PRIMARY RESEARCH

Characteristic features of small business and large firms: An empirical comparative study

Marek Matejun*

Department of Management, Lodz University of Technology, Lodz, Poland

Keywords
Small business
Large enterprises
Specifity and denaturing of business
Methodology of small business

Abstract. When conducting research into small business, it is necessary to clearly define and identify the particular size classes of enterprises. This can be done by applying quantitative and/or qualitative criteria which reflect the specificity of business entities of different sizes. The effectiveness of solutions adopted in this field is crucial for determining the methodological basis of research into small and large business management, and affects the cognitive and interpretative value of the research, as well as its practical outcomes. In light of the above, the present paper aims to identify and assess the quantitative and qualitative areas that classify firms according to their size into the category of small business (micro, small and medium-sized enterprises) and the category of large firms. The objective of the paper was achieved through an empirical comparative study carried out on a sample of 1,784 enterprises of different sizes in the European Union. Based on the results, two research hypotheses were verified, and a series of theoretical, methodological and managerial implications was formulated. The appendix contains a proposal of a research tool for assessing the size of enterprises based on the quantitative and qualitative criteria under investigation.

INTRODUCTION

According to the data collected by the International Finance Corporation in 132 countries between 1993 and 2010, there are over 125 million micro, Small and Medium-sized Enterprises (SMEs) worldwide (Kushnir, Mirmulstein & Ramalho, 2010). For identifying those enterprises, specific criteria need to be adopted which distinguish the small business category from the Large Enterprises (LEs). The criteria can be examined from quantitative and qualitative perspectives reflecting the specificity of business entities of different sizes.

The effectiveness of the solutions adopted in this field is crucial for determining the methodological basis of research into small and large business management, and affects the cognitive and interpretative value of the research, as well as its practical (managerial) outcomes. The existing methods of defining SME sector companies are often considered insufficient (Berisha & Pula, 2015). The main objections concern: lack of precision in terms of quantitative criteria measurement, lack of deeper understanding of the qualitative specifics of the small businesses compared to the large business entities and lack of empirical verification of the criteria taken into account in the business practice.

Moreover, Curran & Blackburn (2001) point out the difficulties in operationalization of the qualitative criteria used for distinguishing the size of the entities. The researches mentioned above point out a theoretical gap in terms of proposal and operationalization of both quantitative and qualitative criteria that are used for distinguishing the small and large business entities, as well as research gap in terms of empirical verification of the proposed classification solutions. These research gaps constitute the grounds for
the research given in this work. In light of the above, the present paper aims to identify and assess the quantitative and qualitative areas that classify firms according to their size into the category of small business (micro, small and medium-sized enterprises) and the category of large firms. Two research hypotheses were put forward. The objective of the paper was achieved through an empirical comparative study carried out on a sample of 1,784 enterprises of different sizes in the European Union.

The paper is organized as follows: in the first part, a literature review was conducted, specific model assumptions were adopted, and research hypotheses were drawn up. Next, the research methodology was described, including the characteristic features of the enterprises under study, and attributes of the respondents. Further sections of the paper present the research findings along with the discussion, verify the research hypotheses and assess them against the current scientific knowledge. The final part of the paper draws attention to the limitations of an empirical study, and presents the key conclusions that lead to the formulation of theoretical, methodological and managerial implications.

The article enriches the theory of the management sciences by identifying key internal and external areas that differentiate the qualitative specifics of the small and large business. The significant theoretical asset of this work is the description and empirical identification of the denaturation of the business entities, taking into account the differentiation of their size.

**LITERATURE REVIEW**

SME sector companies play an important economic and social role in most countries around the world. Numerous studies conducted so far in various countries and regions (Leegwater & Shaw, 2008; Ionica, 2012; Nwachukwu, 2012; Decker, Haltiwanger, Jarmin & Miranda, 2013; Blundel, 2016; Naqshbandi & Kamel, 2017; Naqshbandi, Kaur & Ma, 2015) point to the special importance of small business in such areas as: economic growth, generating the gross domestic product, increase in employment, reducing poverty, implementing innovation, taking action to promote sustainable development and green economy, as well as shaping entrepreneurial attitudes in the society. In the discussions addressing this topic, SME sector companies are often contrasted with large enterprises, both with respect to macroeconomic issues (Edmiston, 2007; Haltiwanger et al., 2013), and the differences in the management processes (Verdú-Jover, Lloréns-Montes & García-Morales, 2006; Kozłowski & Matejun, 2016). This leads to the necessity of making a clear-cut distinction between the two classes of enterprises, which constitutes one of the fundamental methodological issues and challenges of research into the nature, causes, conditions and effects of functioning of micro, small and medium-sized enterprises. This research trend is referred to as the search for the specificity of SMEs (Torrè, 2003a), and focuses on distinguishing those firms from large enterprises. The beginnings of the trend are associated with the studies conducted by the representatives of the Aston Group (Pugh, Hickson, & Hinings, 1969; Pugh, Hickson, Hinings & Turner, 1968) and in the initial phase concerned mainly the effect of the size of an enterprise on the organizational structure and the management processes (Mintzberg, 1979; Penrose & Pitelis, 2009). The Bolton Report (1971), which was also published around that time, initiated the discussion about the criteria for distinguishing SMEs from LEs.

This led to the perception of small business as a coherent population juxtaposed with large enterprises on the basis of specific qualitative and quantitative characteristics that are identifiable and quantifiable (Dandridge, 1979; Welsh & White, 1981; Curran & Blackburn, 2001; Bannier & Zahn, 2012). Theoretical speculations and multi-year observation of economic practice resulted in creating many different definitions of small business all over the world (Ayyagari, Beck & Demirgüç-Kunt, 2007; Dilger, 2013). The most commonly applied quantitative criteria include: employment numbers and various financial data expressing the input, or the output of the activity conducted by enterprises of particular sizes. One of the examples here is the uniform, formal definition of micro, small and medium-sized enterprises used in the European Union, which was suggested by the European Commission (2015). According to the definition, a SME is a company with an employment level not exceeding 249 employees (calculated as full-time equivalent positions), an annual turnover not exceeding 50 million euros, and a balance sheet total not exceeding 43 million euros.

Additionally, this definition takes into account the capital relations and/or ownership relations between SMEs and other enterprises, which, if significant, have influence on the final level of criteria adopted for size analysis. Due to their practical utility, formal definitions of small business are primarily based on quantitative criteria which are measurable and quantifiable. However, such an approach restricts the methodological and substantive level of the conducted studies, and is insufficient to obtain a complete picture of the
specifiﬁcity of the population of micro, small and medium-sized enterprises as opposed to large enterprises. This resulted in the growing importance of qualitative criteria for deﬁning small business, as exempliﬁed by the set of criteria characterizing an “average small ﬁrm”, proposed by (Mazzarol, Reboud & Clark, 2011). The criteria allow for both the speciﬁcity with respect to the quantitative size of business activity, and such areas of qualitative speciﬁcity as: the characteristics of the owner-manager, the company’s strategy, organizational conﬁguration, preferences concerning the ﬁnancing of business activity, and the growth potential. According to this approach, the key characteristic features of small business are: resource limitations, concentration of management in the owner’s hands, intuitive management style, low formalized structural solutions, and the predominance of internal, own sources of ﬁnancing. Other qualitative features that distinguish small business from large enterprises include (Torrè, 2004; Nicolescu, 2009; Storey & Greene, 2010; Schaper, Volery, Weber & Gibson, 2014): independent ownership, high autonomy of business activity, simpliﬁed communication systems, a small market share and limited spatial range of market activity, as well as searching for, creating and exploiting market niches, which is connected with the high level of work specialization and the focus on discrete manufacturing and services. Those suggestions enable forming a general picture of the qualitative speciﬁcity of small business as opposed to large enterprises. It is important to point out that this model identiﬁes both the internal qualitative criteria (related to management processes inside the enterprise), and the external criteria (connected with the ﬁrm’s orientation in its environment). However, the existing solutions have certain weaknesses, such as the lack of clearly identiﬁed areas of speciﬁcity and inadequate empirical veriﬁcation of the proposed models. Bearing this in mind, on the basis of the literature review, the author’s proposal was formulated concerning the conﬁguration of internal and external areas and qualitative features categorizing enterprises according to their size into small business (micro, small and medium-sized enterprises) and large enterprises, as shown in Table 1.

### TABLE 1. Author’s model of areas and qualitative features differentiating enterprises according to their size

| Characteristic Features | SMEs | LEs |
|-------------------------|------|-----|
| **Area of Management**  |      |     |
| Level of management centralization | Centralization | Decentralization |
| Strategic approach to the company’s development | Intuitive and short-term | formalized and long-term |
| Information system in the company | Simple and informal | complex and formal |
| **Area of Structure**   |      |     |
| Relations between ownership and management | Unity of ownership and management | separation of ownership and management |
| Organizational structure | Simpliﬁed and low formalized | Complex and strongly formalized |
| **Area of Specialization** |      |     |
| Scope of duties in the company | Broad scope, varied duties | Narrow scope, specialized duties |
| Returns to scale | Small possibilities of application | large possibilities of application |
| **Area of Autonomy**    |      |     |
| Relations with other entities | High level of independence from other entities | Limited level of independence of other entities |
| Sources of ﬁnancing | Own, internal | Third party, external |
| **Area of Scope of Operations** |      |     |
| Market coverage | Local/regional | National/ International |
| Competitive arena | Market niche | Broad competitive arena |

(Source: Own work based on theoretical considerations)

In the above model, the areas of management, structure and specialization were classiﬁed as internal criteria, while the areas of autonomy and market coverage as external criteria. The adopted model leads directly to the formulation of the research hypothesis.

**H1**: Small business and large enterprises differ signiﬁcantly in terms of quantitative criteria and ﬁve key areas of qualitative speciﬁcity: management, structure, specialization, autonomy and scope of operations.

The above discussion can be supplemented with the proposal by Torrè & Julien (2005) who, when identifying the characteristic features of small and large business, pointed out the existence of a certain group of denatured enterprises within the SME sector, which despite meeting the quantitative criteria of small business, have many (the majority of) qualitative attributes typical of large enterprises. Those include e.g.: born global companies, international new ventures, highly internationalized companies, or companies operating in the high-tech sector (Oviatt & McDougall, 1994; Baum, Schwens & Kabst, 2011; Naqshbandi & Kaur, 2015). Likewise, it can be assumed that the category of large enterprises contains a certain group of denatured companies which despite meeting the quantitative criteria possess many (the majority of) qualitative attributes typical of small business. This leads directly to the formulation of the research hypothesis.
H2: Both the populations of small businesses and large enterprises contain denatured companies which despite meeting the quantitative criteria, possess the majority of qualitative attributes typical of the opposite size class.

**METHODOLOGY**

For achieving the objective of this study and verifying the research hypotheses, an empirical comparative study (Wiseman & Popov, 2015) was conducted on the basis of data collected via survey research (Bryman & Bell, 2015). A Computerized Self-Administered Questionnaire (Calletgaro, Manfreda & Vehovar, 2015) was employed as the research technique, and an electronic self-designed survey questionnaire made available to the respondents via the www.questionpro.com website was used as the research tool. The survey was conducted in 22 selected EU countries: Austria, Belgium, Bulgaria, Croatia, the Czech Republic, Denmark, Finland, France, Greece, Spain, the Netherlands, Lithuania, Germany, Poland, Portugal, Romania, Slovakia, Slovenia, Sweden, Hungary, Great Britain, Italy. According to the World Bank (2016), the study covered an area of over 4 million km² (representing over 95% of the EU total area), inhabited by nearly 500 million people (over 98% of the EU population). The countries with the greatest number of business entities were selected for the survey. As a result, the survey encompassed a territory where, according to the Eurostat data (2016) and the SME Performance Review data (2016), there are over 21 million enterprises, of which over 98% belong to the small business category. The distribution of business entities in that area according to particular size classes was as follows: micro enterprises – 92.52%, small enterprises – 6.25%, medium-sized enterprises – 1.03%, and large enterprises – 0.20%. The empirical data were collected from a random sample of 1,784 enterprises which were divided into 4 size classes based on the integrated criteria of the uniform, formal definition of small business used in the EU, formulated by the European Commission (2016). The criteria take into account the average annual level of employment measured as full time equivalent, level of turnover and balance sheet total. Moreover, only the autonomous enterprises were included in the category of SMEs, i.e. those which are completely independent of other entities in terms of capital and ownership, or have one, or more minority partnerships (each less than 25 %) with other enterprises. The survey research was conducted in 1,183 (66.31%) micro enterprises, 399 (22.37%) small enterprises, 159 (8.91%) medium-sized enterprises and 43 (2.41%) large enterprises. The structure of the sample does not fully correspond with the distribution of enterprises according to size classes in the area under study. However an attempt was made to preserve the key features of the actual distribution, such as the predominance of micro-enterprises, the predominance of SMEs over large enterprises, as well as ensuring that the sample of large enterprises meets the statistical criteria of a large sample, which permitted the use of statistical comparative tests (Ramachandran & Tsokos, 2009). Detailed characteristics of the surveyed enterprises broken down by size classes are shown in Table 2.

**Table 2.** Surveyed enterprises and respondent characteristics as a percentage of the sample

| Variable                      | Micro (n = 1183) | Small (n = 399) | Medium (n = 159) | SMEs (n = 1741) | Large (n = 43) |
|-------------------------------|-----------------|----------------|-----------------|-----------------|---------------|
| **Legal form of the company** |                 |                |                 |                 |               |
| Individual company           | 56.4%           | 23.3%          | 9.4%            | 44.5%           | 2.3%          |
| Private/general partnership   | 13.1%           | 14.3%          | 12.6%           | 13.3%           | 2.3%          |
| Limited liability company    | 27.0%           | 52.1%          | 54.1%           | 35.3%           | 41.9%         |
| Joint stock company          | 2.8%            | 7.8%           | 20.1%           | 5.5%            | 51.2%         |
| Cooperative                   | 0.3%            | 2.0%           | 1.9%            | 0.9%            | 2.3%          |
| Foundation / Association      | 0.3%            | 0.5%           | 0.6%            | 0.4%            | 0.0%          |
| Other                         | 0.0%            | 0.0%           | 1.3%            | 0.1%            | 0.0%          |
| **Sector of Operations**      |                 |                |                 |                 |               |
| Service                       | 68.2%           | 44.9%          | 35.8%           | 59.9%           | 67.4%         |
| Trade                         | 19.9%           | 19.5%          | 13.8%           | 19.2%           | 2.3%          |
| Production                    | 11.9%           | 35.6%          | 50.3%           | 20.9%           | 30.2%         |
| **Range of Market Operations**|                 |                |                 |                 |               |
| Local                         | 8.3%            | 3.3%           | 3.1%            | 6.7%            | 7.0%          |
| Regional                      | 22.1%           | 16.3%          | 13.2%           | 19.9%           | 23.3%         |
| National                      | 43.2%           | 33.1%          | 20.8%           | 38.8%           | 7.0%          |
| International                 | 21.9%           | 39.1%          | 40.3%           | 27.5%           | 37.2%         |
| Global                        | 4.6%            | 8.3%           | 22.6%           | 7.1%            | 25.6%         |
| **Company Age**               |                 |                |                 |                 |               |
| Up to 5 years                 | 15.0%           | 4.5%           | 1.3%            | 11.4%           | 0.0%          |
| Over 5 to 10 years            | 26.2%           | 12.0%          | 6.3%            | 21.1%           | 11.6%         |
| Over 10 to 15 years           | 17.3%           | 20.1%          | 12.6%           | 17.5%           | 9.3%          |
| Over 15 to 20 years           | 12.9%           | 16.5%          | 13.2%           | 13.8%           | 14.0%         |
| Over 20 years                 | 28.5%           | 46.9%          | 66.7%           | 36.2%           | 65.1%         |

(Source: Own work based on survey results)
The results show that the category of small business is dominated by individual companies, or limited liability companies, while the population of large enterprises is characterized by a significantly higher number of joint stock companies. Moreover, large companies more frequently operate in international and global markets, and have been active in the market for a relatively longer period of time than small businesses.

The survey respondents were representatives of the enterprises under study. They were mainly the owners of the surveyed companies (74%), less frequently senior managers (19%), or employees authorized by the management to take part in the survey (7%). The survey participants were mostly men (70%), persons aged 31-40 (30%), or above 50 (35.5%), with a university degree (81%) in technology (40%), or economics/management (26%). The collected empirical material was subjected to statistical analysis using the IBM SPSS Statistics software (Field, 2014). The following quantitative methods of statistical analysis were employed (Swift & Piff, 2014) contingency table analysis, Spearman’s correlation coefficient rs and its significance test as a measure of interdependence of phenomena, and the Mann–Whitney U test to assess the variation in responses provided by the representatives of SMEs and large enterprises. For the purpose of comparative analysis, a nonparametric test was used. The choice of the test was dictated by the significant quantitative differences between the two groups under examination, which arose from the actual economic conditions characterized by the considerable predominance of SMEs over large enterprises. The strength of interdependence between phenomena was assessed using the solution proposed by Cohen (1992), where the following levels of dependence were adopted as the threshold limit values of linear correlation coefficients: 0.1 - weak; 0.3 - medium; 0.5 - strong, 0.7 - very strong.

RESULTS AND DISCUSSION

In the first part of the research, the level of occurrence of qualitative features differentiating enterprises in terms of their size was identified in the examined sample, in accordance with the model assumptions. The detailed results are shown in Table 3.

| Qualitative Characteristic Features of Enterprises | SMEs n | % | LEs n | % |
|---------------------------------------------------|--------|---|-------|---|
| **Area of Management**                             |        |   |       |   |
| Centralization of management                       | 1525   | 87.6% | 30   | 69.8% |
| Decentralization of management                     | 216    | 12.4% | 13   | 30.2% |
| Intuitive and short-term approach to company’s development | 1008  | 57.9% | 6    | 14.0% |
| Formalized and long-term approach to company’s development | 733   | 42.1% | 37   | 86.0% |
| Simple and informal information system             | 1319   | 75.8% | 13   | 30.2% |
| Complex and formal information system              | 422    | 24.2% | 30   | 69.8% |
| **Area of Structure**                              |        |   |       |   |
| Unity of ownership and management                  | 1666   | 95.7% | 13   | 30.2% |
| Separation of ownership and management             | 75     | 4.3%  | 30   | 69.8% |
| Simplified and low formalized organizational structure | 1646  | 94.5% | 10   | 23.3% |
| Complex and strongly formalized organizational structure | 95    | 5.5%  | 33   | 76.7% |
| **Area of Specialization**                         |        |   |       |   |
| Broad and varied scope of duties                   | 1206   | 69.3% | 25   | 58.1% |
| Narrow and specialized scope of duties             | 535    | 30.7% | 18   | 41.9% |
| Small possibilities of applying returns to scale   | 858    | 49.3% | 13   | 30.2% |
| Large possibilities of applying returns to scale   | 883    | 50.7% | 30   | 69.8% |
| **Area of Autonomy**                              |        |   |       |   |
| High level of independence from other companies    | 1433   | 82.3% | 33   | 76.7% |
| Limited level of independence from other companies | 308    | 17.7% | 10   | 23.3% |
| Own, internal source of financing                  | 1555   | 89.3% | 29   | 67.4% |
| Third party, external source of financing          | 186    | 10.7% | 14   | 32.6% |
| **Area of Scope of Operations**                    |        |   |       |   |
| Local/regional scope of operations                 | 1254   | 72.0% | 12   | 27.9% |
| National/international scope of operations         | 487    | 28.0% | 31   | 72.1% |
| Operating in a market niche                        | 686    | 39.4% | 9    | 20.9% |
| Operating on a wide competitive arena              | 1055   | 60.6% | 34   | 79.1% |

(Source: Own work based on survey results)

ISSN: 2414-309X
DOI: 10.20474/jabs-3.4.4
The above characteristics were identified on the basis of the respondents' declarations. This enabled further assessment of the variation in answers relating to particular features and areas that qualitatively characterize businesses in terms of their size. For assessing and identifying the differences in answers between the representatives of micro SMEs and LEs the Mann-Whitney U test was applied. The detailed results are shown in Table 4.

### TABLE 4. Differences in identifying particular features and areas of qualitative characterization of surveyed enterprises according to their size

| Features and areas of qualitative characterization of enterprises according to their size | U       | Z       | Mean rank |
|-----------------------------------------------|---------|---------|-----------|
| **Area of management, including:**              |         |         |           |
| - Level of management centralization          | 14302.50| -7.434**| 879.22    | 1430.38   |
| - Approach to company’s development           | 30759.00| -3.451**| 888.67    | 1047.67   |
| - Information system in the company           | 20982.50| -5.746**| 883.05    | 989.40    |
| **Area of structure, including:**             |         |         |           |
| - Relations between ownership and management  | 20389.50| -6.779**| 882.71    | 1275.03   |
| - Organizational structure                    | 5267.00 | -17.937**| 874.03    | 1640.51   |
| **Area of specialization, including:**        |         |         |           |
| - Scope of duties in the company              | 33265.00| -1.559  | 890.11    | 949.40    |
| - Returns to scale                            | 30301.00| -2.468* | 888.40    | 1058.33   |
| **Area of autonomy, including:**              |         |         |           |
| - Relations with other entities               | 28603.50| -3.452**| 887.43    | 1097.80   |
| - Source of financing                         | 35348.50| -0.942  | 891.30    | 940.94    |
| **Area of scope of operations, including:**   |         |         |           |
| - Market coverage                             | 19637.00| -6.022**| 882.28    | 1306.33   |
| - Competitive arena                           | 20916.50| -6.295**| 883.01    | 1276.57   |

Mann–Whitney U test. * significant at 0.05; ** significant at 0.01. (Source: Own work based on survey results)

The adopted methodological assumptions indicate that all enterprises under study differ with respect to the quantitative criteria provided in the uniform, formal definition of small business used in the European Union. The criteria, however, do not give a complete picture of the specificity of SMEs as compared with large enterprises. Therefore, the subsequent empirical analysis was oriented towards the identification and assessment of qualitative areas that differentiate enterprises according to their size. The findings suggest that the examined enterprises differ statistically and significantly with respect to 5 key qualitative areas: (1) solutions used in the management system, (2) structural organization of the analyzed business entities, (3) character of economic specialization, (4) preferences reflected in the scope of autonomy of a business entity, and (5) differences in the scope of market operations. This fully confirms hypothesis H1 according to which small business and large enterprises differ significantly in terms of quantitative criteria and 5 key areas of qualitative specificity: management, structure, specialization, autonomy and scope of operations. At the level of detailed evaluations, statistically significant differences were found with respect to 9 from 11 (82%) qualitative features proposed in the theoretical model. The strongest qualitative differences between the companies of various sizes were found with respect to the adopted structural solutions, with the unity of ownership and management being the key characteristic of small business. In order to combine those roles effectively, the following factors are essential: a high level of the owner’s human and social capital, exploration of the market opportunities, development of proactive and innovative strategies (Manev, Gyoshev & Manolova, 2005), orientation towards knowledge acquisition and achievement, competitive aggressiveness, innovative and risk-taking orientation, and personal initiative (Krauss, Frese, Friedrich & Unger, 2005).

It should be pointed out that the unity of ownership and management is closely linked to the owner’s aspiration to retain a high level of independence and autonomy. However, as the company size increases, it becomes more common to include hired managers in management process of SME sector companies (Churchill & Lewis, 1983) which should result in a higher level of business performance, and stronger orientation towards the achievement of nonfinancial company objectives (Westhead & Howorth, 2006). It might also be an interesting solution to use all kinds of configurations of the synergistic combinations of ben-
benefits arising from combining the managerial and ownership functions with the support from professional managers, or appointment of supervisory and/or advisory boards (Van Gils, 2005). Another key difference between SMEs and LEs concerns the significant structural disparity between the two, which results from the changes taking place during the enterprise growth processes (Davidsson, Achtenhagen & Naldi, 2010). As the size of the company grows, so does the general scale of formalization and complexity of structural solutions (Levie & Lichtenstein, 2008), which is also related to the changes in the management systems, such as the increased decentralization of management, increased complexity of the information systems, and the growing specialization of activity (Meijaard, Brand & Mosselman, 2005).

It also becomes important to adopt a longer-term perspective of activity (Barrett & Mayson, 2007), which is directly related to the growing scope and formalization of the solutions used for strategic planning (Honig & Samuelsson, 2012). However, excessive administration and bureaucracy of operations, which increase as the company size increases, may adversely affect the level of entrepreneurship, creation of changes and implementation of innovation, and eventually lead to the collapse of the enterprise (Adizes, 1988; Kaur, Naqshbandi & Jayasingam, 2014). The subsequent part of the study focused on identifying the level of occurrence of qualitative characteristics of SMEs and large enterprises in the surveyed sample. The results demonstrate that out of the 11 examined features differentiating enterprises in terms of their size, SME sector companies show on average 8.13; 73.9% of the characteristic feature of small business (and 2.87; 26.1% of the characteristic feature of large enterprises), while LEs identified 6.51; 59.2% of the characteristic feature of their size class, and 14.49; 40.8% of the characteristic feature of small business.

The number of characteristic features of small business identified by the surveyed companies decreases statistically and significantly with moderate strength with the increasing size of the companies, rs (N = 1784) = −0.32, p < 0.01, and has a mean value of 8.47 for micro companies, 7.70 for small companies, and 6.70 for medium-sized companies. Thus, all categories of enterprises belonging to SME sector show the predominance of characteristics features of small business, while large enterprises are predominantly characterized by the features typical of large business. The aggregate results demonstrate that over 93% of the SMEs under study show the predominance of characteristic features of small business, whereas in the group of large enterprises, the proportion of companies showing features of large business was slightly lower, and reached 86%. Detailed results in this respect are shown in Table 5.

| TABLE 5. Percentage of companies showing the features of small and large business in the examined sample |
|---------------------------------------------------------------|
| **Companies in the Examined Sample** | Predominance of Small Business Features | Predominance of Small Business Features |
|-----------------------------------|-----------------------------------|-----------------------------------|
| %                                 | %                                 | %                                 |
| SMEs                             | 1622                              | 92.1%                             |
| %                                | 118                               | 6.8%                              |
| LeM                              | 1630                              | 110                               |
| %                                | 50.8%                             | 49.2%                             |
| (Source: Own work based on survey results)                      |

Also in this case, the percentage of companies with predominant features of small business decreases statistically significantly to a moderate degree with increasing company size, rs (N = 1784) = −0.32, p < 0.01, and is 96.7% for micro enterprises, 88.5% for small enterprises, and 79.2% for medium-sized enterprises. However, the results indicate explicitly that both the category of SMEs and large enterprises contain a number of entities (6.8% and 14.0% respectively) which despite meeting the quantitative criteria, have the majority of qualitative attributes of the opposite size class Torrès (2003b) associates this phenomenon with such processes as: a growing number of strategic alliances, more common use of increasingly advanced management systems, formation of more and more complex network connections, development and growing use of risk capitals, as well as the accelerating internationalization connected with market globalization and a widespread use of new communications technologies. Thus, the results fully confirm the hypothesis H2 and empirically verify the theoretical assumptions formulated by Julien (1998) concerning the existence of a certain group of denatured companies within the SME sector. At the same time, the research results broaden this approach to include the identification of large denatured enterprises whose nature and conditions of functioning should be further investigated.

Limitations of the Empirical Study
An analysis of the research findings should take into account the methodological limitations resulting from the adopted method and research technique (Geletkanycz & Tepper, 2012). They include mainly cognitive limitations stemming from the use of the inductive approach to research which does not give certainty as to the completeness of the picture of phenomena in the investigated population (Popper, 2005). Another limitation is related to the high level of subjectivity of the respondents’ answers, which results from the adopted research technique (Wright, 2005).
and from the complexity, relativism and contextuality of the issues researched by management sciences (Johnson & Duberley, 2003). Another weakness is the fact that the research does not take account of the time criterion which would enable capturing the changes taking place in the surveyed companies (Bryman & Bell, 2015). On the other hand, this would considerably lengthen the research process, and, given the high rate of business failure or transformation, it might be impossible to reach the surveyed enterprises again.

The limitations concerning the substance of the research topic were pointed out by Volery & Mazzarol (2015) who note that it is not possible to create a universal and complete classification system of enterprises due to the considerable diversification, individual specificities, and contextual nature of functioning of particular business entities.

CONCLUSION

For many years now, management scientists have made attempts to construct models which would enable distinguishing SME sector companies from large firms. Those attempts led to the creation of numerous, diverse definitions based on quantitative criteria, as well as many quantitative typologies of characteristic features of small and large businesses. However, the solutions suggested so far have certain weaknesses, such as the absence of empirical verification of the formulated proposals, as well as the lack of comprehensive inclusion of external and internal area-related criteria in the qualitative specificity of enterprises of various sizes. The above considerations were the reason for undertaking the research described in this paper. The research findings enabled verification of two research hypotheses and, at the same time, enriched the theory of management sciences with a new, comprehensive (i.e. including both external and internal factors), and empirically verified proposal concerning the configuration of quantitative and qualitative areas classifying enterprises according to their size into the category of small business (micro, small and medium-sized enterprises) and category of large enterprises. Simultaneously, the research results allow the formulation of the following theoretical implications:

- particular size classes differ with respect to the internal structure of the examined qualitative characteristics. Although the distribution of those features shows a strong statistical concentration of answers of SME sector representatives as compared to the features reported by large enterprises, the phenomenon of denaturation can be observed in the surveyed sample, whereby one size class has the predominance of qualitative features characteristic of the opposite size class. Consequently, 4 categories of entities can be distinguished: (1) specific SME sector companies with predominant features of small business (93.2% in the SME class), (2) denatured SME sector companies with predominance of qualitative features of large business (6.8%), (3) specific large enterprises with predominant features of large business (86%), and (4) denatured large companies with predominant features of small business (14%). Additionally, the paper enriches the achievements of management sciences by formulating recommendations for identification of enterprises in terms of their size. On that basis, the following methodological implications were formulated:

- the division of enterprises into various size classes based on the integrated quantitative and qualitative criteria does not usually give an unequivocal, direct answer as to which size class a given company should belong to. Therefore, for methodological purposes, the predominance, or particular combinations of qualitative features of companies in a given size class should be taken into account, rather than a full list of those features.

- in order to identify the size class of an enterprise, it is advisable to use methodological triangulation (Böhme, Childerhouse, Deakins & Towill, 2012) which takes into account both the quantitative and qualitative criteria. Appendix A contains a suggestion of an integrated research tool which takes account of the above recommendations and enables the assessment of a company's size based on empirically verified criteria. In this questionnaire reverse scored questions (R) are also included (Church & Waclawski, 2001). The presented results can be used by the owners and managers of SMEs and large enterprises to identify and assess the level of occurrence of quantitative and qualitative features typical of a given size class. On their basis, the following managerial implications can be formulated:

- quantitative changes leading to the growth of business entities should take place simultaneously with qualitative changes which adjust the specificity of the business activity to the characteristics of a given size class. Based on the re-
search results, the owners and managers can assess the extent to which their companies fit into the typical qualitative profile identified for a particular size class of enterprises.

- there is no need for owners and managers to try to achieve the qualitative characteristics that fully conform with the theoretical profile specified for a particular size class. The key is to optimally adjust and, above all, to predict the configurations of the company’s qualitative characteristics which ensure the high level of business performance and enable building a long-term competitive advantage.

Research into this field should definitely be continued. The following directions of further research seem particularly interesting and prospective: assessing the impact of specific configurations of qualitative characteristics of SMEs and large enterprises on business performance, examining the internal diversification of qualitative features and the occurrence of denaturation within the population of small businesses and large enterprises. As regards the methodology, it would be worthwhile to consider enriching the existing research methods with qualitative analysis performed using e.g. case studies, which would allow achieving more objective results.

Acknowledgment
The presented research was conducted as a preliminary analysis under the research project no. 2015/17/B/HS4/00988 financed by the National Science Centre, Poland.

REFERENCES

Adizes, I. 1988. *Corporate lifecycles how and why corporations grow and what to do about it*. Englewood Cliffs, NJ: Prentice-Hall.

Ayyagari, M., Beck, T., & Demirguc-Kunt, A. 2007. Small and medium enterprises across the globe. *Small Business Economics*, 29(4): 415-434. DOI: 10.1007/s11187-006-9002-5

Bannier, C.E., & Zahn, S. 2012. Are SMEs large firms in miniature? Evidence from the growth of German SMEs. *International Journal of Entrepreneurship & Small Business*, 17(2): 220-248. DOI: 10.1504/IJESB.2012.048848

Barrett, R., & Mayson, S. 2007. Human resource management in growing small firms. *Journal of Small Business & Enterprise Development*, 14(2): 307-320. DOI: 10.1108/14626000710746727

Baum, M., Schwens, C., & Kabst, R. 2011. A typology of international new ventures: Empirical evidence from high-technology industries. *Journal of Small Business Management*, 49(3): 305-330. DOI: 10.1111/j.1540-627X.2011.00328.x

Berisha, G., & Pula, J.S. 2015. Defining small and medium enterprises: A critical review. *Academic Journal of Business, Administration Law & Social Sciences*, 1(1): 17-28.

Blundel, R. 2016. *Is small still beautiful? Exploring the role of SMEs in emerging visions of a green economy*. Paper presented at the Center for Diet and Activity Research Seminar Series, Middlesex University, London, UK.

Böhme, T., Childerhouse, P., Childerhouse, E., & Towill, D. 2012. A method for reconciling subjectivist and objectivist assumptions in management research. *Journal of Leadership & Organizational Studies*, 19(3): 369-377. DOI: 10.1177/1548051812442965

The Bolton Report. 1971. *Report of the committee of inquiry on small firms*. Richmond, UK: Office of Public Sector Information.

Bryman, A., & Bell, E. 2015. *Business research methods*. Oxford, UK: Oxford University Press.

Callegaro, M., Manfreda, K.L. & Vehovar, V. 2015. *Web survey methodology*. London, UK: Sage Publications.

Church, A.H., & Waclawski, J. 2001. *Designing and using organizational surveys: A seven-step process*. San Francisco, CA: Jossey-Bass.

Churchill, N., & Lewis, V. 1983. The five stages of small business growth. *Harvard Business Review*, 61(3): 30-50.

Cohen, J. 1992. A power primer. *Psychological Bulletin*. 112(1): 155-159. DOI: 10.1037/0033-2909.112.1.155

Curran, J., & Blackburn, R.A. 2001. *Researching the small enterprise*. London, UK: SAGE Publications. DOI: 10.4135/9781849209847

Dandridge, T.C. 1979. Children are not little grown-ups: Small business needs its own organizational theory. *Journal of Small Business Management*, 17(2): 53-57.

Davidsson, P., Achtenhagen, L., & Naldi, L. 2010. *Small firm growth*. Hanover, DE: Now Publishers Inc.
Decker, R., Haltiwanger, J., Jarmin, R., & Miranda, J. 2014. The role of entrepreneurship in US job creation and economic dynamism. *The Journal of Economic Perspectives*, 28(3): 3-24. DOI: 10.1257/jep.28.3.3

Dilger, R.J. 2013. *Small business size standards: A historical analysis of contemporary issues*. Washington, US: Congressional Research Service.

Edmiston, K. 2007. The role of small and large businesses in economic development. *Economic Review*, 92(2): 73-97. DOI: 10.2139/ssrn.993821

European Commission. 2015. *User guide to the SME definition*. Luxembourg, BE: Publications Office of the European Union.

Eurostat. 2016. *Data for short-term economic analysis*. URL: goo.gl/JQKNXF. Last accessed on 24 April, 2017.

Field, A. 2014. *Discovering statistics using IBM SPSS statistics*. London, UK: SAGE Publications.

Geletkanycz, M., & Tepper, B.J. 2012. Publishing in AMJ–part 6: Discussing the implications. *Academy of Management Journal*, 55(2): 256-260. DOI: 10.5465/amj.2012.4002

Haltiwanger, J., Jarmin, R.S., & Miranda, J. 2013. Who creates jobs? Small versus large versus young. *Review of Economics & Statistics*, 95(2): 347-361. DOI: 10.1162/REST_a_00288

Honig, B., & Samuelsson, M. 2012. Planning and the entrepreneur: A longitudinal examination of nascent entrepreneurs in Sweden. *Journal of Small Business Management*, 50(3): 365-388. DOI: 10.1111/j.1540-627X.2012.00357.x

Ionica, O. 2012. The role of SME sector in the post-socialist countries future. *International Journal of Business & Social Science*, 3(10): 173-182.

Johnson, P., & Duberley, J. 2003. Reflexivity in management research. *Journal of Management Studies*, 40(5): 1279-1303. DOI: 10.1111/1467-6486.00380

Julien, P.A. 1998. Introduction. In P.A. Julien (Eds.), *The state of the art in small business and entrepreneurship*. Brookfield, US: Ashgate Publishing.

Kozlowski, R., & Matejun, M. 2016. Characteristic features of project management in small and medium-sized enterprises. *E & M Ekonomie A Management*, 19(1): 33-48. DOI: 10.15240/tul/001/2016-1-003

Krauss, S.J., Frese, M., Friedrich, C., & Unger, J.M. 2005. Entrepreneurial orientation: A psychological model of success among southern African small business owners. *European Journal of Work & Organizational Psychology*, 14(3): 315-344. DOI: 10.1080/13594320500170227

Kaur, S., Naqshbandi, M.M., & Jayasingam, S. 2014. Open innovation in SMEs: Drivers and inhibitors. *Asia-Pacific Tech Monitor*, 31(2): 20-25.

Kushnir, K., Mirmulstein, M.L., & Ramalho, R. 2010. *Micro, small, and medium enterprises around the world: how many are there, and what affects the count*. Washington, US: World Bank/IFC MSME Country Indicators Analysis Note.

Leegwater, A., & Shaw, A. 2008. *The role of micro, small, and medium enterprises in economic growth: A cross-country regression analysis*. URL: goo.gl/yevvir. Last accessed on 15 May, 2016.

Levie, J., & Lichtenstein, B.B. 2008. From “stages” of business growth to a dynamic states model of entrepreneurial growth and change. Working Paper no. 08-02, Hunter Centre for Entrepreneurship, University of Strathclyde, Glasgow, UK.

Manev, I.M., Gyoshev, B.S., & Manolova, T.S. 2005. The role of human and social capital and entrepreneurial orientation for small business performance in a transitional economy. *International Journal of Entrepreneurship & Innovation Management*, 5(3-4): 298-318. DOI: 10.1504/IJEIM.2005.006531

Mazzarol, T., Reboud, S., & Clark, D. 2011. *In search of the‘SME ordinaire towards a taxonomy*. Paper presented at the 56th Annual International Council for Small Business World Conference, Stockholm, SE.

Meijaard, J., Brand, M.J., & Mosselman, M. 2005. Organizational structure and performance in Dutch small firms. *Small Business Economics*, 25(1): 83-96. DOI: 10.1007/s11187-005-4259-7

Mintzberg, H. 1979. *The structuring of organizations: A synthesis of the research*. Englewood Cliffs, NJ: Prentice Hall.

Naqshbandi, M.M., & Kamel, Y. 2017. Intervening role of realized absorptive capacity in organizational culture–open innovation relationship: Evidence from an emerging market. *Journal of General Management*, 42(3): 5-20.

Naqshbandi, M.M., Kaur, S., & Ma, P. 2015. What organizational culture types enable and retard open innovation? *Quality & Quantity*, 49(5): 2123-2144.
Naqshbandi, M.M., & Kaur, S. 2015. Effectiveness of innovation protection mechanisms in Malaysian high-tech sector. Management Research Review, 38(9): 952-969.

Nicoleșcu, O. 2009. Main features of SMEs organisation system. Review of International Comparative Management, 10(3): 405-413.

Nwachukwu, A.C. 2012. The role of entrepreneurship in economic development: The Nigerian perspective. European Journal of Business & Management, 4(8): 96-110.

Oviatt, B.M., & McDougall, P.P. 1994. Toward a theory of international new ventures. Journal of International Business Studies, 36(1): 45-64. DOI: 10.1057/palgrave.jibs.8490193

Penrose, E., & Pitelis, C. 2009. The theory of the growth of the firm. Oxford, UK: Oxford University Press.

Popper, K. 2005. The logic of scientific discovery. London, UK: Routledge Classics.

Pugh, D.S., Hickson, D.J., & Hinings, C.R. 1969. An empirical taxonomy of structures of work organizations. Administrative Science Quarterly, 14(1): 115-126. DOI: 10.2307/2391367

Pugh, D.S., Hickson, D.J., Hinings, C.R., & Turner, C. 1968. Dimensions of organization structure. Administrative Science Quarterly, 13(1): 65-105. DOI: 10.2307/2391262

Ramachandran, K.M., & Tsokos, C.P. 2009. Mathematical statistics with applications. Burlington, CA: Elsevier Academic Press.

Schaper, M., Volery, T., Weber, P., & Gibson B. 2014. Entrepreneurship and small business. Hoboken, NJ: John Wiley & Sons.

Storey, D.J., & Greene, F.J. 2010. Small business and entrepreneurship. Essex, UK: Pearson Education Limited.

Swift, L., & Piff, S. 2014. Quantitative methods for business, management and finance. Hampshire, UK: Palgrave Macmillan.

European Commission. 2016. The SME performance Review data. URL: goo.gl/Ne9qUW. Last accessed on 10 August, 2016.

World Bank (2016). The World bank indicators. URL: goo.gl/4PiJS. Last accessed on 10 August, 2016.

Torrès, O. 2003a. A French perspective of research on small business: Denaturation and proximity. Paper presented at the Conference Research in Entrepreneurship and Small Business, European Institute for Advanced Studies in Management, Lodz, PL.

Torrès, O. 2003b. Thirty years of research into SMEs: A field of trends and counter-trends. Cahiers De Recherché EM Lyon, 6(1): 5-38.

Torrès, O. 2004. The proximity law of small business management: between closeness and closure. Paper presented at the 49th Conference on International Congress of Small Business, Johannesburg, ZA.

Torrès, O., & Julien, P.A. 2005. Specifity and denaturing of small business. International Small Business Journal, 23(4): 355-377. DOI: 10.1177/0266242605054049

Van Gils, A. 2005. Management and governance in Dutch SMEs. European Management Journal, 23(5): 583-589. DOI: 10.1016/j.emj.2005.09.013

Verdú-Jover, A.J., Llorêns-Montes, F.J., & García-Morales, V.J. 2006. Environment–flexibility coalignment and performance: An analysis in large versus small firms. Journal of Small Business Management, 44(3): 334-349. DOI: 10.1111/j.1540-627X.2006.00175.x

Volerly, T., & Mazzarol, T. 2015. The evolution of the small business and entrepreneurship field. International Small Business Journal, 33(4): 374-396. DOI: 10.1177/0266242613516139

Welsh, J.A., & White, J.F. 1981. A small business is not a little big business. Harvard Business Review, 59(4): 18-32.

Westhead, P., & Howorth, C. 2006. Ownership and management issues associated with family firm performance and company objectives. Family Business Review, 19(4): 301-316. DOI: 10.1111/j.1741-6248.2006.00077.x

Wiseman, A.W., & Popov, N. 2015. An introduction to comparing comparative methodologies: A framework for understanding pitfalls and operationalizing promises. In A.W. Wiseman & N. Popov (Eds.), Comparative sciences: Interdisciplinary approaches. Bingley, UK: Emerald Group Publishing Limited. DOI: 10.1108/S1479-3679201526

Wright, K.B. 2005. Researching Internet-based populations: Advantages and disadvantages of online survey research, online questionnaire authoring software packages, and web survey services. Journal of Computer-Mediated Communication, 10(3): 1-11. DOI: 10.1111/j.1083-6101.2005.tb00259.x
Appendix-A

The proposal of an integrated research tool for assessing the size of an enterprise. The quantitative criteria were adjusted to the uniform, formal definition of small business used in the European Union (European Commission, 2015).

1. Please, specify the average level of employment in your company in the last year (measured as full-time equivalent):
   a) 0 - 9 people
   b) 10 - 49 people
   c) 50 - 249 people
   d) Over 249 people

2. Please, specify the amount of turnover (revenue) generated by your company in the last year:
   a) Up to 2 million euros
   b) Over 2 million euros to 10 million euros
   c) Over 10 million euros to 50 million euros
   d) Over 50 million euros

3. Please, specify the value of assets (balance sheet total) of your company in the last year:
   a) Up to 2 million euros
   b) Over 2 million euros to 10 million euros
   c) Over 10 million euros to 43 million euros
   d) Over 43 million euros

4. Please, specify the capital (ownership) relations of your company with other entities:
   a) The company is fully independent of other entities in terms of capital and/or ownership
   b) The company is partly related through capital and/or ownership to other entities, however the relationship does not exceed 25% of share in the share capital, or votes in the meeting of shareholders
   c) The company is related through capital and/or ownership to other entities and the relationship exceeds 25% of share in the share capital, or votes in the shareholders’ meeting

5. Please, specify the predominant features of your company’s management system:
   - the company’s management is rather: a) centralized; b) decentralized
   - the approach to managing the company’s development is rather a) intuitive and short-term; b) formalized and long-term
   - the information system in the company is rather: a) complex and formal; b) simple and informal (R)
   - the company is primarily managed by: a) its owners; b) hired (professional) managers
   - the organizational structure of the company is rather: a) complex and strongly formalized; b) simplified and low formalized (R)
   - the possibilities of applying the returns to scale (reducing costs as the production output increases) in the process of production/provision of services are: a) large; b) small (R)
   - the financing of the company is mainly based on: a) own, internal sources; b) third party, external sources
   - the company operates rather in a) local/regional market; b) international/global market
   - the company conducts its market activity rather: a) on a broad competitive arena; b) in a market niche (R).