The entrepreneurial perception of the small enterprise environment

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ABSTRACT

The way of perceiving the environment is the factor informing on the condition of the environment and its impact on the operation of enterprises whereas the impact on the operation is the factor determining how enterprises operate in realities where there is no place for atomized actions of isolated enterprises and the impact of the environment and relationships with its constituents and all forms of inter-organizational and interpersonal relationships are of increasingly critical importance. The objective of the study is to analyze the perception of the environment in which modern small enterprises operate. The study question relating to this problem was formulated as follows: 1) what is the perception of the environment by the entrepreneurs representing small enterprises? 2) Is the environment of small enterprises perceived as unfriendly (dynamically changing, hostile, heterogeneous) by them? The research tool was the questionnaire. The statistical analyses were conducted using the R Package. While summing up the results of the conducted research, it should be concluded that, in most studies in the field of management of modern enterprises, a frequent observation is defining the environment as turbulent or ultrafast. The perception of the entrepreneurs under research indicates, however, a slightly different, more lenient approach to the environment. Although they were not directly asked about the level of turbulence of the environment, the obtained results, maintaining the characteristics of the environment in the middle of the scales (dynamism, hostility, heterogeneity) indicate that this environment is not perceived in a drastic and pessimistic manner.

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INTRODUCTION

The multipolar world seems to be the fact of modern reality. As Posen (2009) pointed out, a report titled Global Trends 2025: A Transformed World, issued by the US National Intelligence Council, stated that a multipolar world - that is, a world characterized by multiple centers of power - was gradually emerging. The report attributes this to "the rise of emerging powers, a globalizing economy, a historic transfer of relative wealth and economic power from west to east, and the growing influence of non-state actors." An important thought in the context of these processes is the concern for the operating conditions of modern companies, particularly taking into account the smallest ones and simultaneously the ones which are the most significant in economic terms – the sector of small and medium enterprises (SMEs). In order to pursue the considerations concerning this issue, it is worth getting interested in the environment of these enterprises since this is the environment that creates their strategies, operations, competitiveness and overall performance. Also, while aiming at any considerations concerning the issue of their performance in today's globalized, multipolar world, it is worth paying attention to the condition of the environment in which they are currently operating since the fact relating to how the environment of modern SMEs, in particular the small ones, is perceived by them, gives rise to the determination of their potential “well-being” in the conditions of their operation in the international, globalized market. The way of perceiving the environment is also the factor informing on the condition of this environment and its impact on the operation of enterprises whereas the impact on the operation is the factor determining how enterprises operate in realities where there is no place for atomized actions of isolated enterprises and the impact of the environment and relationships with its constituents and all forms of interorganizational and interpersonal relationships are of increasingly critical importance. The objective of the paper is to analyze the perception of the environment in which modern small enterprises operate. The subject of the research has been selected small enterprises (including micro-enterprises) due to their share in a total number of enterprises in Poland (nearly 99%) and also a steady increase in their number as well as an increase in the value of production, revenues, number of employees. In the years 2008-2016 it was the smallest enterprises that indicated the highest profitability against the background of the whole population of enterprises. The research question relating to this problem was formulated as follows: 1) what is the perception of the environment by the entrepreneurs representing small enterprises? 2) Is the environment of small enterprises perceived as unfriendly (dynamically changing, hostile, heterogeneous) by them? The research tool was the questionnaire. The statistical analyses were conducted using the R Package - a free software environment for statistical computing and graphics. The scale reliability was analyzed using Cronbach’s Alpha. The test probability of p<0.05 was found as significant whereas the test probability of p<0.01 as highly significant.

The environment of small enterprises

General environment (Hitt et al., 2015) is a classification of the environment, the pattern of all external conditions and influences affecting a company’s life and development (Mintzberg et al., 2002), that have been classified over time in several and well-known ways: internal and external; national, regional or local, according to the criteria to be applied. The operations of each business take place in the conditions of uncertainty, complexity and volatility nowadays. In order to sustain the existence, each enterprise must introduce changes and operate in a flexible way, with imagination, while adapting, often in advance, its strategy, structure and culture to changes in the environment, which are of a greater importance nowadays than the achievements within the organization.

Turbulence of the environment is one of the most characteristic features of the modern conditions of management. Therefore, it is important to be able to manage an enterprise subjected to constant changes. The sector of small and medium enterprises is especially exposed to the impact of the external environment (Lemańska-Majdzik, et al., 2018). It should be pinpointed that the characteristic feature which is also important for management of small and medium enterprises is significant sensitivity of these entities to internal and external operating conditions, which are often unfavorable and impede the activity and development of the company (Lachiewicz, Matejun, 2012). In the world, there is actually nothing which can be found as permanent and unchangeable. All organizations are constantly subjected to the
operation of the micro- and macro-environment and respond to changes taking place in it. Each organization, in a way, also affects what surrounds it. All entities, both individual actors in the market game and entire organizations, are the particles of a larger whole whereas all changes are closely related. In the conditions of dynamic intensity of competition and the need for increasingly rapid response of enterprises to the changes taking place in the environment the actions taken are burdened with increasing risk. Markets have become global markets characterized by increased competition and pressure resulting from the variety of sources and increasing rapidity. In such environment, there is a probability of the emergence of opportunities and their disappearance in such a short time that the interested enterprises are not able to notice them and realize the fact of their occurrence. While coming across constant changes and turbulences, effective enterprises are forced to abandon traditional customs in the business activity adequate to the stable, slowly changing conditions of the environment in favor of actions more suited to highly dynamic, in competitive and environmental terms, opportunities (Tomski, 2011). It is also claimed that the innovativeness of enterprises depends not only on their innovation potential, but also on their micro- and macro-environment. External factors have greater significance in the case of small enterprises (Sipa, et al., 2016). The condition of the environment and its assessment by enterprises seems to be an important variable for the operation of these enterprises since the perception of the environment influences the activities of enterprises. This study has been carried out in seven Provinces of Poland in 2015.

MATERIALS AND METHODS

While aiming at determining the specificity of research works and, most of all, their objective, scope and research methods, the research problem has been formulated, constituting the starting point of this paper. This problem has been formulated in the form of the following questions: 1) what is the perception of the environment by the entrepreneurs representing small enterprises? 2) is the environment of small enterprises perceived as unfriendly (dynamically changing, hostile, heterogeneous) by them? The research, the results of which have been depicted in the present paper, was based on the method of conducting empirical studies by means of managerial perception (Miller, Friesen, 1978), in which data are obtained using the questionnaire. The conducted research is exploratory in nature, directed to the identification of the environment in which modern small enterprises operate. The respondents of the research were the owners-managers of the analyzed enterprises. The research tool was spread among the randomly selected organizations – due to easy access – from the areas of the provinces: 1) kujawsko-pomorskie, 2) Lubelskie, 3) łódzkie, 4) mazowieckie, 5) Podlaskie, 6) śląskie and (7 Świętokrzyskie. 143 copies of the completed questionnaires were received, out of which 14 were rejected due to incomplete data. In these circumstances, the research sample amounted to 129 small firms. The majority are the companies running their business activity in cities. These enterprises amount to 84.5%, whereas the companies operating in the country constitute 15.5%. The enterprise operating on the market for the shortest period of time is eight months old. The oldest one has been operating on the market for 26 years. The enterprises under consideration are both the companies characterized by self-employment, the ones not employing workers and the ones employing even 46 people. On average, the level of employment in the analyzed companies amounts to 4 employees (an entrepreneur +4 employees). For most of the surveyed companies, the basic activity is production (30.2%). The activity associated with trade was identified as the domain of 33.3% of the surveyed companies. In the sector of services there operate 24% of the surveyed entities. The other 12.5% of the companies run their business activity in the field of the following sectors: construction, hotels and restaurants, transport, storage and communication, education and agriculture, hunting and forestry. The vast majority and simultaneously nearly half of the entrepreneurs declared their age range as 36-45 (46.5%). The people aged 46-55 amount to 20.9% of those questioned whereas the people aged 26-36 amount to 15.5%. The people aged 56 and more as well as the ones aged 25 and less respectively amount to 14% and 3.1%. The research is based on the existing achievements of management science. As early as in the 1980s and 1990s, among significant characteristics of the environment, Miller and Friesen (1980 and 1983), followed by Zahra (1993) listed: dynamism, hostility and heterogeneity. The dynamism of the environment is identified with the unpredictability
of the behavior and tastes of customers and competitors, extent of changes in market trends, technologies and principles of competition in the sector. The hostility of the environment is revealed in price, product and technological competition and in the field of distribution and also in the form of strict rules and legal constraints, shortage of supply in the labor and raw material market and unfavorable demographic trends. The heterogeneity of the environment is revealed in the form of differences in competitive tactics, customers’ tastes, product lines, distribution channels etc. in the markets served by the enterprise. These differences are important when they require the application of completely different marketing operations, production and administrative practices. Taking into account the timelessness of these features and broad acceptance of this approach (over 2300 citations of Miller and Friesen’s article of 1983 in Google Scholar database), for the assessment of the environment and the measurement of its perception by entrepreneurs, the concept of assessment of the environment suggested by Miller and Friesen, made of seven scales, was applied. There were used three items defining the dynamism of the environment (DYN), three defining its hostility (HOS) and one defining its heterogeneity (HET). The research tool was, therefore, developed in order to enable the analysis of the listed characteristics of the environment: environmental dynamism (DYN), hostility (HOS) and heterogeneity (HET). The respondents were asked the following question: “How do you perceive the environment of your company? Please, express your attitude towards the statements listed in the table below. Below, there are presented the pairs of contradictory characteristics of the environment: (DYN1) Market activities of major competitors of my company are predictable/hardly predictable, (DYN2) Tastes and preferences of my customers in the sector which the main area of my company’s activity belongs to are stable and predictable/difficult to predict, (DYN3) Degree of innovation of new processes and products/services in the sector which the leading area of my company’s activity belongs to is low/high, (HOS1) In the sector which the leading area of my company’s activity belongs to, economic downturns and increases in prosperity are predictable/hardly predictable, (HOS2) Market activities of major competitors of my company are hostile/not hostile (reversed coding), (HOS3) Market activities of major competitors of my company affect my company in few areas/affect my company in a large number of areas (e.g. prices, service, quality etc.). (HET) Diversification of production methods/providing services and marketing tactics to meet the needs of different customers is low/high”. The respondents were asked to mark the number which best reflects their feelings: “1” means that the statement on the left is true and “7” that the statement on the right is true. Midpoints reflect the intensity of the combination of two extreme statements, e.g. “4” means the average attitude with simultaneous intensity of the left and right side. For all the variables, except for HOS2, higher values correspond with more adverse features of the environment. In the case of the variable of HOS2, lower values prove more unfavorable nature of the environment to the enterprise.

RESULTS AND DISCUSSION

The perception of the environment by the surveyed entrepreneurs, measured on a seven-point Likert scale, is presented in Table 1.

The obtained results indicate that the first two dimensions of the dynamism of the environment - DYN1 and DYN2 are perceived below the average state. Therefore, the entrepreneurs were prone to state that market activities of major competitors are more predictable than unpredictable (scale average - 3.60) whereas, in the case of tastes and preferences of customers, they tended to define them as more stable and predictable than difficult to predict (scale average - 3.73). In the case of the assessment of the degree of innovation of new processes and products/services in the sector (DYN3), the entrepreneurs indicated a slightly higher level than average (scale average - 4.05). In relation to the hostility of the environment, the entrepreneurs indicated the existence of

Table 1: The perception of the environment of the surveyed entrepreneurs

<table>
<thead>
<tr>
<th>Variable</th>
<th>DYN1</th>
<th>DYN2</th>
<th>DYN3</th>
<th>HOS1</th>
<th>HOS21</th>
<th>HOS3</th>
<th>HET</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value</td>
<td>3.60</td>
<td>3.73</td>
<td>4.05</td>
<td>4.18</td>
<td>3.82</td>
<td>4.21</td>
<td>4.14</td>
</tr>
</tbody>
</table>
such a characteristic of the environment of their enterprises. They pointed that economic downturns and increases in prosperity are hardly predictable (HOS1 scale average - 4.18) whereas market activities of major competitors are hostile (HOS2 scale average with reversed coding - 3.82). (HOS3) Market activities of major competitors were determined as the ones affecting the surveyed enterprises in a large number of areas (HET scale average - 4.14). The results of the analysis of homogeneity of the scales of DYN and HOS, applied to measure the environment, are presented in Tables 2 and 3.

There was identified a high value of Cronbach’s alpha of 0.745 for DYN scale. No variable distorts the scale. The level of Cronbach’s alpha for HOS scale, amounting to 0.644 should be found as barely acceptable. In connection with the fact that HET scale is a one-item scale, its internal consistency was not analyzed. In the conditions of acceptance of homogeneity coefficients, it was concluded that it is possible to use the tool suggested by Miller and Friesen (1980 and 1983) to measure the environment in the case of the surveyed group of enterprises. There was also conducted the analysis of the correlation of variables determining the condition of the environment. The results are presented in Table 4.

The obtained results indicate that the variables of DYN, HOS and HET are positively significantly statistically correlated and this correlation is strong. The last variable analyzed is the variable describing the whole of the environment in which the enterprises being subjected to the analysis operate (ENV). Descriptive statistics for this variable are presented in Table 5.

In conclusion, in accordance with the adopted manner of measurement of the shape of the environment, there were isolated three dimensions characterizing the environment of the surveyed enterprises: dynamism of the environment (DYN), its hostility (HOS) and heterogeneity (HET). On average, the level of dynamism of the environment amounted to 3.79 points. This level deviates from the mean by +/- 1.48 point. At least 50% of the respondents declared this level as not higher than 3.67 points, at least 25% of the respondents – as not higher than 3 points, whereas at least 75% of the respondents – as not higher than 5 points. On average, the level of hostility of the environment amounted to 4.19
points. This level deviates from the mean by +/- 1.40 points. At least 50% of the respondents declared this level as not higher than 4.33 points, at least 25% of the respondents – as not higher than 3.33, whereas at least 75% of the respondents – as not higher than 5 points. On average, the level of heterogeneity of the environment amounted to 4.14 points. This level deviates from the mean by +/- 1.59 points. At least 50% of the respondents declared this level as not higher than 4 points, at least 25% of the respondents – as not higher than 3 points, whereas at least 75% of the respondents – as not higher than 5 points. The environment of the enterprise includes all the factors and processes which have impact on the operation of the company. It determines its opportunities for development, at the same time creating opportunities, barriers and threats. The process of the identification of the environment of the company is subjective in its nature since, as stated by Bednarczyk (1996), the characteristics of the environment are assessed through the filter of cultural determinants of decision-makers and/or analysts of the environment. All in all, in relation to the obtained research results, it should be concluded that the surveyed entrepreneurs do not perceive the environment of their enterprises in a highly negative manner. The parameters of any of the dimensions do not indicate a particular nuisance of the environment. All the results, while hovering around average values, do not suggest that entrepreneurs anxiously perceive the shape of the environment. In these circumstances, one may assume two reasons for that. The first one is a routine and the other one is adaptation. These reasons have, at the same time, the common part since adaptation, the ability to predict changes and flexible changes within the organization, adequate to signals coming from the environment may be identified with a routine. Adapting to changes in the environment can become a routine and permanent changes within the environment can be perceived by entrepreneurs as a constant process, being an element of the landscape of the operation of the company. An additional aspect is the fact that the environment is not perceived negatively since small entrepreneurs (with a predominance of micro-entrepreneurs) can perceive the changes in the environment, all activities of competitors, changes in the industry and changes in homogeneity of the environment as the conditions for arising innovation and recognizing opportunities. Such an interpretation justifies the relatively positive approach of entrepreneurs to the environment and lack of indication of extreme responses but positioning the characteristics of the environment in the middle of the scale. In the context of the impact of the environment, it is worth mentioning that the problem of adaptation of enterprises and changes is generally considered by the theory of organizational balance. The organization subjected to the strong impact of the environment must respond to it to prevent crisis. There are two types of responding to changes in the environment. The reaction of type I is aiming at homeostasis, the return to the equilibrium point of the organization through the adaptation activities or preventing distortions. The application of such a reaction leads to increasing an organizational gap in the case where the strength and pace of changes are large and the impact of the organization on the environment is weak. The reaction of type II is responding by innovation activities in different areas and emphasis on bridging the gap between the challenges of the environment and the organization (Romanowska, 2010). Therefore, it is possible that the surveyed enterprises use the reaction of type II, which bridges the gap between the organization and the environment and contributes to the optimistic perception of the characteristics of the environment. According to Ansoff (1985), the perception of the turbulence of the environment is additionally affected by three filters: cultural perception, prognostic filter of the functioning of the organization and prognostic filter of the environment. In relation to the perception of the environment, it should be emphasized again that objectivity is difficult to

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Standard deviation</th>
<th>Median</th>
<th>Min.</th>
<th>Q25</th>
<th>Q75</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>DYN</td>
<td>3.79</td>
<td>1.48</td>
<td>3.67</td>
<td>1.00</td>
<td>3.00</td>
<td>5.00</td>
<td>7.00</td>
</tr>
<tr>
<td>HOS</td>
<td>4.19</td>
<td>1.40</td>
<td>4.33</td>
<td>1.00</td>
<td>3.33</td>
<td>5.00</td>
<td>7.00</td>
</tr>
<tr>
<td>HET</td>
<td>4.14</td>
<td>1.59</td>
<td>4.00</td>
<td>1.00</td>
<td>3.00</td>
<td>5.00</td>
<td>7.00</td>
</tr>
</tbody>
</table>
achieve since the perception of the environment is a complex cognitive process, consisting in reflecting, in a subjective and individual manner, processes and phenomena taking place in the environment as well as selecting specific features characterizing the environment and assigning them the level of importance (Wach, 2008). Modern enterprises make strategic decisions in very difficult conditions. Complexity, resulting from the relationships of events, processes and activities of economic entities, is the imperative to make key decisions within the operations of enterprises.

CONCLUSION

While summing up the results of the conducted research, it should be concluded that, in most studies in the field of management of modern enterprises, a frequent observation is defining the environment as turbulent or ultrafast. Due to the limitations relating to the volume of this paper, it is difficult to quote all the authors recalling the fact of existence of such a condition of the environment of modern enterprises (Ansoff, 1991; Davis et al., Allen 1991; Grant, 2003; Nowodziński, 2013; Hu et al., 2018; Arnaout and Esposito, 2018). The perception of the entrepreneurs under research indicates, however, a slightly different, more lenient approach to the environment. Although they were not directly asked about the level of turbulence of the environment, the obtained results, maintaining the characteristics of the environment in the middle of the scales (dynamism, hostility, heterogeneity) indicate that this environment is not perceived in a drastic and pessimistic manner. The results obviously relate exclusively to the surveyed group of entities and cannot be generalized. Therefore, in these circumstances, it seems to be justified to carry out such research in the future on a representative group of entrepreneurs, which would allow to relate the results not only to the analyzed population but extend them to the entire SME sector. Additionally, this leads to the conclusion that it would be a good idea to conduct the research into the level of predictability of the environment of small enterprises since one may assume – on the basis of the obtained results for the surveyed group– that the way of the perception of the analyzed characteristics of the environment by the surveyed entrepreneurs may prove the existence of the average level of its predictability. These are, however, the assumptions which can be subjected to the analysis in separate research in order to clarify the approach of modern small enterprises to their environment. In relation to the results of the conducted research, the authors do not formulate any practical recommendations referring to the perception of the environment. The research has been exploratory in nature, aiming at the analysis of the perception of the environment in which modern small enterprises operate. This objective has been accomplished while, at the same time, laying grounds for future research and indicating open research areas. Conducting the analysis of relationships between the performance of enterprises and the perception of the environment would enable searching for the ways of the perception of the environment that allow the best reactions leading to high performance. Finally, it is concluded that the bamboo activated carbon is best suited for removing not only nickel, any type of metal ions and other associated ions from any type of industry wastewater.

ACKNOWLEDGEMENT

The Authors express their gratitude to the entrepreneurs (owners/managers) of the surveyed enterprises for providing necessary information to complete this study successfully.

CONFLICT OF INTEREST

The author declares that there is no conflict of interests regarding the publication of this manuscript. In addition, the ethical issues, including plagiarism, informed consent, misconduct, data fabrication and/or falsification, double publication and/or submission, and redundancy have been completely observed by the authors.

ABBREVIATIONS

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>DYN</td>
<td>Dynamism of the environment</td>
</tr>
<tr>
<td>ENV</td>
<td>Environment</td>
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<tr>
<td>Fig.</td>
<td>Figure</td>
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<tr>
<td>HET</td>
<td>Heterogeneity</td>
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<tr>
<td>HOS</td>
<td>Hostility</td>
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<td>Max.</td>
<td>Maximum</td>
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<td>Min.</td>
<td>Minimum</td>
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<tr>
<td>Q25</td>
<td>First quartile</td>
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<td>Q75</td>
<td>Third quartile</td>
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REFERENCES


