Managerial perception of regional small business environment in southern Poland

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2007

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MANAGERIAL PERCEPTION OF REGIONAL SMALL BUSINESS ENVIRONMENT IN SOUTHERN POLAND

Summary

The paper elaborates on managerial perception of regional business environment of small and medium-sized enterprises in southern Poland (i.e. two voivodeships: Małopolska and Śląsk). The paper is based on own empirical research, which was conducted in late-2004 year. The research was conducted on a random sample of 109 micro, small and medium-sized firms located in a studied region. The paper presents statistical verifications of the correlations between the eight regional environment factors and on one hand four variables describing entrepreneurs and on other hand four variables describing enterprises.

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1. Introduction

Regional circumstances play a crucial role in small and medium-sized enterprises' development. Nowadays more and more researchers and scientists pay their attention to the importance of social capital. Fragmentariness of scientific knowledge based on empirical investigation conducted in Polish reality, makes the author prepare own empirical research in this field. The purpose of this paper is to present the result of the research conducted in southern Poland.

The research was restricted to two provinces in southern Poland (Malopolska Voivodeship and Silesian Voivodeship), which according to European statistical nomenclature NUTS-1 makes up one region. The research was conducted on a random sample of 109 micro, small and medium-sized firms located in a studied region. The empirical study was based on numerous questions, which thematically can be divided into three input groups (local business environment, the entrepreneurial attitude of the owner and the characteristics of the firm) as well as one output group (the development of the firm). Descriptive statistics (arithmetic average, median, modal, quartile) as well as verifying tools (chi-squared test, Mann-Whitney test i.e. U-test) were used in order to verify the hypotheses.

2. Small Business Regional Environment

Competitiveness of economic units, especially small and medium-sized enterprises (SME's), is co-created by the conditions lying in the closest business environment, both local and regional, therefore the understanding of proper sources of competitive advantage requires undertaking the analysis on a mezoeconomic level. Thus, delimitation and identification of

regional factors, taxonomy of regional business environment as well as possibilities of optimization is very crucial for understanding the impact of regional environment on small business success, development and growth. Worldwide literature points out a number of factors, which impact development of small and medium-sized enterprises in qualitative and quantitative dimensions. The factors can be divided into three groups. The first one consists of characteristics and competences of a firm. Another very important group of factors depends on entrepreneurial potential of an owner or a manager. The last group is made up of environmental factors in macro-, mezo- and micro-dimension. During the last decade scholars focused on regional environment conditions as business success factors (e.g. Reynolds 1999; Audretsch 2003; Hart 2003; Reynolds, Storey & Westhead 1994). Some scholars even pay special attention to regional factors (e.g. Hart 2003, p. 12; Audretsch & Fritsch 1996, p.140). In Porter's opinion particular regions compete in offering the most profitable business environment, in which the public and private sector play different, but related roles in creating the economic growth (Porter 2002b, p. 3). Suitable macroeconomic policy determines economic growth, but is not sufficient because economic growth and competitive conditions depends mainly on mezo-environment conditions. The critical factor of small business success and economic growth is the quality of regional environment (Porter 2002a, p. 22). Although scholars agree that the regional business environment plays an essential role in formation, survival, functioning and development of small and medium-sized enterprises, simultaneously there is the lack of common identification and classification of regional factors. Nevertheless it is difficult, and sometimes impossible to differentiate between regional and supra-regional or national factors (Sternberg & Arndt 2000, pp. 3-7; Meyer-Krahmer & Grundrum 1995, p.177). Based on literature studies and a query search I suggest eight factors of regional business environment, which impact small business development:

- E_1: availability of capital and financial support,
- E_2: local initiatives in favour of small and medium-sized enterprises;
- E_3: availability and quality of business-to-business services,
- E_4: availability of well-educated labour resources,
- E_5: physical, transportation and telecommunication infrastructure
- E_6: mobility of a local community,
- E_7: knowledge and technology transfer,
- E_8: life standard of a local community.

Table 1. Survey of regional environment factors in view of different authors

Factors \ Authors	M.E.Porter (2001)	A.Frenkel (2001)	H.Bergmann, A.Japsen, Ch.Tamásy (2002)	A.Sfiligoj, M.Glas et al (2000)	R.Sternberg, T.Litzenberg (2004)	E.Malecki (1997)	T.Kalinowski at al [IBnGR] (2005)
physical infrastructure	+	+	+		+	+	+
business-to-business services	+	+	+	+			+
regional Policy if favour of SMEs		+	+		+		+
financial support	+	+	+	+	+	+	
well-qualified labour resources	+	+	+			+	+
local life standard	+	+					+
image of a region and its promotion		+		+			
natural resources	+						
knowledge and technology transfer	+		+		+	+	
public administration efficiency	+			+			
local competitiveness and cooperation	+					+	
business support centres			+	+			+
local entrepreneurial attitudes (norms and values)			+		+		
education and training			+	+	+		

Source: author's elaboration

The accessibility of capital as well as financial support is the key conditioning factor for formation, survival and development of SMEs, especially in an initial stage of development. Local authorities can use a wide variety of tasks in favour of entrepreneurship. Regional policy should focus on fostering entrepreneurship, but it is recommended not only to introduce new ideas, but also to deal with efficiency of a local administration, which is very important for entrepreneurs (for example 'one-stop shop'). Entrepreneurship infrastructure, consists of noncommercial units specialized in activities for small business, is crucial for SMEs' development in order to assist them on different phases of development (especially in a start-up stage). Small and medium-sized enterprises need B2B services, especially legal, tax, market research, IT and strategic consulting, to develop. This factor is very important in a mezoanalysis because firms offering such services are located in a region. Factors connected with labour market (among others the accessibility of well-educated workers, work culture) depends stronger on regional than national level. Communication and telecommunication infrastructure (e.g. quality and accessibility of roads, railway connections and air traffic, access to Internet) play the essential role for small business functioning and development. Factors connected with knowledge and technology transfer are very important, especially under globalization and knowledge-based economy circumstances. Regions can offer industry clusters, technology parks or innovation centres, which can assist to commercialize the development and research units' results in order to stimulate not only formation, but also growth of innovative firms. Social mobility, understood as readiness of a local community to active participation in economic processes, which is mounded by regulative, normative and cognitive norms, determines entrepreneurial behaviours in a region. Life standard of a local community can stimulate demand conditions, which makes this factor very important in a mezoanalysis. Regional conditions, especially efficient and effective utilization of locally diverse chances, development predispositions as well as co-operation between units is significant for development stimulus of micro, small and medium-sized enterprises.

3. Results

Factor E_1: The arithmetical average for the managerial evaluation of regional capital and financial support accessibility (E_1) carries out $\bar{x}$ = 46,3, which is classified as 'rather unfavourable', simultaneously the most numerous group of studied entrepreneurs estimates it also as 'rather unfavourable' (the value of the dominant carries out M_o = 45). The value of the median (M_e = 45) testifies that more than a half of the entrepreneurs estimated this factor as

unfavourable, what is more, taking the value of the upper quartile ($Q_3 = 55$), one can say that almost $^3/_4$ of managerial evaluation of the studied entrepreneurs is convergent. In the studied sample there is no statistical significance dependence between the factor E_1 and the sector in which the studied firms operate (F_3). Nevertheless there is statistical significance dependence between the factor E_1 and three others variables describing the studied firms, namely the age of the firm (F_1), the size of the firm (F_2) as well as the range of firms' activities (F_4). The dependence between the factor E_1 and the size of the enterprise was proved by using chi-square test ($\chi^2 = 10,56$ at $p = 0,01$) as well as chi- square of the highest credibility test (at $p = 0,01$). It shows, that predominant number of the micro and small enterprises estimate this factor negatively, however small-sized enterprise estimate this factor favourably. Statistically strong negative correlation between the factor E_1 and the age of the studied enterprise F_1 was proved by using linear Pearson's correlation ($r = - 0,45$ at $p = 0,044$). In the studied sample it was observed that firms functioning on the market more than 3,5 years more often estimate the factor E_1 negatively, while the youngest firms more often estimate this factor favourably. Strong positive dependence advocating that the bigger the range of activities is, the more positive evaluation of the factor E_1 is (it was confirmed by using linear Pearson's correlation, whose statistics carried out $r = 0,47$ at $p = 0,038$). The largest percentage of negative evaluations stepped out in the case of firms operating on the local market, and positive in the case of firms operating on international markets. Nevertheless it can be explained by the fact that banks are more favourably disposed towards internationally-orientated firms. Using linear Pearson's correlation allows to confirm the dependence between the factor E_1 and the sector of economy in which the firm operates (F_3). On the basis of the value of the statistics ($r = 0,44$ at $p = 0,043$) as well as a two-dimensional schedule it might be stated that industrial and building companies more often estimate the factor E_1 negatively than servicing and trading firms. Probably it results from the size of the firm as the firms operating in the production or construction industry are bigger, than those operating in services and commerce industry, which can be taken into account while making decisions on credit support. One can not accept the thesis that the evaluation of the factor E_1 depends on the demography of the enterprise with regardless of statistical verification. The test results on the sex of the entrepreneur (O_1), the level of education (O_2), the experience in business management (O_3) as well as the entrepreneurial attitude (O_4) are not statistically significant.

Factor E_2: The average evaluation of the factor E_2 reached $\bar{x} = 55,97$, which according to established ranks can be classified as profitable. Simultaneously the most numerous group of

studied enterprises estimated this factor as profitable, which is confirmed by the value of modal (M_o = 60). Almost $^2/_3$ of studied entrepreneurs estimated the factor E_2 as at least 'favourable', which was testified by the value of lower quartile (Q_1 = 46,7). On the basis of chi-square test (χ^2 = 7,3 at p = 0,006), as well as chi-square of the highest credibility test (at p = 0,003) the dependence between the evaluations of the factor E_2 and the age of the studied enterprises (F_1) was proved. The histogram shows that firms operating on the market no more than 3,5 years more often estimate this factor favourably, while firms functioning on the market more than 3,5 years negatively. Moreover, the bigger the firm is (F_2), the bigger the percentage of negative evaluations is, which was confirmed by chi-square test (χ^2 = 7,06 at p = 0,05). The least negative evaluations were observed among self-employed entrepreneurs. Taking statistical verifications into account only one out of four variables describing the studied entrepreneurs is related with the evaluation of the factor E_2. The dependence between the factor E_2 and the entrepreneurs' experience in business management was observed (χ^2 = 4,13 at p = 0,04). Respondents with at least 3,5-year-experience more often estimate the factor E_2 favourably. Using statistics there are no grounds for confirming the dependence between the factor E_2 and other variables (O_1, O_2, O_4, F_3, F_4).

Factor E_3: Almost $^3/_4$ of studied entrepreneurs estimated the factor E_3 as 'rather favourably' or 'extremly favourably', which was confirmed by the value of lower quartile (Q_1 = 48). Simultaneously the most numerous group of studied enterprises estimated this factor as at least 'favourable', whhich was proved by the value of modal (Mo = 60). The value of chi-square test (χ^2 = 7,5 at p = 0,05) confirms the dependence between the evaluations of the factor E_3 and the size of the studied enterprises (F_2). This correlation was also confirmed using chi-square of the highest credibility test. In the studied sample it was observed that the larger the firm is, the higher of positive evaluations frequency is. Among studied enterprises employing up to 9 workers the percentage of negative evaluations carried out near 50%, while among small enterprises and medium-sized enterprises the percentage of positive evaluations carried out 90%. The value of linear Pearson's correlation carried out the r = 0,50 at the level of significance p = 0,025, which testifies strong positive correlation between the factor E_3 and the variable F_4. The histogram shows that the larger the range of the enterprise is, the higher the percentage of positive evaluations is. For example in the studied sample among enterprises operating on international markets the percentages of positive evaluations carried out 90,91%, while among enterprises operating on local and regional markets it oscillated round 60%. The evaluation of factor E_3 depends on such variables describing entrepreneurs as

his or her sex (O_1) and experience in business management (O_3). The first of these dependences was confirmed on the basis of the value of chi-square statistics, which carried out $\chi^2 = 4,4$ at p = 0,04, as well as of chi-square of the largest credibility statistics (at p = 0,03). Moreover the average positive correlation was confirmed using linear Pearson's correlation (r = 0,42 near p = 0,066), which means that men more often estimate this factor favourably, while women are more prone to negative evaluations. In the studied sample it was observed that there is the dependence between the evaluation of this factor and the experience in business management, which was confirmed by using the linear Pearson's correlation (r = 0,42 at p = 0,068). This moderated positive correlation testifies that the longer experience the maneger has, the higher percentage of positive evaluations is. Two-dimensional schedule of variables frequency affirm that studied entrepreneurs, who have at least 3,5-year experience, more often estimate this factor favourably. There are no statistical significances as far as the remaining demographic features (O_2, O_4, F_1, F_3) in the studied sample are concerned.

Factor E_4: The average arithmetical for the evaluation of the factor E_4 carries out $\bar{x} = 65,9$, which means that it was estimated as favourable. Over $^1/_4$ of studied entrepreners estimated this factor as 'extremly favourrable' ($Q_3 = 80$), simultaneously it was the most numerous evaluation ($M_o = 80$ by 40 respondents). On the basis of the value of standard deviation it is necessary to state that entrepreneurs' evaluations differ about 21,5 % from average evaluation of this factor. The moderated negative correlation among the evaluations of the factor E_4 and the size of firm (F_2) was confirmed by using linear Pearson's correlation (r = -0,43 at p=0,06). It means that the smaller the firm is, the higher the percentage of negative evaluations is. Among studied small and medium-sized enterprises the percentage of positive evaluations carried out 75%, while among firms employing up to 9 workers (microenterprises or self-employed entrepreneurs) the percentage of negative evaluations carried out almost 30%. In the studied sample there was the regularity that the higher the level of education is (O_2), the higher the percentage of positive evaluations is, which was confirmed by the value of chi-square test ($\chi^2 = 7,6$ at p = 0,05). This dependence was also confirmed by chi-square of the largest credibility test (at p = 0,04). On the basis of conducted calculations there are no grounds to confirm the dependence between the evaluation of the factor E_4 and the remaining features (O_1, O_3, O_4, F_1, F_3, F_4).

Factor E₅: The average arithmetical evaluation of the factor E_5 carried out $\bar{x} = 59$, which according to the accepted ranks can be classified as favourable. Only $^1/_4$ of studied entrepreneurs estimated this factor as unfavourable, which was proved by the value of the lower quartile ($Q_1 = 50$). The value of the statistics $\chi^2 = 4,9$ at the level of significance $p = 0,03$ confirms the dependence between the evaluations of the factor E_5 and the age of the studied enterprises (F_1). The older the firm is, the higher the frequency of negative evaluations is. Among firms functioning on the market no more than 3,5 years 82,76 % of positive evaluations was noted, while among these operating on the market more than 3,5 year the percentage of negative answers carried out 40%.

Factor E₆: On the basis of arithmetical average ($\bar{x} = 67,8$) it can be affirmed that the average evaluation of social mobility degree in a studied region, defined by entrepreneurs, is marked as profitable, simultaneously the same evaluation is indicated by the most numerous group of entrepreneurs ($M_o = 60$). Taking the value of median ($M_e = 66,7$) as well as the value the upper quartile ($Q_3 = 63,3$) into account it can be inferred, that the majority of entrepreneurs estimated the feature E_6 as profitable, specifying as extremely or rather profitable (figure 1). This factor became negatively estimated only by the smallest enterprises, these employing up to 9 workers, which was confirmed by the value of chi-square statistics ($\chi^2 = 6,9$ at $p = 0,07$). These results prove the correlation between the variable E_6 and the variable F_2. This dependence became also confirmed using chi-square statistics of the highest credibility at typical level of significance. With regard to four characteristics describing studied businessmen as well as four describing studied enterprises only one proved dependence was observed. The higher education level of entrepreneur is (variable O_2) the bigger frequency of positive answers is. This dependence was confirmed using ch-square statistics ($\chi^2 = 19,7$ at $p = 0,05$), as well as chi-square statistics of the highest credibility (at $p = 0,01$). The results of tests with regard to a sex of an entrepreneur (O_1), the length of experience in enterprise management (O_3), as well as the entrepreneurial attitude of an entrepreneur (O_4), the age of a firm (F_1), the sector in which it functions (F_3) as well as the range of its activity (F_4) there are not statistically essential dependences, which means, that there are no bases nor to prove, nor to reject verifying hypotheses in this incident.

Factor E₇: The regional knowledge and technology transfer was estimated high by the studied entrepreneurs (the maximum value carried out 93,3 simultaneously the minimum

value carried out 46,7, which means it was the highest). Taking the value of arithmetical average (χ^2 = 72,3) as well as the median (M_e = 73,3) into account, it is necessary to state that almost half o the studied entrepreneurs estimated the feature F_7 as 'extremely favourable'. Moreover the lowest standard deviation out of nine remaining factors of regional environment was observed (s = 10,5), which marks that the average difference of the entrepreneurs' evaluations from the average arithmetical studied variable E_7 is low. On the basis of the value of standard deviation we can draw out the conclusion, that the evaluation of this factor is the least diverse (min = 46,7, max = 93,3). The most numerous group of studied entrepreneurs estimated this factor as 'favourable' (Mo = 66,7, at mode size 29). The strong positive correlation between the respondents' education (O_2) and the evaluation of regional knowledge and technology transfer (E_7) was observed by using linear Pearsona correlation (r = 0,48 at p = 0,03). The higher level of education is, the higher the frequency of positive evaluations is. On the basis of conducted calculations there are no grounds to confirm the dependence between the evaluation of the factor E_7 and the remaining features (O_1, O_3, O_4, F_1, F_3, F_4).

Factor E$_8$: The arithmetical average for the evaluation of the factor E_8 reached $\bar{x}$ = 69, which according to the received ranks can be classified as 'favourable'. The most numerous group of entrepreners estimated this factor identically, which was confirmed by the value of the dominant (Mo = 66,7). The value upper quartile (Q_3 = 80) testifies that at least $^1/_4$ of studied entrepreneurs estimated this factor as 'extremely favourably'. The dependence between the evaluation of factor E_8 and the sector of economy in which the enterprise operates (F_3) was confirmed by using chi-squared test (χ^2 = 3,6 at p = 0,05). Negative evaluations have been noted down only among servicing and trading enterprises, which can testify about special sensibility of these enterprises to life standard of local community. Two out of four variables describing entrepreneurs four variables were proved. Using chi-squared test (χ^2 = 3,6 at p = 0,04) shows that the evaluation of the factor E_8 depends on the sex of the studied entrepreneurs (O_1). It was observed that men more often estimate favourably this factor, while among women the relatively high percentage of negative answers was noted down. On the basis of linear Perason correlation (r = 0,48 at p = 0,03) we can point out moderate positive correlation between the evaluation of the factor E_8 and the level of education (O_2). The higher the level of education is, the higher the percentage of positive evaluations is. On the basis of conducted calculations there are no grounds to confirm the dependence between the evaluation of the factor E_8 and the remaining features (O_3, O_4, F_1, F_2, F_4).

The synthetic coefficient of managerial evaluation of regional environment in the studied region was prepared (E_0) in order to conduct the analysis of influence of regional business environment on small and medium-sized enterprises' development. The coefficient was constructed pursuant to the sum of values (in the 1-to-5 range) indicated by respondents for every partial factor (E_1 - E_8), and then it was divided by the sum of maximum values possible to obtainment. In the end the average estimation standardized in the 0-to-1 range (expressed in percentage terms in the 0-to-100 range) was obtained. As a result the quasi continuous variable was obtained. The average managerial evaluation of regional environment was classified as 'rather favourable' on the basis of both the value of arithmetical average $\bar{x}$ = 62,3 and established ranks.

Conclusions

Regional business environment plays a crucial role in stimulating small business development. Present worldwide research focus mostly on the microeconomic point of view, passing over the managerial dimensions of the issue. Thus, own empirical research tried to solve the problem from the managerial point of view. While evaluating the current state of the regional factors, the entrepreneurs' perception was implemented as a research technique. The research assumed eight regional factors, which can impact success of small and medium-sized enterprises. The factors were appointed on the basis of literature study by grouping various factors indicated by various authors. Factors, appointed in this way, treated the regional environment more comprehensively than presented in previous research.

The analysis of literature as well as the results of own empirical research confirm, that the proper functioning as well as development of small and medium-sized enterprises depends among others on particular factors of regional business environment. Local and regional conditioning, and especially efficient and effective utilization diverse chances, developmental predispositions as well as cooperation can be significant stimuli for small and medium-sized enterprises' development in a studied region. Affirming on the basis of conducted investigations, that regional factors are key stimuli for SMEs' development can be going too far, however it is for sure that regional factors are ones of essential determinants of SMEs' development, and their analysis delivers valuable directions for changes in this range.

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