 'creators' in the peripheral region. The conditions and costs of innovation process make it really hard to speak about a holistic vision of functioning by innovativeness. Innovations implemented in the researched enterprises have a character of immediate implementation (with the strong support of the institutional system) of innovative products and services already existing elsewhere to improve the local competitiveness of the enterprise.

What is really important is that both the number of cooperators and the fact of R&D support do not affect innovation effectiveness assessment. In consequence, SME perspective generally concentrates on profitability of reducing costs, that is why possible sources of additional investment funds are so important. There is no room for 'creators' that independently from the scale of activity and the size have the vision of creating the environment, creating new market structures, developing new relations networks or educating clients. Such SMEs are able to exist only in strong centers, not in peripheries where only institutional support systems may mitigate the negative consequences of the peripheral localization of the enterprises.

In other words, specific innovation strategy has no influence on assessment of innovation effectiveness in peripheral region.

There is a need for further research to estimate the net effects of SME innovation based on the analysis of counterfactual states, to look at the regional impact of different measures of SME innovation and perform counterfactual analysis with a combination of the propensity score matching (PSM) method. Evaluation of SME innovation strategies differences and analysis of the impact of SME innovation on strategies effectiveness is needed. The latter approach would be very useful for illustrating the added

value of SME innovation compared to the situation in the absence of innovative activities.

The very first limitation is the lack of commonly recognized conceptualization and operationalization of innovation strategies. Our classification is just an attempt to present more systematic reflection on practical dimension of everyday activity carried out by SME. Different approaches allow to capture various aspects of the phenomenon, however there is no plane for comparative analysis.

Secondly, both quantitative or qualitative research present just one perspective of the phenomenon. In our opinion, only interdisciplinary and based on mixed methodology research will provide the fullest possible picture of SME's innovation strategies, especially in comparison between central and peripheral regions.

Finally, single and irregular research attempts lead to data increase, but we postulate more systematic, and more importantly, longitudinal research project.

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Annex

Table 1. Theoretical model of innovation strategies vs. main aspects of enterprise's functioning

	Creators	Pragmatists	Imitators
SME's environment	focused on	rather not focused on	not focused on
SME's internal conditions	rather not focused on	focused on	not focused on
SME's product/service	not focused on	rather not focused on	focused on

Source: own research based on analysis of CATI.

Table 2. The model of possible innovation effects

Scale of effects (SME's perspective)	Positive effects	Negative effects
SME's environment	Harm to health and the environment of the firm had decreased New market structures had been created SME's share of the market had increased SME had won new market SME had developed new sources of supply	Harm to health and the environment of the firm had increased SME had been supplanted by followers that had been able to promote products/services better SME's share of the market had decreased SME had not win new market SME's current suppliers had not been able to deliver changed materials and services
SME's internal conditions	Labour safety had increased Labour standards had been improved SME had employed new employees due to growing interest in new/improved product/service	Labour safety had decreased Labour standards had been worsened SME had laid off employees due to new maintenance-free machinery and equipment
SME's product/service	Rank of new/improved product/service had increased among other SME's products or services <i>Not noticed by the respondents</i> Customers had appreciated the higher quality of the new/improved product/service Flexibility of production had been improved Effectiveness of production had been improved Labour costs attributable to one product had been reduced Amount of materials and energy attributable to one product had decreased	Incomes had lowered due to denial of products from the market Prices of products/services had increased due to the depreciation costs of new equipment Customers had noticed poorer quality of new/improved product/service Flexibility of production had lowered Outages and failures related to inadequate support for new machinery and equipment had been more often Operating costs had increased <i>Not noticed by the respondents</i>

Source: own research based on analysis of CATI.

Table 3. The distribution of IPEI and INEI

		IPEI	INEI
N	Valid	419	419
	Missing	0	0
Mean		5.59	1.47
Median		5.00	1.00
Mode		0	0
Std. Deviation		3.953	2.083
Skewness		.275	3.043
Kurtosis		-.901	12.847
Minimum		0	0
Maximum		14	14

Source: own research based on analysis of CATI.

Table 4. P-value of H Kruskal-Wallis' test for k independent samples (p values)

		IPEI	INEI
"Hard" factors	range/scale of activities	.000	.023
	value of investment in 2011/2012	.008	.119
	number of employees in 2011/2012	.000	.102
"Soft" factors	engagement in R&D	.424	.405
	cooperation index	.241	.150
	institutional support	.012	.020

Source: own research based on analysis of CATI.

Table 5. P-value of H Kruskal-Wallis' test for k independent samples: *creators* and other enterprises

	p values
environmental positive effects of innovations (IPEI for SME's environment)	.731
environmental negative effects of innovations (INEI for SME's environment)	.679
internal positive effects of innovations (IPEI for SME's internal conditions)	.547
internal negative effects of innovations (INEI for SME's internal conditions)	.168
product/service positive effects of innovations (IPEI for SME's product/service)	.937
product/service negative effects of innovations (INEI for SME's product/service)	.870

Source: own research based on analysis of CATI.