The Diversification Strategy and Business Groups’ Performance in Poland

**ABSTRACT**

**Objective:** The aim of the study is to identify the scope in which business groups in Poland apply the diversification strategy and examine its influence on the performance of a business group.

**Methodology:** The research method is a critical analysis of academic literature as well as documents analysis (desk research). Authors applied also statistical inference.

**Findings:** Conducted research on business groups in Poland showed that business groups in Poland are moderately diversified. The study showed also that the diversification strategy does not differentiate the performance of business groups.
Value Added: The paper is a unique summary of the researches about diversification strategy and business group performance. The theory review and empirical studies deepen research on business groups and their strategies.

Recommendations: It is recommended for business groups to explore the diversification strategies in the context of performance as implementing it may be crucial for further business group development.

Key words: strategy, diversification, diversification strategy, conglomerates, business groups

JEL codes: L25, F23

Introduction

Increase of significance of large business groups is an important phenomenon in the world economy. Business group can be defined as a group of enterprises in which individual enterprises (independent in legal terms) are connected by capital and/or non-capital ties (Khanna & Yafeh, 2005; Khanna & Yafeh, 2007). In the management literature authors highlight significance of capital relations between enterprises in the business groups, whereas in the sociological literature non-capital ties are more profound (Cainelli & Iacobucii, 2011).

Business groups are very important players in the world economy. They prevail on different geographical markets in certain industries, such as: automotive (Aswicahyono, 2000; Zhao, Anand, & Mitchell, 2005), steel and metallurgical (Advasheva, 2008; Nair & Kotha, 2001), computer, telecom and semiconductors (Aluchna, 2010) and many other. They often operate in non-financial industries, but due to globalization processes they are also set up in the financial industry (Aluchna, 2010). Business groups are prevalence around the world. P.P. Heugens and S.C. Zyglidopoulos (2008) reported that business groups make up more than 60% of all enterprises in some countries (e.g. Belgium, Denmark, Indonesia, Netherland, UK, Sweden). The growing significance of business groups is also reported in the emerging and developing economies. In Poland in 2008–2016 the number of business groups rose from 1,462 to 2,124. Also, in other countries of the Central and Eastern
Europe, for example in Romania, Slovenia or Latvia the growth of the number of enterprise groups was observed during the last few years (Dworzecki & Mierzejewska, 2015). The strength of business groups is profound as they generate the high portion of income, profit, GDP (Gross Domestic Product) and employment in different economies. For example, in Poland business groups generate 65% of income as well as 62% of profit and employ 47% of all employees of all non-financial enterprises (data of the Polish Central Statistical Office); in Russia all business groups are responsible for 35–36% of the GDP (Radygin, 2006); five largest Indian business groups generate around 16% of the GDP (Sasi, 2017); about 16% of the GDP is generated by the 30 largest South Korean business groups (Bidgoli, 2010).

Managing business group is challenging because of the scope of business, size measured by the number of employees and very often complex structures. Moreover, business group is managed on multiple levels: the level of the group, the level of the particular unit and the level of the functional area (Trocki, 2004). At the level of the group the key question is about the most effective allocation of resources (Geringer, Beamish, & DaCosta, 1989) and it is a strategic question concerning key choices about the growth strategy. Resources may be applied to various industries and for various products, thus leading to the diversification strategy. The diversification strategy takes advantage of the synergistic effect, risk dispersion, portfolio optimization, know-how transfer (Zelek, 2008). However, it brings some disadvantages, like: overinvestment, diseconomies of scale, coordination and management problems or possibility of getting bogged down in some industries (Romanowska, 2017). Nevertheless, there is a need of researches that take into consideration benefits and disadvantages of diversification strategy in the context of business group and analyse how the diversification strategy affects the performance of the business group.

The aim of the study is to identify the scope in which business groups in Poland apply the diversification strategy and examine its influence on the performance of a business group. To meet the stated aim, authors applied
an appropriate methodology. The research method is the critical analysis of academic literature as well as the desk research. Authors applied also the statistical inference.

The paper is organized as follows: section one presents literature review on the diversification strategy and it influences on the business group performance. Section two introduces the research design. Section three presents the result of the research and discussion. The final section presents the conclusion.

**Literature review and theory development**

**Tendency in the diversification**

The beginning of diversification goes as far as the Great Depression in the 1930s. The diversification was then perceived as a remedy for excessive risk related to the concentration of business in one industry. Later the advantage of synergy between different businesses in the one business group were observed. Enterprises diversified strongly in 1950s, 1960s and 1970s. The culmination of this process was in 1970s, when huge diversified conglomerates were established. From 1950s till 1970s the number of diversified entities increased, and number of specialised enterprises decreased. This trend was observed mainly in developed countries like USA, UK and other European countries, as well as in Japan (Rumelt, 1982; Scott, 1973; Suzuki, 1980). However, the number of diversified enterprises vary across countries (Scott, 1973). It is explained by differences in the institutional environment in which the diversification takes place (Scott, 1973; Yigit & Behram, 2013). The diversification strategy was retreated at the beginning of the 1980s – a lot of enterprises focused on key business and moved away from over-diversification (Grant, 2011; Markides, 1993). At the beginning of the 1990s enterprises operating in unrelated industries were in minority comparing to those operating in related industries (Grant, 2011), thus the de-diversification trend was observed (Zuckerman, 2000). It was continued in 2000s.
At the beginning of the new decade, the number of diversified enterprises was minor, and the number of single business enterprises increased (Franko, 2004) and it concerns developed as well as emerging economies. However, India (as an emerging market) experienced the decrease in the number of unrelatedly diversified firms, but what is very interesting, there was no increase in the number of specialised enterprises. So, Indian enterprises were diversified moderately in related industries around one core business (Mohindru & Chander, 2007).

Much of the research on diversification was carried out in developed economies (Palich, Cardinal, & Miller, 2000), where institutional environment evolved over time and made stable conditions for business functioning (Li & Wong, 2003). Some researchers argue that in emerging and developing economies underdevelopment of the capital market, the product market, the labour market and inconsistent regulations are the reasons why the diversification strategy is much more often implemented and diversified enterprises outperform single business (Khanna & Palepu, 1997; Li & Wong, 2003). Thus, enterprises implement the unrelated diversification strategy to cope with institutional environment and perform effectively as it ensures some kind of self-institutional support (Khanna & Palepu, 1997). Business groups affiliates in emerging economies have less difficulties to obtain necessary resources through internal market (Yiu et al., 2007).

Since 2018 Poland has been classified as a developed economy (Financial Times, 2018), earlier it was classified as emerging or developing country. R.E. Hoskisson et al. (2005) argue that in emerging economies business groups have become increasingly involved in refocusing activities that have led to reduced overall level of diversification and explain it as an attempt to balance organisational and transactional costs. Business groups seek the optimal level of diversification to facilitate the performance. Thus, it could be concluded that the level of diversification of Polish business groups should be moderate (according to R.P. Rumelt (1974) the specialisation ratio – the share of revenue from main business in total revenue – gains
values between $0.96 < SR \leq 0.7$ in moderately diversified enterprises). After the transformation of Polish economy from the command economy to the market economy the diversification strategy became very an interesting option for Polish large enterprises (Gierszewska, 1998; Jarosiński, 2004). Initially, the diversification strategy was defensive, and after the crisis related to the transformation, it changed the character and became more offensive, oriented toward mixed or related diversified business groups. They mainly applied the vertical forward and the vertical backward diversification strategy aimed at strengthening the competitive position, becoming independent suppliers and/or customers, increasing the quality of products and decreasing costs (Romanowska, 1998; Romanowska, 2011). However, it may be expected, as Polish economy has developed, that Polish business groups follow the global de-diversification trend. Thus, authors propose a following hypothesis:

Hypothesis 1: The business groups operating in Poland are moderately diversified.

Diversification and business group performance

Changes in the implementation of the diversification strategy are strongly related to its efficiency. The relation between the diversification and the performance is the central issue of strategic management (Chandler, 1997; Ansoff, 1957; Wrigley, 1970; Rumelt, 1974; Porter, 2001). Literature on diversification-performance relationship (Palich et al. 2000; Ramanujam & Varadarajan, 1989) suggests that there is still much to explore in this topic (Li & Wong, 2003) as numerous studies in this area bring inconsistent results. Generally, two opposite concepts refer to the impact of the diversification strategy on the enterprise performance: diversification discount and diversification premium. However, it should be mentioned that some studies did not identify any relationship between diversification and performance (Palepu, 1985; Delios & Beamish, 1999; Lubatkin, Merchant, & Srinivasan, 1993).
The term "diversification discount" means that the diversification, especially into unrelated businesses, is associated with loss of shareholders value (Khanna & Yafeh, 2007; Montgomery & Wernerfelt, 1988). The extensive diversification was negatively perceived by researchers and some studies proved negative influence of the diversification on the business performance (Ching-Pu & Chen, 2009; Lang & Stulz, 1994). The diversification discount is explained through inefficient allocation of capital (Rajan, Servaes, Zingales, 2000), information asymmetry between central and divisions (Harris, Kriebel, & Raviv, 1982) and engagement in value-destroying investments (Jensen, 1986).

The second concept – diversification premium (Villalonga, 2004a) – indicates the benefits of the diversification and higher valuation of diversified enterprises. The diversification can be strategy maximising value due to risk reduction, greater debt capacity, and lower taxes (Lewellen, 1971). Some researchers pointed out that the diversification creates internal capital markets that lead to a more efficient allocation of resources across businesses (Villalonga, 2004b; Williamson, 1975). J.S. Jahera Jr., W.P. Lloyd and D.E. Page (1987) argue that diversified firms have higher returns. Also, A. Michel and I. Shaker (1984) as well as A.M. Pandya and N.V. Rao (1998) showed the advantage of the unrelated diversification in the context of the business performance. In some research it is indicated that a positive effect of the diversification on the business performance may be connected with the following aspects: market power from the one business may be used in other businesses, creation of an internal financial market between enterprises operating in the one business group and easier access to the capital (Palich et al., 2000).

In the literature theories pointing to the optimal level of diversification can be distinguished (Villalonga, 2004b). They confirm positive effect of the diversification strategy, especially the related one, on the business performance. The research of R.P. Rumelt (1974), M.E. Porter (1987), V. Ramanujama and P. Varadarajana (1987) as well as N.W.C. Harper and S.P. Viguerie (2002) proved the advantage of the related diversification over the unrelated diversification. R.P. Rumelt (1974) found that relatedly diversified enter-
prises, with specialisation ratio between 0.95 and 0.7 perform better than unrelatedly diversified enterprises. It can be pointed that sharing resources and capabilities among different, but related businesses can positively influence the business performance.

Initially, a lineal relationship between the diversification strategy and the performance of enterprise was highlighted. However, empirical researches have shown unanimously that business performance will not be improving endlessly along with the enterprise’s growth of degree of diversification. Curvilinear models occurred (in the form of a reversed “U”) which indicated that some types of the diversification have better influence on the enterprise performance than others. The researchers inclined to the reversed “U-shape” model have reached a conclusion that an optimal strategy maximising profit is the strategy of related diversification. They have observed that some additional costs have to be incurred with the diversification. These are mainly the costs of coordination, managing diversified business portfolio, communication, allocation of resources, internal competition and control, which are much higher for unrelated diversification compared to related one (Palich et al., 2000).

Studies on the relationship between the diversification strategy and the business performance have been usually carried out on the example of large companies. The results of research highlighting a relation between the diversification strategy and business performance can therefore be also applied for business groups. It is worth to continue the research due to its ambiguity.

Authors have discussed that the influence of the diversification strategy on the business performance is ambiguous. Some studies showed a positive relationship between described variables, but some claimed a negative relationship. Thus, authors propose a hypothesis that the diversification strategy influences the business performance:

Hypothesis 2: The highly diversified business groups performed worse than the single product and moderately diversified business groups.
Material and methods

Sample

The research covered business groups listed on the Warsaw Stock Exchange having registered offices in Poland. Authors focused only on business groups in which holding company and other enterprises are linked by capital ties. The research sample comprises 81 business groups whose activities in terms of the diversification strategy were analysed in years 2010–2016. The collected data provided 1,500 records for the analysis of diversification and 2,076 records for the analysis of their performance.

Business groups carry out operations in various industries, with the construction and real estate as well as the processing industries prevailing. It is consistent with the structure of Polish economy, where these two industries also prevail. Interestingly, these were mainly young business groups established after 2000. In respect of the type, operational groups prevail in the research sample. This is also consistent with the general structure of business groups in Poland which are predominantly of operational and operational-strategic ones.

Table 1. Description of the research sample

<table>
<thead>
<tr>
<th>Description</th>
<th>Number of business groups</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Industry</strong></td>
<td></td>
</tr>
<tr>
<td>Construction and real estate</td>
<td>24</td>
</tr>
<tr>
<td>Retail and wholesale trade</td>
<td>11</td>
</tr>
<tr>
<td>Telecommunications and media</td>
<td>10</td>
</tr>
<tr>
<td>Processing industry</td>
<td>32</td>
</tr>
<tr>
<td>Other</td>
<td>4</td>
</tr>
<tr>
<td><strong>Year of establishment</strong></td>
<td></td>
</tr>
<tr>
<td>Before 1999</td>
<td>24</td>
</tr>
<tr>
<td>After 2000</td>
<td>52</td>
</tr>
<tr>
<td><strong>Type of business group</strong></td>
<td></td>
</tr>
<tr>
<td>Operational</td>
<td>64</td>
</tr>
<tr>
<td>Other</td>
<td>13</td>
</tr>
</tbody>
</table>

Source: own study.
Method

The research applied critical analysis of academic literature as well as documents analysis (desk research). In order to gather information about the diversification strategy as well as the business group performance, financial and strategic documentation were analysed. An unquestionable advantage of this research method is the possibility to carry out the comparative analysis. The research considered documents such as consolidated reports of business groups, annual reports of parent companies, prospectuses, management board lists, but also information provided on the companies’ websites and other sources. Data were also supplemented from the Amadeus database (financial information for public and private companies), which provide information about financial results of the enterprises in a standard format enabling to compare entities across industries and borders.

Authors applied also statistical inference, which is the process of drawing conclusions about populations or scientific truths from data. Authors applied ANOVA analysis, preceded by the Kolmogorov–Smirnov test (it is a test for normality of the distribution), in order to identify the differences in the performance of business groups between business groups with different degree of the diversification.

Measures

The diversification strategy was measured with indicators commonly used in the literature.

Diversification was measured with two indices:

- Rumelt’s specialization ratio, describing the share of revenue from main business in total revenue; the higher the ratio, the lower the diversification level;
- Herfindahl/Berry Index, which measures the diversification as a continuous variable; Herfindahl/Berry Index is measured by the following formula:
\[ H = 1 - \sum_{i=1}^{n} P_i^2 \]  \hspace{1cm} (1)

where:

- \( H \) - the index of diversification
- \( n \) - the number of industries (products) in which business operates
- \( P_i \) - the relative share of each industries’ revenue to overall corporate revenue

The higher the value of the index, the more diversified the enterprise.

One of the key issues in the measurement of the degree and nature of diversification is to distinguish main business and other businesses. The research was based on the product-related method of defining business which consists in distinguishing separate business activities on the basis of disparity of individual products or product lines (Pitts & Hopkins, 1982). The product-related method was supported by the analysis of statistical codes made according to the Polish Classification of Activities (PKD). The basic industry was identified with the group from the PKD classification, i.e. three common digits of the code, ascribed to specific fields of activities.

Performance of business groups was measured with four ratios. Authors decided to evaluate business performance based on the following indicators:

- **ROE** [return on equity] using net income, computed as:
  \[ \text{ROE} = \frac{\text{Profit/Loss for period} = \text{Net Income}}{\text{Shareholders funds}} \times 100 \]  \hspace{1cm} (2)

- **ROA** [return on sales] using net income, computed as:
  \[ \text{ROA} = \frac{\text{Profit/Loss for period} = \text{Net Income}}{\text{Total assets}} \times 100 \]  \hspace{1cm} (3)

- **EBIT margin** [earnings before deducting interest and taxes], computed as:
  \[ \text{EBIT margin} = \frac{\text{Operating Profit/Loss} = \text{EBIT}}{\text{Operating revenues} = \text{Turnover}} \times 100 \]  \hspace{1cm} (4)

- **Profit margin** computed as:
  \[ \text{Profit margin} = \frac{\text{Profit/Loss before tax}}{\text{Operating revenues} = \text{Turnover}} \times 100 \]  \hspace{1cm} (5)
Results and Discussion

The degree of diversification was assessed with the specialisation ratio. The table below presents, in percentage terms, the number of business groups in subsequent years with the specialisation ratio (SR) divided into three ranges: 0-0.69; 0.7-0.94; 0.95-1.00. The ranges were defined on the basis of classification proposed by R.P. Rumelt (1974). He classified firms into three groups: single product enterprises with SR ≥ 0.95; moderately diversified enterprises with SR between 0.95 < SR ≤ 0.7 and highly diversified enterprises with SR < 0.7.

Table 2. Percentage of business groups according to the specialization ratio

<table>
<thead>
<tr>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>0.95-1.00</td>
<td></td>
<td>25.9%</td>
<td>27.2%</td>
<td>33.3%</td>
<td>32.1%</td>
<td>29.6%</td>
<td>28.4%</td>
<td>23.5%</td>
</tr>
<tr>
<td>0.7-0.94</td>
<td></td>
<td>32.1%</td>
<td>33.3%</td>
<td>30.9%</td>
<td>37.0%</td>
<td>34.6%</td>
<td>38.3%</td>
<td>43.2%</td>
</tr>
<tr>
<td>0.0-0.69</td>
<td></td>
<td>17.3%</td>
<td>22.2%</td>
<td>23.4%</td>
<td>20.9%</td>
<td>28.3%</td>
<td>28.4%</td>
<td>24.7%</td>
</tr>
<tr>
<td>no data is available</td>
<td></td>
<td>24.7%</td>
<td>17.3%</td>
<td>12.3%</td>
<td>9.9%</td>
<td>7.4%</td>
<td>4.9%</td>
<td>8.6%</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Source: own study.

According to the table, in almost each of the analysed years the research sample was dominated by business groups having a major share in one industry (specialisation ratio between 0.7 and 0.94). Thus, hypothesis 1 is supported and it can be asserted that the business groups operating in Poland are moderately diversified. Specialised entities were equally numerous (specialisation ratio between 0.95 and 1.00). Interestingly, business groups were not highly diversified. Groups with specialisation ratio below 0.7 were
in minority in the research sample (except 2010). The highest number of diversified entities was recorded in 2011 and 2012 (about 28%). Additionally, it can be observed that since then their number decreased significantly. Unfortunately, a lot of data were missing in the sample, particularly data from the last three years and concerning the enterprise birth year. While the latter can be explained by unavailability of data, the missing data in the last years are connected with various scenarios of the analysed business groups’ lives. Some of them have withdrawn from the stock exchange, some of them were liquidated or went bankrupt and other were acquired by other entities.

The degree of business group diversification may also be assessed using the Herfindahl/Berry index. It allows for the assessment of diversification and significance of individual industries of the business group. Figure 1 below presents in a synthetical way a collective analysis of the diversification of business groups in term of the Herfindahl/Berry index.

**Figure 1. Average value of Herfindahl/Berry index for the analyzed business groups**

![Graph showing the average value of Herfindahl/Berry index for the analyzed business groups from 2010 to 2016.](image)

Source: own study.
The value of Herfindahl/Berry index clearly indicates the specialisation trend among business groups and simultaneous limitation of diversification of various activities industries. Since 2010 the average value of the index for business groups has been constantly falling. This can be the evidence of the de-diversification tendency that occurred among business groups operating in Poland. This can be also an effect of the earlier financial crisis that inclined business groups to reorganise their portfolios and to focus on key business areas.

The analyses show that the business groups are mainly specialised entities and entities with a majority share in one industry. The number of diversified business groups was changing in subsequent years, but recently it is falling. Business groups are more likely to choose the strategy of specialization than diversification. The value of the Herfindahl/Berry index drops, which means the decrease of the diversification. Simultaneously, by analysing the specialisation ratio it can be observed that its values have grown slightly in recent years (decrease of diversification).

ANOVA analysis was used to test the hypothesis 2 on relationship between the diversification strategy and business group performance. As dependent variable authors chose the following business groups performance indicators: ROE, ROA, EBIT margin and profit margin and as an independent variable the degree of diversification measured by specialization ration proposed by R.P. Rumelt (1974).

Firstly, the Kolmogorov–Smirnov test was applied as a test for normality of distribution. It allowed to state that only for ROE and EBIT margin the distribution in normal in each of the analysed year. Thus, the later analysis was conducted only for ROE and EBIT margin as dependent variables.

Secondly, the ANOVA analysis was conducted with the statistical significance of < 0.05. Two hypotheses were formulated:

- H0 – the means in the studied groups do not differ
- H1 – at least one mean is different from each other

Table 3 presents results of the ANOVA analysis.
Table 3. Results of the ANOVA analysis

<table>
<thead>
<tr>
<th>Year</th>
<th>Diversification versus ROE</th>
<th>Diversification versus EBIT Margin</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>F (2.56)=1.8 p=0.175</td>
<td>F (2.57)=1.79 p=0.176</td>
</tr>
<tr>
<td>2015</td>
<td>F (2.63)=0.73 p=0.484</td>
<td>F (2.61)=1.63 p=0.205</td>
</tr>
<tr>
<td>2014</td>
<td>F (2.66)=1.42 p=0.248</td>
<td>F (2.67)=0.75 p=0.477</td>
</tr>
<tr>
<td>2013</td>
<td>F (2.67)=0.95 p=0.394</td>
<td>F (2.67)=0.03 p=0.975</td>
</tr>
<tr>
<td>2012</td>
<td>F (2.69)=2.14 p=0.125</td>
<td>F (2.69)=0.35 p=0.708</td>
</tr>
<tr>
<td>2011</td>
<td>F (2.69)=0.22 p=0.804</td>
<td>F (2.68)=0.29 p=0.750</td>
</tr>
<tr>
<td>2010</td>
<td>F (2.68)=0.26 p=0.774</td>
<td>F (2.67)=0.44 p=0.649</td>
</tr>
</tbody>
</table>

Source: own calculation using PSPP.

Conducted study shows that hypothesis H0 cannot be rejected as the statistical significance is higher than 0.05. Thus, hypothesis 2 should be rejected and it cannot be asserted that the highly diversified business groups performed worse than the single product and moderately diversified business groups. Thus, the diversification strategy does not differentiate performance of business group in Poland.

Conclusions

The literature review reveals that companies as well as business groups can grow by implementing the diversification strategy and it is a popular growth strategy for large enterprises as well as in business groups with wide pool of resources. Conducted research on business groups in Poland showed that business groups in Poland are moderately diversified. Authors observed that the Herfindahl/Berry index systematically falls from 2010 to 2016 (decrease of the diversification degree) and the specialisation ratio rose between 2010 and 2016 (decrease of the diversification degree as the revenue form the main business increased in relation to the total revenue of the business group).

The diversification strategy has advantages and disadvantages and it can positively or negatively influence business performance. Studies on influence of the diversification strategy on business performances are ambiguous. Researchers showed that the diversification strategy influences
business performance positively, but some proved that the relationship is negative and other did not find enough evidence to confirm the existence of this relationship. These contradicting results from previous studies of other researchers prompted authors to further investigate the influence of the diversification strategy on the performance of a business group. Authors followed the concept of diversification discount, which emphasize that over-diversification can negatively influence the business group performance. However, conducted study showed that relationship between diversification strategy and business group performance (ROE and EBIT margin) does not exist (the diversification strategy does not differentiate the performance of business groups) supporting such claims from the literature. It is worth to note the many factors influence the performance of enterprises and business groups. Thus, the impact of diversification strategy on business group performance may be not important. It would be interesting to investigate the issues in detail in the future studies, especially taking into consideration the related and unrelated diversification strategy.

Although the research has reached its aims, there are some unavoidable limitations. Firstly, conducted research referred only to business groups in Poland. Thus, conclusions can be formulated only to this business structures; the generalisation is impeded. Secondly, there are statistical and data limitations. Authors identified gaps in the collected data. A lot of data about the degree of diversification as well as the business performance were missing in the sample. Additionally, collected data came from different sources, thus some discrepancies may exist. In the case of business groups performance, some data were not reliable, and they were excluded from the sample.
References


