Journal of Competitiveness

The scientific periodical Journal of Competitiveness published by the Faculty of Management and Economics of Tomas Bata University in Zlín offers results of basic and applied economic research of domestic and international authors in the English language. As it is evident from the title, the journal concentrates on the field of competitiveness of individual companies, clusters of companies, regions or national economies from different angles of view. Problems of competitiveness represent the subject which stretches across the individual branches of economic theory and practice. Therefore, we welcome articles focusing on microeconomics, management, marketing, personnel, financial management as well on problems of national economy and regions or other economic subjects connected with competitiveness.
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Editor’s Letter

Dear readers,

Let us introduce the third issue of the eight volume of the Journal of Competitiveness (2016). This issue offers contributions focused on topics of product management, internal branding of private universities, labour market and young graduates, and labour market connected with Z and Y generation. Firm strategy, market performance, the impact of EU funds on the development of a business model, business economics and investment decisions are topics which were chosen to be published in this issue as well.

You can find contributions from the Czech Republic, Ghana, Nigeria, Poland, Hungary and Slovakia.

The aim of the first paper is to present partial results of an independent research, and connect them with the knowledge base of knowledgeable management and human factors in product management. The paper focuses on a set of requirements for qualifications, experience, knowledge and skills that are imposed on candidates for the position of “Brand Manager”. The conclusion of the second study is that performance of private universities and brand equity depend on a high loyalty among students. The author of the following contribution focuses on two areas including the analysis of perception of graduates as drifters, and their demands for high starting salaries. A partial conclusion of this study indicated that future graduates, in comparison with the initial risk factor of high turnover, see much higher risk in their inability to solve problems, high initial costs of training or lack of independence.

The purpose of Nigerian author’s study is to ascertain the relevant drivers of customers’ churn and retention in the growing Nigerian mobile telecommunication industry. The aim of the fifth paper is to assess the impact of grants received by companies on the formation of a business model. The main question of the sixth research was how to approach the new generations from the view of HR’s perspective.

The next paper focuses on the analysis and identification of specific factors regarding localization, turnover of enterprise and others which may have a potential impact on performance. In this context, the attention is drawn to the orientation of enterprises on particular dimensions of corporate sustainability concept and factors such as company size or capital structure in relation to its application.

The main objective of the last paper is to bring scientific evidence that the age of an entrepreneur should be considered as a factor having significant impact on one part of the credit risk of a company– the risk of a change of the interest change. The research was carried out among 438 Slovak companies in 2016.

We would like to thank members of the editorial staff, peer reviewers and members of the editorial board for preparing this issue, and we are looking forward to our further cooperation.

On behalf of the journal’s editorial staff,
Assoc. Prof. David Tucek, Ph.D.
Editor-in-Chief
Requirements for Brand Managers and Product Managers Responsible for Competitiveness of Product and Brands

Wroblowská Zuzana

Abstract

Competitiveness of a product and care of a brand value are mainly the work of product managers and brand managers who play a major role in creating a competitive advantage of their companies. The aim of the paper is to present partial results of an independent research and connect them with the knowledge base of knowledgable management and human factors in product management. The paper focuses on a set of requirements for qualifications, experience, knowledge and skills that are imposed on candidates for the position of “Brand Manager”. For the purposes of defining the research objectives, an assumption was made that a set of requirements for candidates will prove that brand managers and product managers are knowledgable workers. In order to meet this goal, the method of content analysis of job advertisements was used. Secondly, the research was focused on identifying and analysing the differences between the sets of requirements for product managers and brand managers. The analysis of the texts of job advertisements resulted in the requirements for knowledge and competency. It provided the information about what level of education, type and length of practical experience was preferred for the position of “Brand Manager”. The unexpected result was that the groups of technical knowledge and work experience of brand managers and product managers had statistically significant differences. At the end of the article, there are a number of recommendations formulated for the implementation of recruitment strategy.

Keywords: brand manager, competitiveness, human resources, knowledge, product management, recruitment strategy, skills

JEL Classification: D83, M12, M31, M51

1. INTRODUCTION

With many of the undoubted social changes, marketing of business organizations is currently being confronted with a new reality which requires new knowledge and skills of the marketing staff. It is a challenge to discover whether and how the changes are reflected in the issue of human factors in product management and to focus on brand managers because these kinds of open positions permanently attract graduates and marketers with work experience.

To create the concept of product management as an interdisciplinary function within the firm, the key role is played by the employee with the title of “Product Manager” or “Brand Manager”. It is important to determine whether product categories are being developed within the specific organization in the parts of plans of the portfolio products or brands. As an integrated system of planning, budgeting and implementation activities, brand management was mainly put through
by the manufacturers of products for consumer markets. On B2B markets, they pay attention to the brands primarily as a seal of quality and utility that allows the company to protect its intellectual property and promote itself on the market.

The role of the chief brand officer has emerged in business and has been described, but the responsibility for making the brand decisions every day still rests on the shoulders of brand managers in most companies. The involvement of brand managers in internal company processes is rather complex and, in the hierarchy of the company, another worker or a group of workers is rarely subordinate to the brand manager. Thanks to the use of tools of marketing tactics, s/he should be able to build a strong position for the product brands s/he was entrusted with. The brand manager has to understand the tendencies in the development of products and services market, and by improving her/his personal performance, consistently strengthen the competitiveness of the organization and increase its chances of success in the future. In order to succeed, s/he must have knowledge and personal attributes.

The researched issues are characterized by the lack of input data since brand managers do not do the jobs according to qualification standards. In a corporate practice, this job function can vary to some extent in its content and demands. This fact was taken into consideration in the selection of primary sources.

A set of demands for educational, professional and general competencies, knowledge and skills, experience and expertise with which the candidates for the position of “Brand Manager” are confronted with at the beginning of the recruitment process, is also used to identify the shifts in demands. For this purpose, there has been used a unique set of data from 2007 prior to the outbreak of the financial crisis in the US, which influenced not only product and service markets, but also the labour force in the EU and the Czech market as an integral part of it. Moreover, the consistent application of the methods of content analysis, which was first published by Wroblowská (2011), allows us to compare the requirements imposed on brand and product managers.

2. OBJECTIVES AND METHODOLOGY

2.1 Purpose and methodology

The goal of the paper is to present partial results of an independent research and to connect them with a knowledge base which relates to human factors in product management and an output in the form of recommendations for the strategy and implementation of the recruitment process and to provide inspiration to those who are responsible for professional training of future brand managers.

While addressing the raised issues, an interdisciplinary approach was applied, as the knowledge of a theoretical background and the analysis of the current state of issues and the tendencies of its development required to conduct a research in several fields of study. The methods used in the research were partly empirical (primary research) and partly logical, particularly using deduction when working with secondary data, analysis and synthesis. The determination of research assumptions proceeded from a knowledge base. To verify the hypotheses, the method of comparison was also used, the results of which were examined by the test of independence of variables.
2.2 Scientific aim

The primary goal of the research project was to examine the situation of “Brand Manager” positions offered on the researched labour market and to provide answers to the questions arising from the research assumptions. The research project has been drawn up to examine the assumption that a brand manager is an example of a knowledgable worker and is seen as such by the business practice. The secondary objective was to identify whether with the passing of the years, there has been a shift in demands imposed on candidates for the position of “Brand Manager”, and finally, to compare and identify differences in requirements for product managers and brand managers. For this purpose, the following assumptions have been made:

- the set of requirements for candidates for the job of a brand manager will confirm that a brand manager is one of the workers who have knowledge, skills and experience,
- employers at the stage of economic recovery do not lower requirements for the new workers to be qualified for the position of “Brand Manager”,
- as for the requirements for the level of education, knowledge and expertise, brand managers and product managers do not differ.

The research project was designed in such a way that it would be possible to compare the outputs of the primary research with the results of partial stages of the research project by Wroblowská (2011). Therefore, the validated content analysis method has been used according to the concept of Bernard Berelson (1952), who defined it as the research method for the objective, systematic and quantitative description of the content of the text. The information on the requirements for applicants for the position of a Brand Manager in the Czech Republic was taken from the publicly available recruitment advertising on the career portal Jobs.cz. The data collection took place in the odd weeks from February to April and from June to August 2015. Thus 86 adverts were gathered with the exclusion of ads supplemented with adjectives “senior” or “junior” and after that, four adverts were excluded because the job responsibilities did not correspond to the functional characteristics of product management. After removing duplicates, the final sample showed 56 advertisements.

Data processing has been applied in a manner consistent with the procedure referred to in the dissertation by Wroblowská (2011) which provided an input for the results comparison between 2007 and 2014 and analysed differences between the requirements for filling positions of Brand Manager and Product Manager. Data segments were transferred into an electronic form. The work with transferred data was applied to a so-called manifest content analysis according to Plichtová (1996 in Miovský, 2006) which only studies the explicit content of the text. In the categorisation of the requirements, the classification of the competencies database in the project of The National System of Professions in the Czech Republic (NSP, 2012) was taken into account. There were compared the requirements that had cumulated frequency in the analysed samples which exceeded 3 % threshold in at least one of the processed data files. The statistical verification of results was made using test criteria in the chi-squared test according to Řezanková (2007).

The theoretical background and part of the discussion is based on the analysis of references which included the following three types: scientific and expert monographs and collections available in the university library under the key words “product management” and “brand management”; reviewed scientific and expert articles accessed from the EBSCO service using the key words: brand
manager, job profile, knowledge, product manager, recruitment, and skill (Web of Science database was prioritised); and, finally, two articles publicly available on the web.

3. THEORETICAL BACKGROUND

To complete the research task, an interdisciplinary approach was applied because the theoretical basis exceeds the boundaries of marketing as this applied study has had an intensive development and is still developing.

Assuming that at least one side is striving to satisfy the needs of the other side, marketing management according to Kotler and Keller (2012) can be approached as “the art and science of choosing target markets and getting, keeping, and growing customers’ base through creating, delivering, and communicating superior customer value”. From the point of view of company management, marketing can be seen as a management process which uses the resources of the whole company in order to satisfy the needs of selected groups of customers to reach the goals of both sides as the principles of marketing apply to all areas of business and their use differs only in the intensity of their application (McDonald & Wilson, 2012).

Tomek and Vávrová (2009) emphasise that product management is an integrated product development process. Gorchels (2005) integrates brand management with product management referring to the fact that it is the most common form of product management for companies that produce consumer goods. On consumer markets, the brand management tasks are determined by the “product-brand-consumer” relationship. The dimension of the relationship is not just about how many products bring value, but mainly the value of the offers, and, therefore, success does not act only as a rational plane, but primarily the realm of emotions and feelings (Přibová et al., 2000). Kotler and Pfoertsch (2006) emphasise that on B2B markets brands fulfil the same purpose as on consumer market because “they facilitate the identification of products, services and businesses as well as differentiate them from the competition”.

The starting point to derive requirements for brand managers is to state their role in the process of strategic brand management where the strategic, tactical and operative tasks are as follows: (1) identifying and establishing brand positioning, (2) planning and implementing brand marketing programmes, (3) measuring and interpreting brand performance, and (4) growing and sustaining brand equity (Keller, 2008).

In the current concept of holistic marketing, according to Kotler and Keller (2007), it is necessary to work with greater emphasis on brands and this also corresponds to the call on the commitment of top management. Gorchels (2005) points out, that managers on the top level of an organisation require further materials that would help them make decisions in matters not only of a strategic nature, but also in a number of activities that by their nature fall into the range of tactical dimension. The pressure on brand managers is growing and thus their disillusionment. Brand management system is often criticized. For example, Kumar (2008) notes that brand managers who fail are too focused on the short-term goals and do not have the authority which could help them be seen as business partners by retailers. Gorchels (2005) explains that the cause of it is not human factors, but the choice of the enterprise competitive strategy.
Brand managers in their coordinating role should prove their ability to gain over other functional sectors to perform the tasks and maintain product integrity which is integrated into the entrusted to them brand. According to Gorchels (2005), more importance to their expertise is given on B2B markets. However, it is indisputable that the employment eligibility of brand managers and the added value of brand management process have a causal connection similar to the relation between employment eligibility of a product manager and added value of the product management process, as described by Wroblowská (2011, 2012a).

The added value that people can contribute to an organization is emphasized by human capital theory (Schultz, 1961 in Armstrong, 2012). Human capital theory is associated with the resource-based view of a company as developed by Barney (1991 in Armstrong, 2006). This suggests that sustainable competitive advantage is attained when a company has a human resource pool that cannot be imitated or substituted by its rivals. At the same time, human capital represents the combined intelligence, skills, and expertise that give an organization its distinctive characters (Bontis, 1999 in Armstrong, 2012).

A high level of education and specialist skills combined with the ability to apply skills to identify and solve problems are distinguishing characteristics of knowledge workers (Drucker, 1993). Knowledge workers do not form a homogeneous group. In a corporate organization, there may be multiple types of knowledge workers next to each other. Mládková (2008) pointed out that you can distinguish between those who produce knowledge and those who are responsible for knowledge transfer. Davenport and Prusak (2000) developed the topic of “working knowledge” and concluded that knowledge can be transformed into innovations and then competitiveness. Other authors continued these studies in conditions of certain organizations. For example, Pitra, Mohelská et al. (2015) stressed the importance of a suitable corporate culture for knowledge application. Púčková (2015) focused on the importance of knowledge about customers for a successful brand positioning. Thanks to the combination of the knowledge of customers and knowledge held by employees, companies can personalise their products. Product personalisation is one of the ways to increase competitiveness (Tomek & Vávrová, 2009).

One of the targets of this research paper is to contribute to an improvement of overall orientation of labour market participants through the outcomes of the research project which is accompanied by recommendations for the process of recruitment of brand managers. It starts with the definition of knowledge, skills and competencies necessary for work or/and with the definition of education, qualifications, training and experience that are required for the acquisition of the necessary knowledge and competencies (Armstrong & Taylor, 2015).

4. RESULTS

This paper presents and discusses data and results which are directly related to the paper’s goal. The final results of the research project, their discussion and possible applications are now being processed. Partial results related to product managers and requirements for knowledge, specialised and strategic skills and transferable general competencies were presented to the experts in the paper published by Wroblowská and Ruda (2015a).
4.1 Secondary data applied in the research project

In the discussion of findings, the available empirical surveys conducted outside the Czech Republic will be mentioned. When preparing the independent research, no new information was available from the empirical research which meant to research the human factor in product management in the Czech Republic apart from those which had been published already, see Wroblowská (2011, 2012b, 2012c).

4.2 Content analysis and comparison of requirements in job advertisements

The source of requirements for candidates for the position of “Brand Manager” were job advertisements on Jobs.cz, the most popular career portal in the Czech Republic, which was already verified by Wroblowská (2011) as a suitable source to fulfil the research goal. The job position had a different name, for example, “Junior Brand Manager” or “Senior Brand Manager”, the advertisement was not included in the sample in that case. In 2007, when applying the same selection procedure, the sample of single adverts reached the number of 34, and in 2015, there were 56 advertisements. The sorted data from the researched advertisement texts are presented in a form of frequency chart in Table 1. At the same time, the table gives the information about the results of the survey carried out by Wroblowská (2011) between 2006 and 2007.

Tab. 1 - Comparison of requirements for a brand manager by advertisers in 2007 and 2015.
Source: Independent research

<table>
<thead>
<tr>
<th>Group</th>
<th>2007</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Brand manager</td>
<td>Brand manager</td>
</tr>
<tr>
<td></td>
<td>Abs. frequency</td>
<td>Relative frequency</td>
</tr>
<tr>
<td><strong>Technical knowledge and skills and general</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>requirements for education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>university</td>
<td>17</td>
<td>50,0%</td>
</tr>
<tr>
<td>high school or university</td>
<td>13</td>
<td>38,2%</td>
</tr>
<tr>
<td>high school or higher technical education, not university</td>
<td>1</td>
<td>2,9%</td>
</tr>
<tr>
<td>technical knowledge and skills</td>
<td></td>
<td></td>
</tr>
<tr>
<td>knowledge of technical disciplines</td>
<td>7</td>
<td>20,6%</td>
</tr>
<tr>
<td>knowledge of brand/product management</td>
<td>1</td>
<td>2,9%</td>
</tr>
<tr>
<td>knowledge of marketing</td>
<td>3</td>
<td>8,8%</td>
</tr>
<tr>
<td>knowledge of project management preferable</td>
<td>2</td>
<td>5,9%</td>
</tr>
</tbody>
</table>
In accordance with a recognized expert opinion that the knowledge worker is characterized not only by his/her training and expertise, but also by his/her experience, the part of presented output are also requirements for working experience of applicants for the vacant position of “Brand Manager”.

Figure 1 illustrates that the representation of the characters in some groups differs according to evaluation requirements, with the exception of general and transferable competencies which were marked with “J” during the data processing, the changes in the representation of the requirements in individual groups are statistically insignificant, see table 2.
Fig. 1 - Comparison of relative frequency of hard skills applied for a brand manager by advertisers in 2007 and 2015. Source: Independent research

- Experience with leading a team/a smaller work group
- Experience with this position 3 years and more
- Experience with this position at least 2 years
- Professional experience
- Experience in the field necessary
- Experience in the field preferable
- Work experience in marketing
- Professional experience with provable results
- Work experience in sales
- Driver's license of Czech cat. B
- Work with PC/with MS Office on a good level
- Good/advanced/communicative English
- Excellent English
- Communicative knowledge of DE or FR
- Excellent Czech
- Knowledge of project management preferable
- Knowledge of marketing
- Knowledge of brand/product management
- Knowledge of technical disciplines
- High school or higher technical education, not university
- High school or university
- University
The test criterion was the χ² test. On the significance level of 0.1 %, 1 %, and 5 %, it was tested whether the null hypothesis regarding independence of the analysed variable on the sign representing the year of the content analysis of advertisements can or cannot be rejected.

Tab. 2 - Overview of results of individual requirement groups testing. Source: Independent research

<table>
<thead>
<tr>
<th>the group of tested requirements</th>
<th>chi-square value</th>
<th>df</th>
<th>test result</th>
</tr>
</thead>
<tbody>
<tr>
<td>G requirements for education</td>
<td>3,964153877</td>
<td>2</td>
<td>H₀ not rejected</td>
</tr>
<tr>
<td>H technical knowledge and skills</td>
<td>1,551634615</td>
<td>3</td>
<td>H₀ not rejected</td>
</tr>
<tr>
<td>J general, transferable competencies</td>
<td>17,04126771</td>
<td>5</td>
<td>H₀ rejected</td>
</tr>
<tr>
<td>K required practice and work experience</td>
<td>14,72279766</td>
<td>8</td>
<td>H₀ not rejected</td>
</tr>
</tbody>
</table>

A statistically significant difference in the distribution of requirements for general, transferable competencies was confirmed for both & = 0.01 and & = 0.05.

Table 3 gives information about the comparison of the two analysed data files: advertisements for the position of “Product Manager” in 2014 and advertisements for candidates for the position of “Brand Manager” in 2015.

Tab. 3 - Comparison of requirements for brand managers (in 2015) and for product managers (in 2014). Source: Independent research

<table>
<thead>
<tr>
<th>Group of requirements</th>
<th>2014</th>
<th>2015</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Product manager</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Technical knowledge and skills and general competencies</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>requirements for education</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>university</td>
<td>55</td>
<td>55,0%</td>
<td>35</td>
<td>62,5%</td>
</tr>
<tr>
<td>high school or university</td>
<td>24</td>
<td>24,0%</td>
<td>13</td>
<td>23,2%</td>
</tr>
<tr>
<td>high school or higher technical education, not university</td>
<td>12</td>
<td>12,0%</td>
<td>5</td>
<td>8,9%</td>
</tr>
<tr>
<td>technical knowledge and skills</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>knowledge of technical disciplines</td>
<td>34</td>
<td>34,0%</td>
<td>7</td>
<td>12,5%</td>
</tr>
<tr>
<td>knowledge of brand/product management</td>
<td>13</td>
<td>13,0%</td>
<td>4</td>
<td>7,1%</td>
</tr>
<tr>
<td>knowledge of marketing</td>
<td>8</td>
<td>8,0%</td>
<td>5</td>
<td>8,9%</td>
</tr>
<tr>
<td>knowledge of project management preferable</td>
<td>2</td>
<td>2,0%</td>
<td>4</td>
<td>7,1%</td>
</tr>
</tbody>
</table>
### general, transferable competencies

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Count</th>
<th>Percentage</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communicative knowledge of DE or FR</td>
<td>2</td>
<td>2,0%</td>
<td>0</td>
<td>0,0%</td>
</tr>
<tr>
<td>Excellent English</td>
<td>28</td>
<td>28,0%</td>
<td>27</td>
<td>48,2%</td>
</tr>
<tr>
<td>Good/advanced/communicative English</td>
<td>57</td>
<td>57,0%</td>
<td>18</td>
<td>32,1%</td>
</tr>
<tr>
<td>Excellent Czech</td>
<td>8</td>
<td>8,0%</td>
<td>6</td>
<td>10,7%</td>
</tr>
<tr>
<td>Work with PC/with MS Office on a good level</td>
<td>35</td>
<td>35,0%</td>
<td>24</td>
<td>42,9%</td>
</tr>
<tr>
<td>Driver’s license of Czech cat. B</td>
<td>32</td>
<td>32,0%</td>
<td>25</td>
<td>44,6%</td>
</tr>
</tbody>
</table>

### required practice and work experience

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Count</th>
<th>Percentage</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional experience with provable results</td>
<td>13</td>
<td>13,0%</td>
<td>12</td>
<td>21,4%</td>
</tr>
<tr>
<td>Work experience in sales</td>
<td>2</td>
<td>2,0%</td>
<td>5</td>
<td>8,9%</td>
</tr>
<tr>
<td>Work experience in marketing</td>
<td>11</td>
<td>11,0%</td>
<td>18</td>
<td>32,1%</td>
</tr>
<tr>
<td>Experience in the field preferable</td>
<td>17</td>
<td>17,0%</td>
<td>11</td>
<td>19,6%</td>
</tr>
<tr>
<td>Experience in the field necessary</td>
<td>54</td>
<td>54,0%</td>
<td>12</td>
<td>21,4%</td>
</tr>
<tr>
<td>Professional experience</td>
<td>4</td>
<td>4,0%</td>
<td>10</td>
<td>17,9%</td>
</tr>
<tr>
<td>Experience with this position at least 2 years</td>
<td>18</td>
<td>18,0%</td>
<td>18</td>
<td>32,1%</td>
</tr>
<tr>
<td>Experience with this position 3 years and more</td>
<td>23</td>
<td>23,0%</td>
<td>13</td>
<td>23,2%</td>
</tr>
<tr>
<td>Experience with this position at least 5 years</td>
<td>12</td>
<td>12,0%</td>
<td>0</td>
<td>0,0%</td>
</tr>
<tr>
<td>Experience with leading a team/a smaller work group</td>
<td>1</td>
<td>1,0%</td>
<td>0</td>
<td>0,0%</td>
</tr>
</tbody>
</table>

Table 4 is prepared for the set of requirements for professional knowledge and professional skills that are in Table 3 classified as the group H. It demonstrates the statistical verification procedure and the result of applying the independence test. A statistically significant difference in the distribution of requirements for technical knowledge and skills was confirmed for $\alpha = 0.05$, as proven by calculations in Table 4.
Tab. 4 - Two-dimensional analysis for a group of requirements for technical knowledge and professional skills. Source: Independent research

OVERALL CONCLUSION: The significance level of 5% rejects the null hypothesis; the probability distribution of the individual characters does not differ in groups "brand managers" (2015) and "product managers" (2014).

The hypothesis that the columns and rows are independent of the level cannot refuse cannot refuse refuse

<table>
<thead>
<tr>
<th>level</th>
<th>0,1%</th>
<th>1%</th>
<th>5%</th>
</tr>
</thead>
<tbody>
<tr>
<td>row</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>columns</td>
<td>0</td>
<td>0</td>
<td>0</td>
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</tbody>
</table>

TESTED DATA

<table>
<thead>
<tr>
<th>group H = advertiser's requirements</th>
<th>A1</th>
<th>A2</th>
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<tbody>
<tr>
<td>knowledge of technical disciplines = H1</td>
<td>34</td>
<td>1</td>
</tr>
<tr>
<td>knowledge of brand/product management = H2</td>
<td>13</td>
<td>6</td>
</tr>
<tr>
<td>knowledge of marketing = H3</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>knowledge of project management preferable = H4</td>
<td>57</td>
<td>20</td>
</tr>
</tbody>
</table>

TEST OF INDEPENDENCE

<table>
<thead>
<tr>
<th>A = position and year of data collection</th>
<th>2014 PM</th>
<th>2015 BM</th>
</tr>
</thead>
<tbody>
<tr>
<td>chii-square</td>
<td>7,963775</td>
<td></td>
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<tr>
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<td>4,68%</td>
<td></td>
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<tr>
<td>adjusted residuals</td>
<td>1,9009</td>
<td></td>
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<tr>
<td>1,3263</td>
<td></td>
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<tr>
<td>3,973</td>
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<td>adjusted residuals</td>
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<td>3,973</td>
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</tbody>
</table>

OVERALL CONCLUSION: The significance level of 5% rejects the null hypothesis; the probability distribution of the individual characters does not differ in groups "brand managers" (2015) and "product managers" (2014).

Besides the requirements for professional knowledge and skills, the statistical verification process confirmed the differences in a set of requirements for the practical experience of candidates for the positions of Brand Manager and Product Manager for & = 0.001.

5. DISCUSSION FINDINGS AND RECOMMENDATIONS

The results presented in Chapter 4.2 are directly linked to the objectives set in Chapter 2. Thanks to the experience gained from the research project implemented by Wroblowská (2011) in the phase of economic recovery before the onset of the global economic crisis, the job descriptions were carefully reviewed in the posted advertisements so that the analysed group could include only the advertisements for vacant positions within the structures supporting the product planning and management. In this way, we can discuss a job role in product management. Although experts attributed the role of a coordinator to brand managers and product managers, Wrob-
lowská (2011, 2012c) pointed out that in real practice the role of brand managers as implementers of marketing plans prevailed in the Czech Republic.

Now, the results will be analysed and the degree of fulfilment of the research assumptions and objectives will be evaluated. In 2015, the requirement for having a higher education degree occurred in the analysed advertisements 35 times. It was demanded by more than 50% of advertisers. The requirement for the educational degree occurred in 95% of advertisements.

The second highest frequency was recorded in the requirement for an excellent knowledge of the English language, and that is 27x (48.2%). On the contrary, the requirements from the category of professional knowledge and skills are stated in the texts of advertisements significantly less often. You cannot overlook the fact that for the given position they are looking for workers with experience and this experience is defined in the published advertisements in different ways, thereby reducing the resulting frequency of individual characters.

The findings show that the assumptions that the brand manager is one of those who possesses professional knowledge, skills and experience, and, as a knowledge worker, is seen by corporate practice as problematic. In the texts of the advertisements, it was rarely mentioned where or in what field the candidate should receive his/her education. It is, therefore, a matter of discussion whether advertisers assume that a successful completion of university education proves that the graduate has demonstrated his/her intellectual flexibility and is not only equipped with the acquired knowledge and professional skills, but is also prepared for his/her further education, as stated by Pitra, Mohelská et al. (2015).

The intellectual flexibility and the ability for lifelong learning are among the characteristics of a knowledge worker (Truneček, 2003). It can, therefore, be concluded that the advertised requirements for higher education and experience replace the explicitly formulated requirements for professional knowledge and skills, as mentioned by Armstrong and Taylor (2015).

The discussion regarding the second assumption according to the purpose of the article will be linked to the statement that we pointed out some of the differences. There was a statistically significant shift in the set of general, transferable competencies. At present, a higher level of knowledge of the English language is required, while the interest in the German language has decreased and the requirement for the excellent knowledge of the Czech language has newly appeared. It could be, therefore, concluded that the employers have not lowered their requirements for brand managers, at least as far as hard skills and working experience are concerned, when the above mentioned term “hard skills” has the opposite meaning of the term “soft skills”, which in some academic works and, especially, in human resources practice is connected to a group called “soft skills” which is used to describe the behavioural competencies and personality traits possessed by an individual, which nourish these competencies.

As all the aspects of modern business are influenced by an increased globalization, there is no surprise that advanced or excellent English is in the set of requirements for brand managers. Hollensen (2011) emphasized that experience and a positive attitude towards international processes together with corresponding skills determine the competitiveness in the international business environment. Nevertheless, to fulfil the tasks on the Czech national market needs an excellent Czech for understanding the customers’ needs and feelings, creating and communicat-
ing the value for customers. There is the way how to improve market knowledge and marketing knowledge, which is absolutely important for building strong brands. Thus, this is the way of applying learning methods in the company. It is mainly coaching by a marketing manager and market research manager according to Armstrong (2012). The author’s findings regarding technical knowledge and skills correspond to the idea of internal learning methods.

The third research assumption that in terms of requirements for the level of education, knowledge and professional skills, brand managers and product managers have no differences was not proved by the results. Brand managers have to prove their experience in the process of recruitment and demonstrate their experience in marketing more often. On the other hand, the request to show the knowledge of the advertiser’s field and/or industries of his/her customers occurred less often. The filling of “Brand Manager” position is more often subject to less than three years’ working experience. The advertisement requiring the proof of at least five years’ practical experience for the position has not occurred at all and for the positions of Product Manager it was mentioned in 12 cases. The knowledge of the technical discipline and knowledge of brand/product management were greatly emphasised.

To verify what knowledge the product managers should have was one of the research objectives of Tyagi and Sawhney (2010). During the analysis of the sample of 198 product managers, they found out the overshadowing of marketing knowledge and the elevation of product knowledge. Moreover, the authors stated in the characteristics of the sample that the participants of the research worked as product managers on average 7.4.

For the purposes of meeting the targets of this article, it may be formulated that the positions of Brand Manager and Product Manager are intended primarily for workers who are prepared to make their knowledge available to employers and who are able to receive, develop and apply new knowledge. The author refers to the articles by Wroblowská and Ruda (2015a, 2015b) in which the findings regarding product managers are discussed in more detail.

For the successful performance of marketing jobs, Kotler and Keller (2013) recommend to grasp the current challenges and flip them for the success of their products and brands on the market, which also means a greater and more effective use of the Internet as the information and sales channel, grasping social media and using it for emphasizing brand messages, communicating with customers through blogs, supporting online communities and using the stir created by brand ambassadors in their communities. Brand managers must have the specific knowledge and skills for these activities.

Although the requirements for applicants for open positions in brand management have rarely been referred to as explicitly stated experience in digital marketing and “knowledge of Internet communications”, one can conclude that the e-recruitment strategy will be effective because the candidates are open for the recruitment process with the use of online communication (Wroblowská, 2016). Recruitment adverts in newspapers and magazines only allow advertisers to say a few words. The adverts which are on advertisers’ corporate websites and on employment websites are more comprehensive, but since these adverts clearly contain 100 percent of advertising content, they are sometimes not viewed by the reader as being authentic and credible. And, finally, about 80 percent of the population that is not actively looking for a job simply will not
even glance at them. Thus conventional adverts generally work for active jobseekers only. A combination of various methods of e-recruiting, including effective job posts on job boards, makes a very effective strategy. In order to capture the attention of those who are the best, but who are possibly not looking for a job actively, it is appropriate to accompany the advertisement with podcasts and boost the visibility of the one who offers a job on social networks of professionals, primarily LinkedIn.

With reference to the research paper of Connie Barrow (2014), it is recommended to the advertisers, in order to get a productive person that the competitors would like to have in their team, they must not only attract a suitable candidate, but also “get him to the action.” The ways that appear as effective can be associated with the term “native ads”. The native ads fit to several categories. One of them is “paid search” when advertisements appear during a standard search on the website. On Google, they appear in the right hand column.

The fact is that “native ads” are actually viewed more frequently and their readers are more fully engaged when reading them because they contain useful information. Sullivan (2016) mentioned in his article that more recruiting leaders are aware that “native ads” will become the mainstream in recruiting.

Finally, greater attention to the selection process is not addressed in the article. Nevertheless, the author suggests readers to consider the inclusion of an expensive complex method of Assessment Centre and the behavioural interview. If the results and experience of the applicants are generally serious criteria for suitability for the job of a brand manager for the advertisers, it is important not only to lay down the criteria on the spot, but also to fairly evaluate them. These two methods are recommended to determine the candidates’ self-marketing and uncover to what extent the candidates’ successes and ambitions are based on their personal qualities. These methods significantly reduce the effect of self-marketing behaviour of candidates.

6. CONCLUSION

This paper deals with the specific issues that were examined by way of an empirical research project. Its long-term objective was to gather and analyse information about the requirements that are imposed on candidates for the position of “Brand Manager”. This research project was initiated by the author’s interest in human resources in the field of product management as brand managers have an important role in striving for competitiveness.

Since the implementation of the research in 2015 in which the method of content analysis of adverts for filling the position of “Brand Manager” was applied, it was expected to confirm that the business community perceives brand managers as knowledgable workers and they prefer candidates with knowledge, professional skills and qualifications for filling vacant positions in product management, which is a sign that the knowledgable workers will be able to expand their knowledge in practice. The interest of advertisers in candidates with working experience, holders of a university degree and who are also multilingual and IT literate shows that the category of knowledgable workers includes brand managers, though the frequency of requirements for technical knowledge and skills does not correspond to it.
The most published requirement in the analysis of sample advertisements in 2015 was the attainment in higher education (62.5%). The same kind of requirement, if we do not evaluate claims and requirements for the soft skills, dominated in ads in 2007 when the economy of the Czech Republic was also in the phase of boom. During the comparison, there were recorded some differences. A statistical verification confirmed the shift of requirements in the group of general transferable competencies. In 2015, the requirements in this group did not require another world language rather than English which was more often required at both advanced and excellent levels. The greatest number of advertisements contained the requirement for IT-skills of the applicant. The research assumption has not proved that in the analysed groups of requirements, the groups of data from the analysis of advertising for the position of a product manager and brand manager will not differ. By applying the test of independence, in which the test criterion of chi-square distribution was chosen, there were differences in the group of “required practice and work experience” confirmed for $\& = 0.001$, $\& = 0.01$, and $\& = 0.05$.

For brand manager’s positions, a shorter period of work experience (less than 2 years) is significantly more often acceptable. Advertisers are not looking for brand managers with at least 5 years’ experience, as compared to product managers. They are more likely to search for candidates with experience in marketing and less often with experience acquired in the field of the employer. In advertisements for the position marked “Brand Manager”, the relative frequency of requirements for the demonstration of tangible results in the previous position of the applicant exceeds greatly.

The latter findings led the author to complement and broaden the recommendations for recruitment of brand managers by incorporating financially more demanding, but significantly more reliable methods of Assessment Centre and behaviourial interview to follow-up the selection process.

This article can be used as a source of inspiration for the bearers of professional training of future managers as well as human resource managers as the positions in marketing are among those that are permanently being advertised and finding the most appropriate candidate is associated with considerable requirements for human and financial resources. The author carries out her research on job advertising in the USA where the concept of brand management has its roots, and it is expected that subsequent to its completion, it will be possible to examine the issue of human resources in product management in a new context.

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References


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Internal Branding and the Competitive Performance of Private Universities in Ghana

Amegbe Hayford

Abstract
The objective of this paper is in three fold. First, to examine the inter-relationship between internal branding and performance of private universities. Second, to examine customer-based brand equity (CBBE) antecedents in predicting the performance of private universities. Third, to examine the effect of internal branding on the performance of private universities when brand loyalty levels are high among students. The sample comprises 213 male and 234 female students studying at various private universities in the Greater Accra Region of Ghana. In order to have fair representation of students from all levels of classification from all the private universities in Accra, convenience sampling was purposefully used to collect data from undergraduate students in the private universities sampled. The result of the study indicated that the dimensions of brand equity and private universities’ performance are positively related. The regression analyses indicate that there is a positively related predictive power of private universities performance by brand association and brand loyalty. However, the study did not find brand awareness and perceived quality to be positively related. The conclusion of the study is that the performance of private universities’ and brand equity depends on the high loyalty among students.

Key words: Internal Branding, Brand Equity, Performance, and Private Universities

JEL Classification: M31

1. INTRODUCTION AND BACKGROUND
The demand for higher education in Ghana is high due to dramatic increase in population and net immigration. To the extent that state-funded (public) universities have to turn away a large number of applicants each academic year; leading to a backlog of potential students. Competition for admission to public universities is very keen. The numbers of qualified applicants for academic programmes far exceed the available vacancies; leading to only a few applicants with strong aggregate entry scores being admitted annually. As pointed out by Oduro and Senadza (2004), on the average, only forty-nine percent of qualified applicants gain admission to the public universities creating a demand-supply gap of fifty-one percent every year. This situation has led to the establishment of private universities in the country to augment access to tertiary education in Ghana. Today, the private sector is the fast growing segment in higher education in Ghana.

As of April 2015, the National Accreditation Board (NAB), the body mandated by Parliament to regulate and accredit institutions of higher education in Ghana, has accredited 57 private universities and, more others are in the process of being accredited. The situation has led to increased competition for students among the private universities and their public counterparts. This calls for strong branding to be ahead of the competition and also attract appreciable students’ numbers. Pinar, Trapp, Girard, and Boyt (2011) indicated that the role of brand management...
has been elevated to a new level of importance in today’s global marketplace. They further observed that brand management are powerful assets, brands represent the essence of a company; therefore, they must be developed and managed carefully.

Kotler and Keller (2006) indicated that brands represent consumers’ perceptions and feelings about a product (service) and its performance and that the real value of a strong brand is its ability to capture customer preference and loyalty. Branding efforts are no longer limited to “consumer products.” Firms in various service industries have been trying to utilize branding strategies to build stronger brands (Pinar, Trapp, Girard, and Boyt, 2011). In this regard, institutions of higher learning are not exceptions; they have also realized the need to develop sustainable brand strategies. In fact, branding has increasingly become a strategic imperative for universities and other post-secondary educational institutions to develop meaningfully differentiated brands to communicate their strengths (Jevons, 2006).

According to Preez and Bendixen (2015), there is a significant body of research illustrating the importance and benefits of internal branding. They indicated that in the view of Gummeson (1987), staff must be well acquainted with the “mission, goals and strategies” of an organization in order to deliver at the “moment of truth”. Berry (2000) states “service providers make or break a brand (they) turn a marketer articulated brand into a customer-experienced brand”. Schultz and de Chernatony (2002) contend that organizations rely on employees to deliver the brand promise. A customer’s first experience of a brand is frequently influenced by the job behavior and performance of frontline employees (de Chernatony et al., 2003). De Chernatony and Cottam (2006) describe “a brand ethos” where “employee behavior is automatically based upon the brand” (p. 626). Punjaisri and Wilson (2007) write internal branding not only influences “on brand” performance “but also influences attitudes employees have toward the brand which [...] affects employee performance”. Morhart et al. (2009) contend that “Customers perceptions of a service brand depend highly on the behavior of front line staff”.

Due to the increasingly complex and highly competitive nature of private universities among private universities in Ghana, it is important to study whether the building of brand equity significantly impacts on the performance of private universities to warrant attention (in terms of resource allocation) from managers and owners of private universities. This study uses the customer-based brand equity (CBBE) model (i.e., brand awareness, loyalty, association, and perceived quality), as described by Aaker (1991) to assess the performance of private universities in Ghana from the perspective of undergraduate students. The objective of this study is three fold. First, to examine the inter-relationship between the level of internal branding and performance of private universities. Second, to examine the extent of the antecedents of brand equity (brand awareness, brand association, perceived quality, brand loyalty) in predicting the performance of private universities performance in Ghana. Third, to examine the effect of internal branding on the performance of private universities when the level of brand loyalty is high.
2. LITERATURE REVIEW

2.1 Brand equity

The definition of brand equity can be approached from the perspective of investors, manufacturers, retailers or consumers. Retailers and manufacturers are usually concerned with the cash flow and strategic implications of brand equity, while investors concern themselves with value in terms of finances so as to treat it as an asset and include it in the firm's balance sheet (Myers, 2003; Keller, 1993). According to Keller (2003), “brand equity [is] the differential effect that brand knowledge has on consumer response to the marketing of the brand”. Therefore, it is important for the brand to provide some value to customers in order for it to have a high equity level. This is because the power of a brand is determined by what customers learn of it over time. It also includes what they have felt, seen, or heard about the brand (Keller, 2003).

Aaker (1991) and Keller (1993) developed the foundation for consumer-based brand equity research. From a cognitive psychology approach, Aaker (1991) defines brand equity as “a set of brand assets and liabilities linked to a brand, its name and symbol that add to or subtract from the value provided by a product or service to a firm and/or to that firm's customers”. These assets are brand awareness, perceived quality, brand associations, brand loyalty and other proprietary assets. Keller (1993) develops an alternative view and defines the concept of consumer-based brand equity as the differential effect of brand knowledge on consumer response to the marketing of the brand. Following these two approaches, this study uses a consumer-based brand equity measure that consists of four key constructs: brand awareness, perceived quality, brand associations, and brand loyalty and examines these on consumers’ willingness to pay price premiums, consumers’ attitude towards brand preference and purchase intention. These brand equity dimensions are widely accepted and used by numerous researchers (e.g. Yoo et al., 2000; Kim et al., 2003; Pappu et al., 2005; Lee & Back, 2010; Pike et al., 2010; Kim & Hyun, 2011). For the purpose of this study, the construct described by Aaker (1991) for measuring consumer-based brand equity which includes; perceived quality, brand awareness, brand associations, and brand loyalty are used to measure the concept of overall university brand equity. These constructs are discussed in detail below.

2.1.1 Brand Awareness

Brand awareness is the first step to creating brand equity. This dimension refers to whether consumers can recall or recognise a brand and is related to the strength of a brand’s presence in consumers’ minds (Aaker, 1996). Perceived quality and brand associations are also two key dimensions of brand equity. Perceived quality refers to the perception of the overall quality or superiority of a product or service relative (Keller, 2003), while brand associations are the concepts that have links to the brand name in consumer memory (Keller & Lehmann, 2006).

Brand awareness involves linking the brand to different associations in memory (Keller, 2003). Therefore, consumers must first be aware of a brand to later have a set of brand associations (Aaker, 1991). Brand awareness affects the formation and the strength of brand associations, including perceived quality (Keller, 1993; Pitta & Katsanis, 1995; Keller & Lehmann, 2003; Pike et al., 2010).
2.1.2 Perceived quality
Perceived quality refers to the judgement or perception about the superiority of the product compared to others in the same category or close substitutes. It is the ability of a product to offer the necessary level of satisfaction better than other alternatives. As explained by Baldauf et al. (2003), the quality of a product is a significant resource that enables the firm to achieve competitiveness. When the firm creates a brand, they need to communicate the essence of the brand with the aim of positioning it in the minds of the audience in the marketplace so as to match the characteristics of the brand to the needs and expectations of the consumers. According to Hamann et al. (2007), branding contributes greatly to providing security and assuring customers of the quality of products. The development of powerful brands in a market arises from consistently providing a compelling experience to customers. The experience is achieved through the distribution channels, the product on offer, physical environment, employee behaviour and brand communication. These factors largely contribute to making the brand tangible to consumers (Abimbola & Vallaster, 2007). Having a high-quality brand is not only a prerequisite to being competitive in a market; it enables also the company that owns the brand to become attractive in the marketplace (Urde, 1994). The service encounter provided by the firm to its customers serves as the strongest impression of quality of the brand; hence, every interaction between the firm and its customers affects the brand image (de Chernatony & Drury, 2006)

2.1.3 Brand association
According to Lassar et al. (1995), brand association refers to the relative strength of a consumer’s positive feelings towards the brand. The interaction between customers and other relevant stakeholders has an influence on the brand equity of the firm. It has been argued by some researchers that when the customers’ experience of a product or brand is positive, the brand becomes stronger and there is a positive reputation of the brand (Abimbola & Vallaster, 2007). A study by Hamann et al. (2007) reveals that buyers often patronize and are also willing to pay premium prices for those products that are branded when they have a choice to select from products that fall into the same category. Buyers eventually identify with the brand and they also form some emotional bond with and sentimental attachment to the brand (Lassar et al., 1995). Consumers use the name of the brand to make inferences about the quality of a product they are not familiar with mainly because the brand name tends to build a reputation of the product as a result of the associations it has by virtue of its name and the utility or value of the product (Lassar et al., 1995). Some researchers (Simmons, 2007) explain that a brand evokes in the mind of customers a certain presence, personality and product or service performance. The associations can be either a functional consequence or a symbolic meaning (O’Loughlin & Szmigin, 2005). According to Balmer and Gray (2003) buyers are usually persuaded to believe in some perceived cordiality associated with a particular brand. Hence, consumers tend to consume the brand and associate themselves with the brand to identify who they are, who they wish to be and/or how they wish to be seen. Brands become competitive in the marketplace as a result of the associations and behaviour of consumers towards them. Simply put, buyers tend to develop relationship with brands and such a relationship substitutes for human interaction between the firm and its customers. According to Delgado-Ballaster and Munuera-Aleman (2005), this relationship is known as relational market based brand equity.
2.1.3 Brand loyalty

When a customer is loyal to a product or a brand, they consider it as their first option or choice and they are not influenced or affected by the strategies that are employed by competitors to lure them or get their attention (Tong & Hawley, 2009).

Unlike the other antecedents of brand equity, brand loyalty develops from actual buying and usage of the product or brand (Baldauf et al., 2003). It is often indicated by the favourable attitude of consumers towards a brand, demonstrated by repeated purchase of the brand over time (Urde, 1994).

Brand equity is influenced by the subjective evaluation of any direct (e.g. trial, usage) and indirect contact (e.g. advertising, word of mouth) with the brand (Delgado-Ballaster & Munuera-Aleman, 2005; Keller, 1993). Consequently, in order to achieve brand equity, it is important for firms to develop marketing strategies that not only win customers but also build trust and loyalty. Brand loyalty is an important characteristic of brands with high equity (Atilgan et al., 2005; Tong & Hawley, 2009; Aaker, 1991). When a firm succeeds in building loyalty in the marketplace for its products and services, it leads to certain marketing advantages. The marketing advantages include price premiums, market share and greater trade leverage and reduced marketing costs (Delgado-Ballaster & Munuera-Aleman, 2005)

2.2 Concept of Internal Branding

The service and corporate branding literature has recognised that staff are influential on customers and other stakeholders’ brand perceptions through their role in delivering both functional (what are delivered) and emotional (how they are delivered) values (de Chernatony, 2002). When they are aligned with the brand values, a corporate (service) brand could achieve a sustainable competitive advantage (Pringle & Thompson, 2001). Therefore, internal branding is argued as having the attainment of competitive advantage through people as its core objective, which is difficult to be replicated (Jacobs, 2003). This is then pertinent to the concern revolving around the heterogeneous quality of a service brand. On one hand, the intangible nature of service brands highlights the importance of brand promise fulfilment. As it is difficult to evaluate service brand quality, customers encounter perceived risks during a buying decision process. Dawar and Parker (1994) suggest that a brand needs to become a risk-reducing device. To achieve this, the brand promise needs to be delivered at every service encounter. On the other hand, the simultaneity of the production and consumption processes suggests the presence of consumers and service providers, which is further related to heterogeneity. Similarly, the corporate branding concept suggests numerous points of contact that stakeholders have with the brands (King, 1991). To ensure consistency of the brand experience across stakeholder groups, staff need to be enabled to understand their brand’s values. Consequently, they will appreciate their roles and their commitment to delivering the brand promise will increase (Heskett, 1987). As such, Cleaver (1999) places an emphasis on internal issues to ensure staff’s appreciation of the brand promise and use brand’s values to guide their behaviours.

Internal branding has been proposed to promote the brand inside an organisation, namely to employees (Ahmed et al., 2003). Recent studies (Aurand et al., 2005; Burmann & Zeplin, 2005) support that internal branding enables employees to deliver the brand promise during service
encounters because it engenders a shared understanding of a brand across the entire organisation. In short, internal branding is argued to be instrumental in influencing employees’ attitudes and shaping their behaviours to be aligned with a brand, by creating employees’ understanding of brand values and engaging them in living brand reality (de Chernatony & Segal-Horn, 2001; Drake et al., 2005; Kotter & Heskett, 1992; Thomson et al., 1999).

2.3 University brand equity
Pinar, Trapp, Girard and Boyt, (2013), indicated that, Ivy (2008) identifies seven distinct factors that students find important in the selection of a university business school. In order of importance, with most important first, the factors are the program (choice of majors, electives), prominence (reputation), price (tuition), prospectus (communication through direct mail), people (interactions with faculty, staff, and other students), promotion (publicity and e-media), and premiums (mixture of various offerings). Other studies have focused on the importance of facilities (Price et al., 2003), the importance of emphasizing people (i.e. faculty, staff, other students, community) and processes (logistics of the service delivery) in the marketing of services (Cowell, 1982; Nicholls et al., 1995), and the tight linkage of positioning to the concept of branding (Nicholls et al., 1995). With respect to brand positioning, the prior research (Gatfield et al., 1999; Gray et al., 2003; Mazzarol, 1998) has identified academic instruction and learning environment, campus life, reputation, and career prospects for graduates as being the most salient dimensions in higher education. Ng and Forbes (2009) assert that the focal point of university branding is the learning experience as a part of core value-creation. Therefore, brand equity dimensions should be measuring the significance of the core value creation of learning experience.

2.4 Brand equity and competitiveness
According to Porter (1995), the competitiveness of firms is as a result of the value the firm is able to create for its customers at a reasonable cost compared to competitors. The intensity of competition in many industries has compelled firms to seek for new sources of competitive advantage from their available resources (Abimbola & Kocak, 2007). The assertion by Porter (1995) is strengthened by Keller (1993), who also indicated that firms endeavour to gain a sustained competitive advantage so as to earn profits in both the short and long terms. The competitiveness of firms results from their ability to utilize efficiently resources and capabilities such as organisational processes and skills, knowledge and information as well as the skills of management (Asamoah, 2010). In studies by Farquhar (1989) and Wood (2000) it was found that the competitive advantage of firms with a high level of brand equity is that it provides them with an opportunity to succeed in extending their brand so as to stay resilient in the face of competition and pressures from the barriers to competitive entry, in addition to sales (Farquhar, 1989), profitability (Baldauf et al., 2003) and market share (Lassar et al., 1995).

A key strategy in marketing that achieves market performance and competitiveness of a firm is the creation of brand equity (Runyan & Huddleston, 2006). However, there has been limited study on the relationship between the brand equity constructs and the market performance of firms. Baldauf et al. (2003) indicate that brand equity contributes directly to the enhancement of value to customers, in that it provides information and serves as a source of confidence and
satisfaction of usage. Consequently, it enhances the firm’s competitiveness, effectiveness and efficiency of its marketing programs, trade leverage, brand extension and ultimately the firms’ profit margins. Brands serve as a source of reassurance to customers about the quality of the attributes of a product. A firm that is able to build a high level of equity for its brands will be able to leverage on it to launch new products as well as use it as cues for customers to repurchase the a product/brand (Hoek et al., 2003; Baldauf et al., 2003).

Furthermore, Leiser (2004) explains that there are many factors that influence the success of a brand when it is extended into new product categories or markets; notable among them is brand credibility. Apart from the service that is delivered, the stature and imagery of the brand is also sold to people who by the brand (O’Loughlin & Szmigin, 2005). Also, when there is a higher level of brand association, there is a higher tendency for brand extension to become relevant to customers. Furthermore, brand awareness generates a high level of purchase, mainly because consumers are likely to buy those brands they are familiar with; hence, the firm’s profitability and sales are enhanced (Baldauf et al., 2003). Research in the past has shown that when there is a high level of brand loyalty, sales are enhanced and there is growth in the firm’s operations and performance. This is mainly because loyal buyers are less likely to be susceptible to price competition and they are less likely to switch brands (Hoek et al., 2003). The above argument is strengthened by research conducted by Kuczmarski & Associates, which revealed a 72 per cent premium for their brand over its closest competitor (Leiser, 2004).

2.5 Brand performance (bp)

Brand performance refers to how successful a brand is in the market. It intends to measure the strategic achievements of a brand. As a result, economic measures are inappropriate for this construct. Brand awareness, reputation, and loyalty were suggested as important performance of a brand (Chaudhuri, 2002; Chaudhuri & Holbrook, 2001; Reid, 2002; Wong & Merrilees, 2007; Zeithaml, 1988). Since brand awareness and loyalty have been discussed in the above literature, reputation is presented. Balmer and Fombrun and van Riel (2004), reputation refers to value judgments about an organization’s qualities, trustworthiness and reliability built up over time. This suggests that reputation is more durable than image, cannot be developed or altered as quickly (Markwick & Fill, 1997), and requires nurturing through time (Bennett & Kottasz, 2000). With hundreds of buying decisions to make every day, dozens of products to choose from and hundreds of promotional messages to come across, a customer most of the time relies on habit; that is they buy brands that have proved satisfactory in the past (Doyle, 1990).

3. HYPOTHESIS

The under listed hypotheses are formulated for the study.

- H1. There is a positive relationship between internal branding and the competitiveness of private universities;
- H2. There is a positive relationship between brand association and the performance of private universities;
- H3. There is a positive relationship between perceived quality and private universities performance;
• H4. There is a positive relationship between brand loyalty and the performance of private universities;

• H5. There is a high predictive relationship between the antecedents of brand equity (brand loyalty, H5a; brand awareness, H5b; brand association, H5c; perceived quality, H5d) and the performance of private universities; and

• H6. When the level of brand loyalty is high, it results in a greater effect of brand equity on the performance of private universities.

It is observed from literature that brand loyalty is viewed as the dominant construct that would ensure greater performance and competitiveness of private universities. Therefore the study examines whether a higher level of brand loyalty will have a greater effect on brand equity and the performance of private universities hence H6. H4 looks at the loyalty and the performance of private universities and not both performance and brand equity.

4. METHOD

4.1 Survey and measurement scales

To achieve the objectives of this study and to test the testable hypotheses, a survey instrument was adapted from Pinar, Trapp, Girard, and Boyt (2014). On the measure of university brand equity which they developed the core value-creation brand equity scale items from the following sources: (i) brand awareness (Lassar et al., 1995; Aaker, 1996; Netemeyer et al., 2004; Buil et al., 2008; Tong & Hawley, 2009), (ii) perceived quality (Aaker, 1991, 1996; Buil et al., 2008; Pappu et al., 2005, 2006; Yoo et al., 2000; Yoo & Donthu, 2001; Tong & Hawley, 2009), (iii) brand associations (Gray et al., 2003; Kim & Kim, 2004; Pappu et al., 2006), and (iv) brand loyalty (Kim & Kim, 2004; Yoo et al., 2000; Yoo & Donthu, 2001). The study measure each item on a seven-point Likert-like scale of importance (1 = very unimportant; to 7 = very important). However, on the performance of private universities, the study used three (3) out of five (5) items used by Wong and Merrilees (2008) in measuring brand performance. The questions were modified to suit the purpose of measuring the performance of private universities. The questions were given to three professors of marketing who are knowledgeable about scale development and university branding to evaluate the intended meaning and clarity of the scale items. Based on their feedback, the study modified some of the scale items in order to improve the wording and clarity of meaning. Because the study’s intention was to assess the performance of private universities in Ghana from the perspective of undergraduate students, who are the main focus and consumers of higher education, a pre-test was conducted with the target population and included students from different private universities and different levels. Thus, the pretests provided useful input for improving the survey items and in establishing face validity of the constructs (Churchill & Iacobucci, 2005; Narver & Slater, 1990).

4.2 Sample and data collection

The data for the study was collected from all private universities in Accra which have been accredited by the National Accreditation Board (NAB). The study selected all the nineteen (19)
private universities in Accra accredited by the NAB. In order to have representation of students from all levels of classification and different all the private universities in Accra convenience sampling was purposefully used to targeted all undergraduate students in these private universities. Graduate level classes were not included in this study. In all, a total of 30 classes with varying sizes were involved which produced a total of 447 respondents used for the study. Though the private universities were nineteen (19) the questionnaires were administered to more than one class in some of the private universities. This is because the private universities some of the private universities had more business programs i.e. marketing, human resources, banking and finance etc. while others had only one or two business programs. This resulted in some of the universities having more than one questionnaire served on the business school of the university. These classes served as clusters where the survey was administered to all of the students in each class. Moreover, classes were selected in such a way that it minimized student overlap. However, to prevent duplications students were told not to complete the survey a second time. In order to make sure that the survey was completed properly, three marketing students of the researcher were trained to administer the surveys. These students helped in the entire data collection process and the data entering process. The data collection process lasted for four (4) weeks. This served as an opportunity for these students to learn how to conduct research which would enable them in writing their thesis/project work. These students read the survey and understood it and they helped in the collection of the data. This sampling process produced a total of 447 usable surveys.

5. RESULTS

Using the criterion of a Cronbach’s a coefficient of greater than 0.6, the instruments proved to be satisfactory for gathering responses. Analysis in the form of regression and correlation between the variables and ANOVA were performed using the Statistical Package for Service Solution (SPSS) version 20. From the results of the analysis of variance (ANOVA), significant differences were found between female and male students of the private universities with regard to their perceptions of quality (significance= 0.029). From the analysis, it was found that males (mean = 2.82) recorded a higher score compared to females (mean = 2.71). The findings on perceived quality between male and female students support previous studies of differences between categories of respondents in terms of sex (Muyimba, 2009). Hence, it can be said that there is a gap between the level of satisfaction and the quality that is offered by private universities in Ghana. Also, there was no significant difference among the respondents selected with regards to the nature of the students (either regular students or distance students), performance of private universities (significance = 0.531) and brand equity (significance = 0.515).

From Table 2, it is revealed that there is a relatively low level of brand equity. This is characterized by the low levels associated with brand loyalty and the perception of quality. The findings in Table 2 show that when the brand equity is small, there is a lower attraction of loyalty from customers because of their small size (Hoek et al., 2003). In Table 2, the sales growth is a ratio scaled variable. This is because all arithmetic operations are possible on a scale variable. Also, there is an increase in the brand equity level when brand loyalty increases (Atilgan et al., 2005).

From Table 3, it can be seen that the brand equity level is significant and positively related to
the performance of private universities. Table 3 further reveals that the brand equity dimensions – i.e. perceived quality, brand awareness, brand loyalty and brand association – had a positive relationship with the performance of private universities. Hence, H1, H2, H3 and H4 were all confirmed. This finding confirms the assertion by Baldauf et al. (2003) that the antecedents of brand equity have a positive relationship with the performance of firms.

Tab. 1 - Summary Statistics of Respondents

<table>
<thead>
<tr>
<th>University</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central University College</td>
<td>12</td>
<td>10</td>
<td>22</td>
</tr>
<tr>
<td>Regent University College of Science and Technology</td>
<td>10</td>
<td>12</td>
<td>22</td>
</tr>
<tr>
<td>Islamic University College of Ghana</td>
<td>8</td>
<td>9</td>
<td>17</td>
</tr>
<tr>
<td>Pentecost University College</td>
<td>11</td>
<td>13</td>
<td>24</td>
</tr>
<tr>
<td>Ghana Christian University College</td>
<td>11</td>
<td>13</td>
<td>24</td>
</tr>
<tr>
<td>Knutsford (University)College</td>
<td>11</td>
<td>12</td>
<td>23</td>
</tr>
<tr>
<td>Trinity Theological Seminary</td>
<td>13</td>
<td>12</td>
<td>25</td>
</tr>
<tr>
<td>Maranatha University College</td>
<td>13</td>
<td>11</td>
<td>24</td>
</tr>
<tr>
<td>Data Link University College</td>
<td>11</td>
<td>18</td>
<td>29</td>
</tr>
<tr>
<td>Valley View University</td>
<td>12</td>
<td>11</td>
<td>23</td>
</tr>
<tr>
<td>Ashesi University</td>
<td>13</td>
<td>10</td>
<td>23</td>
</tr>
<tr>
<td>Methodist University College of Ghana</td>
<td>12</td>
<td>14</td>
<td>26</td>
</tr>
<tr>
<td>Wisconsin International University College</td>
<td>12</td>
<td>17</td>
<td>29</td>
</tr>
<tr>
<td>African University College of Communication</td>
<td>13</td>
<td>12</td>
<td>25</td>
</tr>
<tr>
<td>Ghana Telecom University College</td>
<td>11</td>
<td>12</td>
<td>23</td>
</tr>
<tr>
<td>University College of Management Studies</td>
<td>9</td>
<td>12</td>
<td>21</td>
</tr>
<tr>
<td>Jayee University College</td>
<td>12</td>
<td>15</td>
<td>27</td>
</tr>
<tr>
<td>Zenith College</td>
<td>11</td>
<td>10</td>
<td>21</td>
</tr>
<tr>
<td>Meridian University College</td>
<td>8</td>
<td>11</td>
<td>19</td>
</tr>
<tr>
<td>Total</td>
<td>213</td>
<td>234</td>
<td>447</td>
</tr>
</tbody>
</table>

Source: Field Data, 2015

Tab. 2 - Brand Equity and performance of Private Universities in Ghana

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Brand Equity</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brand Awareness</td>
<td>3.14</td>
<td>0.43</td>
<td>1.00</td>
<td>4.00</td>
</tr>
<tr>
<td>Brand Associations</td>
<td>3.01</td>
<td>0.37</td>
<td>1.32</td>
<td>3.79</td>
</tr>
</tbody>
</table>
### Tab. 3 - The relationships between the brand equity dimensions and Private University Performance

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brand Awareness -1</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brand Association -2</td>
<td>0.245**</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brand Quality -3</td>
<td>0.321**</td>
<td>0.316**</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brand Loyalty -4</td>
<td>0.164**</td>
<td>0.314*</td>
<td>0.184**</td>
<td>1.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brand Equity -5</td>
<td>0.391**</td>
<td>0.190**</td>
<td>0.423**</td>
<td>0.231**</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>Private University</td>
<td>0.212**</td>
<td>0.244**</td>
<td>0.231**</td>
<td>0.130*</td>
<td>0.208**</td>
<td>1.000</td>
</tr>
<tr>
<td>Performance - 6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Field Data, 2015

Note: * Correlation is significant at the 0.05 level (two-tailed); **correlation is significant at the 0.01 level (two-tailed)

### Tab. 4 - Multiple Regression Model of Brand Equity and Private University Performance

<table>
<thead>
<tr>
<th>Model</th>
<th>Un-standardized coefficients</th>
<th>Standardized coefficients</th>
<th>t</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>SE</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>(Constant)</td>
<td>1.011</td>
<td>0.233</td>
<td>3.102</td>
<td>0.000</td>
</tr>
<tr>
<td>Brand loyalty</td>
<td>0.229</td>
<td>0.132</td>
<td>0.221</td>
<td>2.314</td>
</tr>
<tr>
<td>Perceived quality</td>
<td>0.004</td>
<td>0.083</td>
<td>0.003</td>
<td>0.205</td>
</tr>
<tr>
<td>Brand awareness</td>
<td>0.039</td>
<td>0.073</td>
<td>0.031</td>
<td>0.751</td>
</tr>
<tr>
<td>Brand association</td>
<td>0.202</td>
<td>0.057</td>
<td>0.184</td>
<td>3.329</td>
</tr>
</tbody>
</table>

Source: Field Data, 2015

Table 4 presents the multiple regression results of the brand equity constructs and Private University performance. Private University performance was used as the dependent variable, and it was found that the brand equity constructs predict 26.7% of Private University performance variance, with an adjusted R2 of 0.213 and an R2 of 0.301. The F change was 19.96 with a significant F change of 0.000. It was further revealed that there is a contribution of 34.9% of brand loyalty and 17.8% of brand association, which represents a significant change in the performance of Private Universities; hence, both H5a and H5c were confirmed. This means that both brand awareness and perceived quality were not found to be significant in predicting the performance.
of Private Universities; hence, H5b and H5d were not supported. The results from the analysis also revealed that when brand loyalty is high, then there is a stronger effect of brand equity on the performance of private universities; therefore, H6 was supported.

The results in Table 4 show an inconsistency with past research by Baldauf et al. (2003). Baldauf et al. (2003) found that the various antecedents of brand equity together significantly predict the performance of firms, which is inconsistent with the findings in this study. One explanation for this could be due to the size of Private Universities compared to that of Public Universities; in the two groups, the approach and focus of brand building differs significantly (Abimbola & Kocak, 2007). Other factors for the difference other than the size of the firm can be attributed to time, resource constraints and marketing knowhow (Krake, 2005). Some researchers, such as Na and Marshall (2005), explain that the differences could also be attributed to factors such as cultural values in countries, and the level of technological and infrastructural differences. Also, Atilgan et al. (2005) explain that the differences are not surprising, because among all of the antecedents of brand equity, brand loyalty represents the core dimension; hence, it has a direct and significant influence on brand equity.

6. CONCLUSION

The findings of the study revealed that the performance of Private Universities located in the Greater Accra Region of Ghana and brand equity are high when there is high brand loyalty among students. The role of internal brand management in the performance of Universities in general and Private Universities in particular cannot be over-emphasised. The interest for internal branding throughout the Universities sampled is a very important factor, initiated by an active role of the University authorities. In the development and implementation of internal branding, the creativity and initiation of the brand management team is indispensable. Building strong brand equity takes energy, time, and is a complex and demanding process. Although financial resources are an important component in internal branding building, it is recommended that private universities explore and make full use of their unique features; wisely using resources and strengthening their core values and mandate will build up their brands greatly. Though this study is limited to Ghana, other similar countries where there are private universities could take a lesson from this study about the management of internal branding in the performance of private universities.

It is also recommended that the board and brand management team of private universities devote much of their attention to building brand loyalty among students, irrespective of the category in which the students fall. Strategies must be developed for brand associations as they are a prerequisite for the growth and continuous survival of any businesses establishment in highly competitive markets. Also, the study indicates that brand equity and its antecedents (perceived quality, brand awareness, brand loyalty and brand associations) are separately and positively related to the performance of private universities. In statistical terms, perceived quality and brand awareness are not significant predictors of the performance of private universities. However, brand loyalty and brand associations do have a significant effect on the performance of private universities. Also, the study found that, when there is a high level of loyalty towards a brand,
brand equity tends to have a greater effect on the performance of private universities. The study is limited to only private universities in the Greater Accra region of Ghana. Future studies could go further into comparing the extent of prediction by the antecedents of brand equity in both private universities and public universities. Also, it would be useful to study the level of control and the major decision-making factors when deciding on the focus of internal brand building in both private and public universities. Furthermore, future studies could focus on variations across industries with regard to the impact of internal branding equity on the performance of universities. Institutions other than the educational sector such as services, manufacturing and trade could be investigated to find the predictive power of the antecedents of brand equity.

References


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Risk Factors of Young Graduates in the Competitive E.U. Labour Market at the End of the Current Economic Crisis

Kačerová Eliška

Abstract

Modern development trends in the labour market have been an increasingly important political and economic issue not only domestically but also on the European level. It proves the fact that in The Europe 2020 strategy, one of the main five points is the aim to increase the employment rate of the population (age: 20–64) from the current 69% to at least 75%. Various risk groups of job candidates emerge among the unemployed. The economic crisis in 2007 made the situation in the labour markets worse. The demand for labour decreased while the number of candidates increased. In recent years, fresh graduates under the age of 25 have been regarded as a high risk group sometimes nicknamed “the lost generation” or Generation Y. This generation is well accustomed to modern technologies which they use for their own benefit and they are willing and able to work from anywhere. On the contrary, those over the age of 35, who are sometimes referred to as Generation X, have different attitudes and requirements for the labour market. Despite the increasing level of education among young people, their unemployment has been worsening since the economic crisis began. The aim of this article was to ascertain how future university graduates (491 final-year students from 5 faculties at Tomas Bata University in Zlín, Czech Republic) perceive individual risk factors influencing the success of today’s graduate of Generation Y in the competitive labour market. The target group, future university graduates, evaluated 13 risk areas on a five-point scale. These 13 risk areas were identified based on primary research among 1.059 employers in the Czech Republic, which is a part of a complete two-year research project IGA/FaME/2013/030. This article focuses on only two areas which closely analysed the perception of graduates as drifters, and their demands for high starting salaries. These two risk areas were mentioned by employers as the areas with the highest risk and therefore, these areas are examined in detail by the future graduates. A partial conclusion of this study indicated that future graduates, in comparison with the initial risk factor of high turnover, see much higher risk in their inability to solve problems, high initial costs of training or a lack of independence. It is the opinion of graduates, how these factors see the employers. On the other hand, graduates consider a lack of IT knowledge or few ideas/suggestions for improvement and innovation as less risky as high turnover.

Keywords: labour market, young graduates, unemployment, success, college students, risk factors, Czech Republic

JEL Classification: J220, A230, I290

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1. INTRODUCTION

Since 2004, when the Czech Republic joined the European Union, major changes have occurred in the European labour market in employment structures and in human resource requirements. From this year, there has been significant growth of the whole labour market, employment and wage growth. But, the situation changed dramatically in 2008, 2009 and 2010 when the economy dropped in the Czech Republic and other European countries due to the global economic crisis.

At the beginning of 2005, a period of steadily declining unemployment started, lasting until the first quarter of 2008. At that time, EU-28 unemployment hit a low of 16.1 million persons (equivalent to the rate of 6.8%) before rising sharply depends on the economic crisis. Between the second quarter of 2008 and middle of 2010, the unemployment level went up by more than 6.6 million taking the rate up to 9.7%, at that time, the highest value recorded since the start of the series in 2000. The decline of unemployment in the following three quarters was a deceptive sign of the end of the crisis and of a stable improvement in labour market conditions in the EU-28. In fact, from the second quarter of 2011 until the first quarter of 2013, the unemployment steadily increased taking it to the record level of 26.4 million, corresponding to the record rate of 10.9 %. Since then, the rate decreased, reaching 9.9 % at the end of 2014 (Eurostat, 2016a).

The growth in the EU-28’s GDP (current prices) slowed down in 2008 and GDP decreased considerably in 2009 as a result of the global financial and economic crisis. There was a market recovery in the level of the EU-28 GDP in 2010 and this development continued (albeit at a progressively slower pace) in 2011–2013 before the growth accelerated again in 2014, as current price GDP increased by 3.0%. By 2014, GDP in the EU-28 had reached EUR 13.9 trillion (EUR 13 900 billion), that is 6.2% more than in the United States (Eurostat, 2016b). The economic crisis, however, severely hit the young. From the second quarter of 2008, the youth unemployment rate has taken an upward trend peaking in 23.8 % in the first quarter of 2013 before receding to 21.4 % at the end of 2014. The EU-28 youth unemployment rate was systematically higher than in the euro area between 2000 and middle of 2007 (Eurostat, 2016a). The consequences of this situation are apparent from the increasing unemployment rate of graduates who are becoming an at-risk group not only in the Czech Republic but throughout the European Union.

The introductory paragraph states that European and Czech labour market failed during the economic crisis of 2008 - 2013, and high-risk groups, including graduates, started having big problems with the application in the labour market as the statistics show. The questions then arise: Did the behaviour of young people change in the Czech Republic in relation to the labour market? What risks and opportunities are young people facing during transfer from school to work? These questions are interesting for many scientists (Helve & Evans, 2013; Mach, Boháčková & Selby, 2014). The article is regionally focused on behavior TBU graduates in the framework of the project Internal Grant Agency of FaME TBU No. IGA/FaME/2013/030 “Risk Factors in the Application of University Graduates on the Czech Labour Market after 2008”. The aim of the primary survey among 491 future university graduates was to ascertain their evaluation of risk factors which influence success during their first employment search. This goal is subsequently presented other issues and questions. Does the evaluation of risk factor “graduates as drifters” differ between the bachelor and master’s degree students? How do the students evaluate other risk factors in relation to the factor “graduates as drifters”? Are male or
female students assuming that the employer is afraid to hire the graduate due to his/her demand for a high starting salary? The processed data was gathered through the quantitative research in 2014. This primary research is a part of a larger research that addresses the issue of risk areas from the perspectives of both sides of the labour market. A detailed research among employers is not included in this article.

Students evaluated 13 risk factors influencing their success in the Czech labour market on a scale of answers ranging from 1 (a small risk influencing success in the labour market) to 5 (a significant risk influencing success in the labour market). These 13 risk areas reported on the basis of an extensive research among Czech employers in the first phase of the project IGA, where individual factors are described thoroughly. Most factors belong to soft skills; their significance in connection with a success in the labour market present many foreign authors. As the riskiest areas, employers reported two factors: high labour turnover and high demand/high entry salary. For this reason, these factors have been examined in more detail in terms of gender and level of studies because both these play an important role in channelling young people towards gender-typical careers. The gender differentiation is a topic that is discussed in relation to the labour market for all European countries. The aim of this article is to determine whether the two identified risk areas are evaluated differently by students - men and women, and whether the perceived risk areas vary between bachelors and masters. These findings significantly help the Job Centre at the University prepare students - future graduates – to enter into the labour market.

2. THEORETICAL BACKGROUND

2.1 The unemployment rate among graduates

According to Eurostat data, the unemployment rate among graduates in the Czech labour market has increased to 19.1%. This index rose by 3% in a year-on-year comparison (Radačičová, 2013). The unemployment rate of university graduates is closely connected with the overall unemployment rate in the country. It is one-third to one-half lower in most European countries, including the Czech Republic.

Lászlo Andor, the Hungarian E.U. Commissioner for Employment, Social Affairs and Inclusion, warns that unemployed young people could become a destabilizing social factor. They are already called “the lost generation” (The Economist, 2013). According to estimates, the economic loss related to young unemployed people in Europe reached 153 billion U.S. dollars, i.e., more than 1% of GDP (The Economist, 2013).
The competition in the labour market in the European Union is high, especially for graduates.

2.2 The importance of assessing the impact of risk areas on success of university graduates in the labour market in the Czech Republic

Young graduates have rarely had it easy in the labour market; however, today their situation is even worse. Despite the fact that European labour market is increasingly short of technically-oriented experts, future graduates are mostly interested in people-oriented professions, especially in business management positions (Sobotková, 2015). Modern information technologies and mass media also have significant influence on the ideas of young people regarding their future professional career (Švarcová, 2016).

In connection with the labour market mismatch, the authors often talk about over or under education. Most literature is focused on the educational mismatch and only a small percentage on the skill mismatch. Far less attention is paid to job-mismatches referring to the field of education obtained.

There are three reasons of the job-mismatch. First of all, school-leavers have to compete for the available jobs with those who have already gained a position on the labour market. Secondly, a relatively large number of school-leavers end up in jobs that do not match their educational qualification. These job-mismatches can be the result of incomplete information about the abi-
ties of school-leavers and the characteristics of jobs offered by employers. The last possible issue of the job-mismatch deals with the imbalance of use of gained abilities and qualification (Marsíková & Urbánek, 2015; Sloane, 2003).

Mason also identifies incomplete information as one of the reasons for problems in the labour market, reflecting a mismatch between graduates and employers (Mason, Williams & Cranmer, 2009). According to Švarcová (2016), uncertainties in educational and occupational ambitions of students, together with the uncertainties of labour market developments, make career decision of young graduates more difficult.

Another reason of the labour market mismatch was the financial crisis which negatively affected young graduates in almost all European countries, most in Greece and Spain, where more than one-sixth of young graduates are unemployed. The economists have begun to see another problem: fresh graduates do not have the necessary knowledge and skills for the labour market (Němec, 2013).

The employability of university graduates is important theme of higher education (HE) as labour markets change more and more rapidly. The studies about employability have to consider to what degree a university education helps graduates start a career. The results of a survey of graduates from Germany indicate that the graduates possess more knowledge than required but they are missing lack important competences and transferable skills that the job market demands. This may be partly remedied by the introduction of project-oriented classes (Hennemann & Liefner, 2010).

2.3 Demand versus supply in the labour market

The employers, particularly small and medium enterprises, have an irreplaceable contribution for economic growth, employment and competitiveness of each country. But, because of their size, they are sensitive to changes within external environment. Their productivity is disturbed by the existence of barriers in business that can negatively affect the employment of young graduates (Belás et al., 2014).

In order to stabilize the transition from university to the labour market, university graduates should be prepared for the requirements and needs of future employers, and their knowledge, abilities and skills (competences) should meet the expectations of their potential employers (National Training Fund, 2009).

The research carried out among 50 managers of human resource departments in the Czech Republic shows that the most important factors for university graduates seeking employment are the knowledge of English (nearly 90% of employers require English during recruitment and 57% think that university graduates should improve their English), communication skills, professional behavior, self-reliance, logical and technical thinking and good manners (Hovorková, 2012). Employers also expect the abilities to solve problems, make decisions, deal with people and to work in teams, as well as to bear responsibility, willingness to learn, adaptability, self-representation and flexibility (Kalousková & Vojtěch, 2008).

The differences between the qualities of university graduates and employers’ requirements in the labour market are increasing. Although employers generally appreciate that university graduates
are hard-working and able to come up with original ideas, the list of required skills is still insufficient. The study carried out among 50 large Czech employers shows that university graduates lack professional experience and basic practical skills; they do not have a practical overview or experience in their fields, they lack independence and stability – high labour turnover – are extremely confident and have high financial requirements (Kalousková & Vojtěch, 2008; Novotný, 2009).

2.4 New Generation Y of graduates in the labour market

The representatives of Generation Y, i.e., people born between 1980 and 1995, are today’s young people in the labour market. Their motto has been characterized as, “We do not live to work, we work to live.” On the other hand, they want to have meaningful jobs. They are well accustomed to modern technologies which they use for their own benefit. Due to technology, they are able and willing to work from anywhere. On the contrary, people over the age of 35 who are sometimes referred to as Generation X, have completely different attitudes and requirements for the labour market. For example, contrary to Generation Y, they are willing to work overtime more often. The priorities of graduates have been gradually changing (Hníková, 2014).

More than half of Generation Y’s new graduates move back to their parents’ homes after receiving their degrees, and this cushion of support gives them time to find a job that they desire. They grew up with the Internet and they know how to launch a viable online business. Generation Y is forcing companies to think more creatively about work-life balance. To understand Generation Y is important not just only for employers. Older workers, that are anyone over 30, need to know how to adapt to the values and demands of their newest colleagues. Before too long, they will be the bosses (Armour, 2005).

Terjesen identifies five most important organizational attributes for young graduates of Generation Y: they invest the most time in training and development of their employees, they care about their employees as individuals, they have clear opportunities for long-term career progression, they desire to variety in their daily work, and they have a dynamic, forward-looking approach to their business (Terjesen, Vinnicombe & Freeman, 2007).

The most new graduates are from Generation Y, notoriously ambivalent to commitment and less loyal than their predecessors. Organisations are growing increasingly reluctant to invest in their training, particularly in transferable skills, tipping the balance of the responsibility of skill development towards higher education institutions (HEI). HEIs worldwide, however, are accused of producing graduates deficient in the “soft” skills deemed essential for enhanced productivity and innovation in the workplace (Jackson, 2010).

According to the research project REFLEX 2013, a considerable part of graduates are not prepared to offer soft skills knowledge at a level required by the employers. Especially the ability to communicate with people and the ability to manage stressful situations and obstacles are competencies that are problematic for a large part of graduates because they don’t have skills on this level what is required from employer’s side. What is also required are skill identify and solve problems, ability to make decisions independently, ability to take responsibility and ability to adapt to changed circumstances. For example 35% and more of graduates are expected (required in their work), to have a high level of competence and ability to take responsibility and skills to
communicate and negotiate with people. One third of graduates with high level of ability handle stressful situations and obstacles. 29% and more of graduates are expected high level of skills to make decisions independently to identify and solve problems. The quarter of graduates are expected high level of ability to adapt to changed circumstances, skills of flexible and creative thinking and skills to work with information. In this case, it has to accrue about 5-10% of graduates with this high level of these competencies (Koucký, Ryška & Zelenka, 2014).

The results of Švarcová (2016) from the year 2013, 2014 confirmed that majority of the young graduates in the CR is not interested in doing similar work as their parents. This trend may affect the structure of the workforce available for the country’s economy for many years to come.

The Czech members of Generation Y are highly professionally indecisive and prefer five different professional areas, most frequently oriented towards the entertainment industry. This orientation does not fully correspond with the current Czech labour market demands, which are oriented more towards industry (Team of authors, 2013).

3. RESEARCH OBJECTIVES AND METHODOLOGY

The aim of the primary survey among future university graduates was to ascertain their evaluation of risk factors which influence success during their first employment search. Success in this survey is defined as the applicant’s employment within six months after graduation. The target group, future university graduates, was evaluated on a five-point scale of 13 risk areas. These 13 risk areas were identified based on primary research among 1,059 employers in the Czech Republic in 2013 in the first phase of IGA research, and at the beginning of 2014 in the second phase. In the first phase, questionnaires were collected personally visits of companies by students of the Faculty of Management and Economics at Tomas Bata University. The second phase was carried out electronically.

The processed data was gathered through the quantitative research carried out at the beginning of the summer semester in February 2014. The target group consisted of students of five faculties of Tomas Bata University in Zlín, Czech Republic during their final year of studies (404 undergraduate and 87 graduate students). Altogether, 491 valid questionnaires were collected during personal visits of summer semester introduction seminars at these faculties: FAI (Faculty of Applied Informatics), FAME (Faculty of Management and Economics), FHS (Faculty of Humanities), FMC (Faculty of Multimedia Communications), and FT (Faculty of Technology).

The Students evaluated risk factors influencing their success in the Czech labour market on a scale of answers ranging from 1 (small risk influencing success in the labour market) to 5 (significant risk influencing success in the labour market). The data was consequently processed and analyzed using by various statistical computer applications.

The research sample consisted of 178 male students and 313 female students - the structure of the sample corresponds to the structure of TBU students. The questionnaire survey focused on several areas. For this article, partial risk factors influencing success at job interviews from Czech employers were selected. The analyzed areas closely included: the graduate is often perceived as a drifter, demand for high/not corresponding starting salary. These two risk areas were men-
tioned by employers as the areas with the highest risk and therefore, these areas are examined in
detail by the future graduates.

**Research questions and hypotheses:**

**RQ1:** *Are bachelor/master’s degree students more likely to assume that the employer perceives graduates as drifters?*

H₀₁: The assumption of future graduates that employers perceive the graduate as a drifter is not dependent on the level of completed studies of the future university graduates.

**RQ2:** *Do future graduates afraid of that they will not be employed because they are perceived as drifters?*

H₀₂: All risk factors have the same degree of risk as the factor of high labour turnover.

**RQ3:** *Are male or female students assuming that the employer is afraid to hire the graduate due to his/her demand for a high starting salary?*

H₀₃: The assumption of future graduates that employers are afraid of non-corresponding ideas about the graduate’s starting salary is not dependent on the gender of the future university graduate.

The computer program XLStatistics, and within it the Pearson Chi-square test, was used to confirm or reject the hypotheses and to answer the research questions.

4. RESULTS AND DISCUSSION

4.1 The evaluation of risk areas by future university graduates

The evaluation of risk factors influencing a success of the fresh graduate in the labour market was carried out by the quantitative research. Future university graduates assessed individual risk factors on a five-point scale. The graph below includes individual risk factors in accordance with the results from the primary February 2014 survey.

Why companies do not employ university graduates, future graduates consider the inability to solve problems (1770 points), high initial costs of training (1748 points) and lack of independence (1730 points) as the most risky criteria, while the least risky criteria are lack of IT knowledge (1325 points), few ideas/suggestions for improvement and innovation for companies (1393 points) and lack of motivation and interest (1506 points).
4.2 A detailed evaluation of two tested risk areas

Based on the survey results among 1,059 employers, the selected tested risk factor was that the graduate is considered to be a drifter. High turnover among fresh graduates is perceived by employers as the greatest risk. The second chosen risk factor for the closer testing was high demand/high entry salary. In this case, dependence on the gender of future graduates was examined. Gender differences play an important role in channeling young people towards gender-typical careers. However, gender continues to have a strong direct effect on labour market outcomes in both track-differentiated and general educational systems (Smyth, 2005).

The exploration analysis (the Pearson Chi-square test in XLStatistics) was chosen to verify the set hypotheses. The difference in importance of individual criteria was assessed by the t-test in the computer program XLStatistics.

\( H_0: \) The assumption of future graduates that employers perceive the graduate as a drifter is not dependent on the level of completed studies of the future university graduate.

\[
\text{Chi-square: } 5.93336 \\
p-value: 0.20418 > \alpha \quad (1)
\]

The null hypothesis is not rejected at the level of importance of 0.05. There was not any statistically important difference between the degree of assessment of bachelor’s and master’s degree students for the risk factor: high turnover.

Discussion:

Graduates like drifters are one of the subjects of interest in the article by Jiang and Loui (2012). To describe how advanced engineering students decide their post-baccalaureate plans, they conducted a mixed-methods study with engineering students at a large public university in the Mid-
west. According to the surveys, there were no statistically significant differences between men and women in their choices of post-baccalaureate plans. Jiang and Loui (2012) reported that the drifters in their study enter professional practice without clear reasons or goals. The question is whether all TBU students have clear career plans and goals. If not, they may feel themselves as potential drifters and transmit these expectations and the expectations of employers.

Jiang and Loui (2012) defined eight decision style archetypes that characterize how students make post-baccalaureate plans – these archetypes (Avoider, Opportunist, Drifter, Planner, Pragmatist, Idealist, Tortoise, and Adventurer) can be verified by independent study under the conditions of TBU and then used to prepare students in the Job center TBU.

H02: All risk factors have the same amount of risk as the high turnover factor.

Tab. 1 – Matrix evaluation of risk factors to the tested factor: “high turnover”. Source: own

<table>
<thead>
<tr>
<th>H02: ( \pi_1 - \pi_2 = 0 )</th>
<th>( \bar{x}_1 - \bar{x}_2 )</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>inability to solve problems</td>
<td>+0,3781</td>
<td>3,5976</td>
</tr>
<tr>
<td>high initial costs of training</td>
<td>+0,3333</td>
<td>3,5528</td>
</tr>
<tr>
<td>lack of independence</td>
<td>+0,2967</td>
<td>3,5163</td>
</tr>
<tr>
<td>early departure for parental leave (especially for women)</td>
<td>+0,2703</td>
<td>3,4898</td>
</tr>
<tr>
<td>little practical knowledge</td>
<td>+0,2622</td>
<td>3,4817</td>
</tr>
<tr>
<td>high demand/high entry salary</td>
<td>+0,2520</td>
<td>3,4715</td>
</tr>
<tr>
<td>low level of language knowledge</td>
<td>+0,1199</td>
<td>3,3394</td>
</tr>
<tr>
<td>high labour turnover</td>
<td>0,0000</td>
<td>3,2195</td>
</tr>
<tr>
<td>low manpower</td>
<td>-0,0915</td>
<td>3,1280</td>
</tr>
<tr>
<td>low flexibility and adaptability</td>
<td>-0,1260</td>
<td>3,0935</td>
</tr>
<tr>
<td>lack of motivation and interest</td>
<td>-0,1585</td>
<td>3,0610</td>
</tr>
<tr>
<td>few ideas/suggestions for improvement and innovation for companies</td>
<td>-0,3882</td>
<td>2,8313</td>
</tr>
<tr>
<td>lack of IT knowledge</td>
<td>-0,5264</td>
<td>2,6931</td>
</tr>
</tbody>
</table>

A different evaluation in comparison to the initial factor (high labour turnover), was identified through mutual testing of the risk factors. Future graduates, in comparison with the initial risk factor of high turnover, see much higher risk in their inability to solve problems, high initial costs of training or a lack of independence. On the other hand, a lack of IT knowledge or few ideas/suggestions for improvement and innovation are viewed as less risky than high turnover.

H03: The assumption of future graduates that employers are afraid of the graduate’s salary demands does not depend on the gender of the future university graduate.

Chi-square: 5,87384
p-value: 0,20877 > \( \alpha \) \hspace{1cm} (2)
The null hypothesis is not rejected at the level of importance of 0.05. There was no statistically important difference between the rate of assessment of gender for the criterion of high demand/high entry salary.

Discussion:

Student’s expectations regarding employer’s requirements should be compared with the views of employers. Cai (2013) provides a conceptual framework for understanding what employers think about the value of graduates with similar educational credentials in the workplace (their employability). In this framework, the development of employer’s beliefs about graduate’s employability is broken into a number of factors and mechanisms, including exogenous factors, initial signalling effects and the processes of both private and public learning. The hypothesis H03 suggests that students, regardless of gender are unsure how future employers respond to their wage demands. Cai (2013) in his article provides on how to improve graduate’s employment by influencing employer’s beliefs using Employer-university partnerships. Closer cooperation between universities and companies during the study period can significantly affect the feasibility of the expectations of both students and employers.

5. CONCLUSIONS

The labour market imbalance has been increasing not only in the Czech Republic but also in other countries of the European Union. The economic crisis in 2007 worsened the situation. The downturn of Czech economy came with the end of 2008, which was consequently reflected on the Czech labour market with an increase in unemployment. On one hand, the demand for labour decreased however the number of candidates increased. In 2009, a significant deterioration in entering the labour market was experienced by university graduates who have generally been considered a risk group. They are thought to lack practical experience, and also, their positions are recently, often substitute with less educated graduates.

The aim of this article was to ascertain how future university graduates (491 final year students from 5 faculties at Tomas Bata University in Zlín) perceive individual risk factors influencing the success of today’s Generation Y graduate in the labour market. The degree of dependence of two selected risk factors, gender and level of studies of future university graduates, was tested. A partial conclusion of the study indicated that future graduates consider lack of independence or the inability to solve problems as the most significant risk factor which influencing success of a graduate in the labour market. On the contrary, they are not afraid of the lack of IT knowledge or new ideas and innovations. These results correspond with the findings of many studies and researches (Branine, 2008; Ulovec, 2014). According to the results of primary research, we can say that future graduates estimate their soft skills much more problematic by entering into the labour market as compared with hard skills (Stavjaničková, 2015; Sobotková, 2015). It opens a space for further discussion.

The Pearson Chi-square test did not prove any statistical dependence between the degree of evaluation of masters and bachelor’s degree program students for the risk factors of high turnover. This fact did not identify dependence on the degree of evaluation of gender for the risk
factor of high demand/high entry salary. The hypothesis H03 suggests that students, regardless of gender are unsure how future employers respond to their wage demands. Cai (2013) in his article provides information on how to improve graduate’s employment by influencing employer’s beliefs using Employer-university partnerships. Closer cooperation between universities and companies during the study period can significantly affect the feasibility of the expectations of both students and employers.

Švarcová (2016) found in her research among university students from 2013 that respondents’ gender played an important role when deciding whether to choose the same profession as their parents or not.

In the surveys of Jiang and Loui (2012), there were no statistically significant differences between men and women in their choices of post-baccalaureate plans. The authors reported that the drifters in their study enter professional practice without clear reasons or goals. The question is whether all TBU students have clear career plans and goals. If not, they may feel themselves as potential drifters and transmit these expectations and the expectations of employers.

This paper did not confirm the influence of respondents’ gender on deciding on two critical risk areas from the perspective of firms (turnover and salary). The research presented in this paper identifies that the university does not have to choose different strategies for bachelors and masters on how to prepare students for the labour market. This research result will help to improve the work of the Job Centre of the University. It is not efficient to hold other preparatory activities for students - women and men, because they show a different decision, as described in the results of this study. Even this research result will help to improve the work of the Job Centre of the University. That gives the area for detailed research and testing among the other factors.

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Relevant Drivers for Customers` Churn and Retention Decision in the Nigerian Mobile Telecommunication Industry

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Abstract
The need for better support marketing decision on customers who are likely to leave a service provider for a competitor is very essential to the survival of most telecommunication firms. The application of logistic regression to the study of customer churn and retention decision in the Nigerian telecommunication industry falls into proactive methods, which helps in a better understanding of the needs of subscribers, to be able to predict their churn and retention decision in the industry and enhance better marketing strategies with a research driven policy guide for the operators in the industry. The purpose of this study is to ascertain the relevant drivers of customers` churn and retention in the growing Nigerian mobile telecommunication industry. Considering this issue, the logistic regression models have been used as the evaluating method. Four hundred and eight questionnaires have been used in this study. The population of this questionnaire consists of subscribers of mobile telecommunication in the six selected campuses of higher institution of learning in Lagos-state, Nigeria. The data collected was analysed by STATA 12 software. The results showed that the coefficients of mobile number portability (MNP) services and dubious promotions are positive and significant. Furthermore, low coverage and unwanted calls and SMS are positive and significant. This implies that the better the availability of MNP services, the greater the likelihood of customers` churn. More so, an increase in quality of calls provided by mobile telecom firms will increase the likelihood of customers’ loyalty by retention. The study recommends strong institutional measures for the overhaul of mobile services provision towards an improved service delivery in Nigeria.

Keywords: Drivers, churn, retention, telecommunication, mobile number portability, logistic regression
JEL Classification: C21, L10, M2, M31

1. INTRODUCTION
Telecommunication seems to be an inseparable part of our everyday life, as mobile phone phones are now playing a great role in enhancing effective communicate both at individual and at organisational level, and from one place to another place. The importance of communication to human life cannot be overemphasized, as it has been observed that an average human being keeps mobile phone at arm’s length all the time, even while sleeping (Oyatoye, Adebiyi & Amole, 2015). The mobile phone is not only used for making calls, among many other functions, it is used for communicating through text-messages, multi-media messages, social media as well as internet facilities. The opportunities that lie in the telecommunication market seem endless and
the growing demand for mobile telephony systems is creating a worldwide market. Hence, actors in this industry are seeking the most profitable markets throughout the world (Hossain & Suchy, 2013).

IBM Corporation (2010) has described churn as the process of customer turnover (switching or termination of contract with network providers) which is not restricted to a telecommunication market. It occurs wherever stiff competition provides incentives for customers to switch providers, especially with mobile number portability (MNP) implementation, which gives a legal backing to customers’ switching (porting) behaviour from one service provider to the other without losing their original number which might have even been the barrier in switching out-rightly before the period MNP was implemented, for the fear of losing contact with those who know the old contact number or those on the same network service provider (Oyatoye, Adebiyi & Amole, 2015). However, it should be noted that churn is more familiar in the telecommunication industry as this was not experienced in Nigeria before 2001. Thirteen years later, four major players struggle to secure the patronage of customers from the same market in providing the essential service of effective communication and the implementation of MNP. This empowers subscribers to switch their network providers without losing their original/known number. Therefore, churn has become an issue of major concern for all stakeholders, as it affects firms’ revenues, profitability, and survival as well as questions quality service delivery in competition, which in turn, enhances satisfaction of subscribers.

Customer churn (often referred to as customer attrition in other industries) in mobile telecommunication is the movement of subscribers from one service provider to another. It is the propensity of customers to cease doing business with an organisation. Customer churn, sometimes known as customer attrition or customer turnover, is the loss of existing subscribers to another company or service provider (Kerdprasop, Kongchai & Kerdprasop, 2013). Business sectors consider customer churn seriously because the cost of retaining current customers has been found from research to be much lower than acquiring new ones (Syam & Hess, 2006). Many subscribers frequently churn one provider to another in search of better rates or services (Kolajo & Adeyemo, 2012). Thus, as it applies to this study, customer churn is the loss of existing subscribers to a competitor or shift of preference to other competitors (Jie & Xu, 2009). This phenomenon when it does occur, has the potential to result in considerable loss or profit to a company. As such, the prevention of customer churn, especially the profitable ones is central to the survival of businesses.

Losing customers or customer churn has been suggested to be one of the problems that many firms may face in the 21st century (Chih-Fong & Yu-Hsin, 2009). This is because, churning of good customers has irrecoverable disadvantages for a famous company. This study examines the relevant customer’s churn drivers (mobile phone subscribers), churn rate and present the motivation for churning among service provider by subscribers. In fact, customer’s churn, which is the decision of customers to terminate the relationship with a provider, is a major concern for telecommunication firms in most countries in the world (Portela & Menezes, 2011). Thus, if a customer terminates a membership agreement with one telecommunication company in this era of MNP and become subscriber of another competitor while he/she maintains the original number, this subscriber is called a churn customer.
In fact, considerable increase of business competition in the Nigerian mobile (GSM) telecommunications industry in the last eight years that the Etisalat service provider joined the Nigerian telecommunication market. Besides, the implementation of mobile number portability (MNP) in 2013 has greatly increased the switch from one service provider to another. These have also increased the churn rate of customers and seriously affected the financial performance of the telecommunication firms and costs of implementing their promotional strategies to fight the competition. This has led several researches to note that customer churn is the main reason of loss of profits in the telecommunication industry, as signaled by losses in current and potential revenues, marketing costs, brand image, and so on (Ahna, Hana & Lee, 2006; Qian, Jiang & Tsui, 2006).

Churn behaviour is a common problem faced by telecom companies as it reduces the revenue, profitability, and damages the brand image of the business (Adebiyi, Oyatoye, & Kuye, 2015). Apart from these, the privatisation/liberalisation of the Nigeria telecommunication market in 2001 has increased the number of operators from one to five and equally increased competition. This has afforded customers to choose among service options, the service provider that will provide the best service. Lu (2002) notes that customers exercise their right to choose among the existing providers and thereby switch (port) from one company (operator) to another. Moreover, MNP gives the legal right to dissatisfied customer to switch (port) to any other competitors without losing the original number that the service subscribers is identified with.

For his part, Geppert (2003) defines churning as the movement of customers from one service provider to another in search of better and cheaper products and services. In relation to this, Richeldi and Perrucci (2002) contend that customers become churners when they suspend their subscription or spend less and/or move to the next competitor.

Churning behaviour is synonymous to customer turnover. As Neslin, Sunil, Wagner, Junxiang and Mason (2006) notes that customer churn is “the propensity of the customer to cease doing business with a company in a given period of time”. In this context, Ghosh (2007) introduced the cross-buying concept, while Eppen, Ward, Ward and Kipp (1991), argued that customers who signed up for more than one service within a single company tend to be more loyal than those who contract for one service. This cross-buying behaviour increases the loyalty and reduces churn attitude. Moreover, churn management represents a proactive approach to retain customers. It involves identifying likely churners based on demographic and behavioural customer data, targeting these customers with a retention campaigns and other factors (Neslin, Gupta, Kamakura, Lu & Mason, 2006). This study focuses majorly on pre-paid services in the Nigerian telecommunication industry, since the issue of churn is dominant to this group, especially with MNP policy implementation in Nigeria.

Consequently, the study provides answer to the research question, which seeks to understand, what are the major drivers of customers’ churn and retention in the Nigeria mobile telecommunication industry?
2. LITERATURE REVIEW

2.1. Customer Churn
In this study, we rely on the operational definition of churn as given by Alberts (2006), churn occurs when a customer has permanently stopped using/recharging his SIM-card as early as possible. It is also the rate of movement of subscriber within a system (GSM operators). Thus, churn situation is when a number of customers switch/port their preferences among network providers.

According to Modisette (1999), churn can be categorised into three types;

1. Involuntary churn: This occurs when subscribers fail to pay for service and as a result the provider terminates service. Termination of service due to theft or fraudulent usage is also classified as involuntary churn.

2. Unavoidable churn: This occurs when a customer dies or moves or is otherwise permanently removed from the marketplace, travels outside the country without roaming, and possibly permanently relocates to places outside the outside network coverage.

3. Voluntary churn: Termination of service relationship by the customer, leaving one service operator for another because of better value or dissatisfaction with current service provider.

In reality, it is most unlikely that a service provider could differentiate unavoidable and voluntary churn and predict them separately through secondary data (database) of the telecom operators. However, questions may be asked through primary data instruments (questionnaire or interviews) to get information on the reasons or motives for a subscriber to make voluntary or involuntary churn. This rather can be analysed using logistic regression.

2.2. Churn Drivers
According to Hamelin, Nassali and Harcar (2010), a number of researchers and academics have studied factors that may cause churn. However, it is important to investigate why customers are leaving before selecting the appropriate churn-reduction mechanisms. For Fox and Poje (2002), a better price is the main factor but not the “prevailing reason”. In fact, as it has been observed, offering a lower price does not necessarily mean higher customer loyalty. They also reveal that customers churn to the competitor who best matches their needs in terms of service features, technology, and service quality. The probability that a subscriber will change the actual carrier depends on the satisfaction level reached in addition to factors relating to service attributes, which include call quality, tariff level, handsets, brand image, income and other relevant factors.

In addition to these service attributes, Kumar (2007) has indicated that the transparency level of any company is highly associated with customer satisfaction. When a specific firm adopts transparent marketing strategies, communicates transparent tariffs and makes information available, it increases the customer confidence and satisfaction. Geppert (2003) summarises in his article the most important factors which explain the churn attitude:

1. Price: Higher prices than those of competitors, changing fees constantly or lack of transparency regarding services and products provide customers with high incentives to switch.
2. Customer service quality: The manners in which services and products are delivered to customers play a crucial role in their satisfaction. Lack of reliability, responsiveness and availability of staff would drive customers to terminate the relationship with the service provider.

3. Payment Loopholes: Customers may attempt to “game the system” by generating high usage volumes and avoiding payment by constantly churning to the next competitor.

4. Lack of responsiveness: Lack of response to customer complaints or no answer to their problems may lead to poor service delivery and therefore, to ending the contract.

5. Privacy concerns: Any attempt to use personal information for specific purposes or to divulge it to other parties could break the relationship. Companies have the responsibility and the duty to keep all information they have about their customer secret and not to use it for the purposes of communication or telemarketing.

6. Lack of features: Subscribers are always looking for innovative and original products. Customers will churn if their actual carrier is unable to provide them with what they need, when and where they need it.

7. New technology or new products introduced by competitors: Customers could switch companies if the next competitor introduces new products, launches new services or brings to the market new technology that has never been used before.

8. New competitor enters the market: A new service provider in the market offering interesting incentives and attractive service packages may cause some customers to churn from one service provider to a new one.

9. Billing or services disputes: Continuous billing errors, incorrect payment or disputes about services can lead to customer churning.

Another important point worth noting as a churn driver is the absence of switching costs when a customer makes a decision to cease business with its current telecom operator. Switching costs are barriers which prevent subscribers from changing a service provider. Without these barriers, churners can conveniently switch between various service providers. Furthermore, the introduction of MNP in the telecom industry enhances the ability of mobile phone subscribers to switch from one service provider to another without losing their original numbers that people identify them with.

A churn implies large costs for firms and for a telecommunication network service provider to convince a subscriber to switch to its product or service; it needs to make marketing efforts (promotional mix). The longer a customer has a relationship with a network providers, the more profit is generated for the later through recharges and positive words of mouth (referrals). Therefore, a network provider must strike a balance between maximising the number of customers it has and minimising (marketing) costs by managing churn. To achieve this, the network provider needs to have a clear picture of and understand the dynamics of subscribers’ behaviour present in the market. Hence, the need to understand which variable(s) motivates subscribers to switch product/services to other competitors as well as what influences their decision to stay with a service provider.
Furthermore, Tsai and Lu (2009) noted that in today’s competitive market, many companies are have realized the importance of the customer-oriented business strategy for sustaining their competitive edge and maintaining a stable profit level. In other words, companies mainly rely on the income, which comes from customers. However, to create and retain customers is difficult and costly in term of marketing. As acquisition of new subscriber involve new account setup, advertising and promotional expenses which can add up to several times the cost of efforts and resources that may enable the firms to retain a customer (Keaveney, 1995). It is becoming an industry-wide belief that the best core marketing strategy for the future is to retain existing customers and avoid customer churn (Kim, Park & Jeong, 2004; Kim & Yoon, 2004).

Burez and Van den Poel (2007) indicated two types of targeted approaches to managing customer churn: reactive and proactive. When a company adopts a reactive approach, it waits until customers ask the company to cancel their service relationship. In this situation, the company will offer the customer an incentive to stay. On the other hand, when a company adopts a proactive approach, it tries to identify customers who are likely to churn before they do so. The company then provides special programmes or incentives for these customers to keep the customers from churning. Targeted proactive programmes have potential advantages of having lower incentive costs. However, these systems may be very wasteful if churn predictions are inaccurate because companies are wasting incentives (money) on customers who will not churn. Therefore, it is important to build a customer-churn prediction model as accurately as possible (Burez & Van den Poel, 2007; Van den Poel & Lariviere, 2004).

Consequently, the application of logistic regression to the study of customer churn and retention decision in the Nigerian telecommunication industry falls into proactive methods. This makes for a better understanding of the needs of subscribers to predict customer churn and retention in the industry in order to enhance better marketing strategies and provide research driven policy guide for the operators in their quest for the optimal development of the industry.

2.3 The churn prediction models

Hadden, Tiwari, Roy and Ruta (2006) observed that many techniques have emerged for predicting a required outcome. The methods which are most frequently used in research, therefore, have been recognised as neural networks, classification trees and regression (Van Den Poel, & Lariviere, 2004; Au, Chan & Yao, 2003; Boone & Roehm, 2002). Therefore, Hadden et al, (2006) pointed out suitability of these technologies for predicting customer churn using the complaints data previously mentioned. In their study, each model was created for each of the chosen technique (Linear Regression, Regression Tree and Neural Network). The models were constructed using the same training dataset. The training dataset consists of 202 customers with a 50: 50 ratio of churners and non-churners. The regression tree and neural network models were created using Matlab. The Matlab is a high-level language and interactive environment that enables its users to perform rigorous tasks much faster than they can be done by using conventional programming languages. It has many pre-written toolboxes that can be used with minimum training to perform experiments by using many advanced technologies. Some examples of toolboxes available include neural networks, statistics, fuzzy logic and signal processing. Hadden, et al, (2006) also used Matlab with the neural network toolbox and the statistical toolbox. However,
many studies have not collected primary data from subscribers who used the services on a daily basis, and used a logistic regression model to ascertain the relevant drivers of churn and retention decision, especially in the Nigerian growing mobile telecommunication market.

2.4 Customer Retention

The customer retention is a part of customer relationship management (CRM). According to Payne (2006), CRM is a business approach that seeks to create and develop relationships with carefully targeted subscribers in order to improve the value of customers and corporate profitability so as to maximise shareholder value. Thus, an effort by a telecommunication organisation to improve customer value will also assist in ensuring their essence of being in business, which, of course, is to make profit. Hennig-Thurau and Hansen (2000) argued that relationship marketing has become one of the most prosperous branches of marketing theory and the most important management issues for the business community in recent times.

The argument for the customer retention is relatively straightforward as it is more economical to keep an existing customer than to acquire new ones. According to some studies, acquiring new customers is calculated as being five times more costly than the expenses of retaining an existing customer. The costs of obtaining customers to replace those who have been lost are high, because the expenses of acquiring ones are incurred only at the beginning stages of the commercial relationship (Hurley, 2004; Reichheld & Kenny, 1990). In addition, long-term customers buy more, and if satisfied, may generate positive word-of-mouth promotion for the company at relatively no cost to the firm. Finally, long-term customers take less of the company’s time, and are less sensitive to price changes (Healy, 1999).

Although many companies recognise the value and importance of the customer retention in general, only a considerable few understand the economics of retention in their own business (Kotler, 2003; Payne, 2006). Companies can clearly benefit from increasing the lifetime spending of customers. Most companies, however, channel a significant amount of resources on attracting and acquiring new customers, instead of keeping the existing ones. As it is perceived in the Nigeria telecommunication industry, all network providers (GSM companies) focus on similar promotional activities almost at the same time. It is generally believed that once a customer is acquired, keeping the customer is simple through superior products and services (Payne 2006). As Van-Den-Poel and Lariviere (2004) summarised, the economic value of customer retention are as follows:

1. lowering the need to seek new and potentially risky customers, which allows more focus on demands of an existing customers;
2. long-term customers tend to buy more;
3. positive word of mouth from satisfied customers is a good way for new customers’ acquisition;
4. long-term customers are less costly to serve due to a larger database of their demands;
5. long-term customers are less sensitive to competitors’ marketing activities;
6. losing customers results in less sales and an increased need to attract new customers, which is five to six times more expensive than the money spent on retention of an existing customers;
many times, people tend to share negative than positive service experience with friends, this may result in negative image of the company among possible future customers.

Therefore, the customer retention rates are receiving an increased attention from academic market researchers as one of the most important metrics in customer relationship management (Reinartz & Kumar, 2002). In this regards, Benner and Tushman (2003) noted that during the periods of incremental changes in stable tenure of industries, ability to minimise the number of defected clients is becoming crucial. Similarly, Bain (1996) indicated that reducing defection rates by 5%, boosted profits, from 25% to 85%, depending on industry. Similarly, Reichheld (1996) revealed that customers become not only significantly more profitable over time, but they are most likely to bring new clients to the company (referral), using most effective means of advertisement at cheap/no cost to the organisation. This contributes in boosting the profit of the country. In order to retain customers more effectively, telecommunication companies must understand subscribers’ and market services, which motivate them to remain with the current service provider and not switch (port) to other competitors who render similar or same service.

3. RESEARCH METHODS

This study adopted quantitative methods which are generally associated with the philosophical traditions of positivism. A cross sectional survey with the aid of a structured questionnaire was used to address the problem of this study, since the reasons to churn or retain a network SIM can be best explained by the subscribers who have received the service or have been informed by those who use the services. The total sample for the study consists of 480 mobile phone subscribers/customers in the selected tertiary institutions in Lagos. Lagos is divided into five divisions namely: Ikeja, Badagry, Lagos, Ikorodu and Epe division. A multi-stage sampling design was used to select six out of eleven tertiary institutions in Lagos state. The first stage was the selection of all the tertiary institutions in Lagos state irrespective of their ownership structure as shown in the Table 1.

Tab. 1 - Tertiary Institutions in Lagos divisions and their ownership

<table>
<thead>
<tr>
<th>Divisions</th>
<th>Ownership Structure</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Federal</td>
</tr>
<tr>
<td>Ikeja</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Badagry</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
In the second stage, six tertiary institutions were selected from the earlier identified eleven across five divisions in the state. The selected institutions are presented Table 2.

Tab. 2 - Sampled Tertiary Institutions in Lagos divisions and their ownership

<table>
<thead>
<tr>
<th>Divisions</th>
<th>Ownership Structure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lagos</td>
<td></td>
</tr>
<tr>
<td>Ikorodu</td>
<td>-</td>
</tr>
<tr>
<td>Epe</td>
<td>-</td>
</tr>
</tbody>
</table>

Source: Authors’ compiled, (2014).

The respondents were of different age groups, incomes, educational background, information needs and so on. Lagos was chosen because it is the economic nerve center of Nigeria (commercial capital), with the highest number of GSM subscribers (Adeleke & Aminu, 2012). The sample consists of the customers of the four major GSM companies in the selected area. These include MTN, Airtel, Glo, and Etisalat. The operators account for over 85 percent of mobile subscriptions in the country (Pyramid Research, 2010). In a bid to collect quality data that reflect subscribers’ opinion on reason(s) for their decision on churning or staying with a mobile network provider, convenience sampling technique was employed in selecting the respondents.
who were administered with the questionnaires. The sample size of the target group who participated in this study was calculated by using random sampling method of Yamane, (1967) which is expressed as:

\[ n = \frac{N}{(1 + N \cdot e^2)} \]

where, \( n \) is the sample size, \( N \) is the population size (total number of active subscribers) and \( e \) is the sample error (0.05).

From the above expression, the sample size is obtained as:

\[ n = \frac{133,282,003}{(1+133,282,003 \cdot 0.05)^2} = 399.99 \]

Eighty copies of the questionnaire were administered in each of the six selected institutions, given a total of 480 subscribers. The sample unit for the study includes students, workers (both academic and non-teaching), literate traders within the campuses, and visitors to the campuses at the time copies of the questionnaire was administered. Out of the 480 questionnaires administered, only 408 were valid for the purpose of the study analysis. To facilitate logistic regression modeling, the dependent variables have been dichotomised into binary form. The customer churn and retention drivers suggested from both the literature and focus group discussion (FGD) conducted by the researchers on GSM subscribers were evaluated. The respondents were asked questions as to ascertain if the drivers can influence their decision to churn or retain a network. The binary questions were the dependent variables of both churn and retention in the logit models, while their satisfaction with service level of the relevant churn and retention drivers, which is based on five in the Likert scale, were the independent variables for the models. The data were analysed using the STATA 12 computer software program. A logistic regression analysis was employed. Logistic regression applies maximum likelihood estimation after transforming the dependent into a logit variable (the natural log of the odds of the dependent occurring or not). In this way, a logistic regression estimates the probability of a certain event occurring. That is, it calculates the changes in the log odds of the dependent variable, not changes in the dependent variable as the Ordinary Least Square regression does.

### 4. RESULTS DISCUSSION

#### 4.1 The relevant drivers of customers’ churn in the Nigerian mobile telecommunication industry.

The results of the logit model to explain relevant drivers of customers’ churn are presented in Table 3. The coefficients of MNP and dubious promotions are positive and significant. Furthermore, low coverage and unwanted calls and SMS are positive and significant. This result implies that the higher the availability of MNP services, the greater the likelihood of customers’ churn. The positive sign associated with dubious promotions provided by telecommunication firms
implies that a one grade increase in the level of uncertain promotions activities of the firms is likely to increase the probability of customers’ churn by 18.9 percentage points. The statistical significance of dubious promotions is also much higher than the availability of MNP services, an indication that dubious communication activities could rapidly increase churn. Coefficients of low coverage which has a positive sign implies that inability of a telecom firm to spread its bandwidth to cover more areas frequently habituated or occupied by subscribers would increase the likelihood of churn by 17.6 percentage points. Similarly, an increase in unwanted calls and SMS to the subscribers by telecom firms is likely to increase the likelihood of churn by 26.4 percentage points at 1% level of significance.

Table 3 shows that coefficients of poor message delivery and high tariff by telecom providers are negative and significant at 10% and 5% level of significance respectively. The results imply that subscribers are less concerned with poor services related to message delivery and high tariff ceteris paribus. The result is an indication that customers’ churn is less influenced by tariff rate in Nigeria, on the other hand, drivers within the analysis framework.

Tab. 3 - Logit results on drivers of Customers’ churn

<table>
<thead>
<tr>
<th>Explanatory variables</th>
<th>Coefficient</th>
<th>t-ratio</th>
<th>Marginal effects*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of quality calls</td>
<td>0.403</td>
<td>1.02</td>
<td></td>
</tr>
<tr>
<td>Mobile Number Portability</td>
<td>0.442</td>
<td>1.99**</td>
<td>0.101</td>
</tr>
<tr>
<td>Poor message delivery</td>
<td>-0.555</td>
<td>-1.66*</td>
<td>-0.120</td>
</tr>
<tr>
<td>Dubious promotions</td>
<td>0.793</td>
<td>2.92***</td>
<td>0.189</td>
</tr>
<tr>
<td>High tariff</td>
<td>-0.958</td>
<td>-1.98**</td>
<td>-0.188</td>
</tr>
<tr>
<td>Poor connectivity</td>
<td>0.200</td>
<td>0.46</td>
<td></td>
</tr>
<tr>
<td>Low coverage</td>
<td>0.732</td>
<td>1.97**</td>
<td>0.176</td>
</tr>
<tr>
<td>Inefficient internet</td>
<td>-0.026</td>
<td>-0.08</td>
<td></td>
</tr>
<tr>
<td>Unwanted calls &amp; SMS</td>
<td>1.109</td>
<td>3.76***</td>
<td>0.264</td>
</tr>
<tr>
<td>Constant</td>
<td>-0.897</td>
<td>-1.87*</td>
<td></td>
</tr>
<tr>
<td>Log likelihood</td>
<td>-243.744</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of Obs</td>
<td>408</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LR chi(2) 10</td>
<td>48.09</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prob &gt; chi2</td>
<td>0.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pseudo R2</td>
<td>0.089</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

***,**,* 1%,5%,10% level of significance
a Marginal effects are shown only for significant coefficients
4.1 The relevant drivers of customers' retention in the Nigerian mobile telecommunication industry.

Table 4 shows the relevant drivers of customers' retention in the Nigeria mobile telecommunication industry. Coefficients of quality of calls, quality of message delivery, efficient internet package and complexity of MNP are positive and significant. The results show that an increase in quality of calls provided by mobile telecom firms would increase the likelihood of customers' loyalty by retention. Similarly, the positive sign associated with the quality of message delivery also indicates that a one-grade improvement in the quality of message delivery would increase the likelihood of loyalty by 17.2 percentage points. In addition, mobile subscribers are more likely to be loyal to their mobile firms if the internet services provided are deemed efficient. Furthermore, the coefficient of complexity of MNP is positive and significant, an indication that subscribers would prefer to retain their mobile service provider if porting to another mobile line is complicated, this corroborated the submission of Adebiyi, Oyatoye and Amole (2015), that MNP was not on the top priority list of factors that make customers to churn network provider in Nigeria. However, how MNP would become complex for a longer time to satisfactorily benefit service providers remains a question for further research.

Tab. 4 - Logit results on drivers of Customers' retention

<table>
<thead>
<tr>
<th>Explanatory variables</th>
<th>Coefficient</th>
<th>t-ratio</th>
<th>Marginal effects*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality of calls</td>
<td>0.671</td>
<td>1.65*</td>
<td>0.139</td>
</tr>
<tr>
<td>Quality of message delivery</td>
<td>0.711</td>
<td>2.00**</td>
<td>0.172</td>
</tr>
<tr>
<td>Frequent promo</td>
<td>-0.027</td>
<td>-0.12</td>
<td></td>
</tr>
<tr>
<td>Good billing rate/tariff</td>
<td>-0.293</td>
<td>-0.99</td>
<td></td>
</tr>
<tr>
<td>Easy inter-connectivity</td>
<td>0.224</td>
<td>0.73</td>
<td></td>
</tr>
<tr>
<td>Coverage</td>
<td>-0.050</td>
<td>-0.17</td>
<td></td>
</tr>
<tr>
<td>Efficient internet package</td>
<td>0.699</td>
<td>2.25**</td>
<td>0.168</td>
</tr>
<tr>
<td>Effective complaint management</td>
<td>0.325</td>
<td>1.11</td>
<td></td>
</tr>
<tr>
<td>Complexity of MNP</td>
<td>0.746</td>
<td>3.27***</td>
<td>0.166</td>
</tr>
<tr>
<td>Constant</td>
<td>-0.476</td>
<td>-0.98</td>
<td></td>
</tr>
<tr>
<td>Log likelihood</td>
<td>-253.107</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of obs</td>
<td>406</td>
<td></td>
<td></td>
</tr>
<tr>
<td>L.R chi(2) 9</td>
<td>26.44</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prob &gt; chi2</td>
<td>0.0017</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pseudo R2</td>
<td>0.0496</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

***, ***, * 1%, 5%, 10% level of significance
a Marginal effects are shown only for significant coefficients
5. CONCLUSION AND RECOMMENDATIONS

The study contributes to a better understanding of factors, which influence customers’ churn and retention decision in the Nigerian mobile telecommunication industry. It also identified strategies to be adopted for effective customer retention management, which are necessary for development of the telecommunication industry in Nigeria through the application of logistics regression. The study concluded that the coefficients of MNP and dubious promotions are positive and significant. Furthermore, low coverage and unwanted calls and SMS are positive and significant. This implies that the better the availability of MNP services, the greater the likelihood of customers’ churn. The positive sign associated with dubious promotions provided by telecommunication firms implies that a one-grade increase in the level of uncertain promotions activities of the firms is likely to increase the probability of customers’ churn by 18.9 percentage points. For the retention drivers, the study concluded that an increase in the quality of calls provided by mobile telecom firms would increase the likelihood of customers’ loyalty by retention. Similarly, the positive sign associated with the quality of message delivery also indicates that a one-grade improvement in the quality of message delivery would increase the likelihood of loyalty by 17.2 percentage points. In addition, mobile subscribers are more likely to be loyal to their mobile firms if internet services provided are deemed efficient.

In all, the marginal effects of drivers of customers churn and retention were computed using logistic regression analysis. For retention drivers the marginal effect of customer satisfaction with GSM services after MNP. The result reveals that a unit increase in frequent promotion by network providers will increase customer loyalty to network provider. However, if the billing system changes favourably to customers, it will enhance customer retention. Moreover, easy interconnectivity, coverage, and effective complaint management suggest some marginal effect for percentage increase in customers’ satisfaction and enhanced customer retention. There is need for an urgent overhaul of GSM service attributes towards an improved service delivery on the customers churn drivers that are significant to the customer decision for porting from one service provider to the other, in order to enhance customer satisfaction and unbroken patronage.

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The Impact of EU Funds on the Development of a Business Model for Small and Medium-Sized Enterprises

Olinski Marian, Szamrowski Piotr, Luty Lidia

Abstract
The purpose of this paper is to assess the impact of grants received by companies on the formation of a business model. The study covered micro, small and medium-sized enterprises based in rural areas, which received support in the form of investment grants within the Regional Operational Programmes 2007-2013 for northern Poland. The research was done using a direct survey method, and covered a total of 155 companies. The results of the study indicate that the grant obtained affected implicitly the modification of the business model elements that are placed on the left side of the template of the Business Model Canvas. However, the tendency of enterprises to undertake an innovative activity usually means changes in their business model both on the left and right side. The greatest strength of the dependence was observed in the case of relationship between the size of the company and changes in the model elements. Medium-sized enterprises were the most active in this respect, when compared to comparison to micro and small businesses, and changed the largest number of elements of the business model due to the obtained grant.

Keywords: business model, grant, small and medium sized enterprises
JEL Classification: H81, L20, O38

1. INTRODUCTION
In recent years a business model “Canvas” by Osterwalder and Pigneur has become a popular tool used both in practice and in numerous papers (e.g., Toro-Jarrin, Ponce-Jaramillo & Guemes-Castorena, 2016, Dijkman, Sprenkels, Peeters & Janssen, 2015, Wirtz, Pistoia, Ullrich & Gottel, 2015, Obst, 2015, Zolnowski & Böhmann, 2014, Da Silva & Trkam, 2014, Hauksson, 2013, Muegge, 2012). In the databases an extensive scientific literature could also be found. It concerned the effects of support policies of micro, small and medium-sized enterprises with the use of instruments of a financial nature - for example, in the form of investment subsidies (e.g., Blackburn & Karvis, 2010, Acs & Kallas, 2008, Wren, 2005, Ramsden & Bennett, 2005, Devins, 1999). However, there are no articles diagnosing (evaluating) the impact of the support in the form of investment subsidies reshaping business models in beneficiary enterprises. The following article is thus an attempt to fill up the resulting gap in the subject literature and business practice. Therefore, the research objective of the study is to assess the impact of grants on the formation of the business model. The study is limited to show the relationships between the components of the business model and the received support, limited to the sector of micro, small and medium-sized enterprises. This limitation is due to the fact that such entities are the main recipients of public aid within the framework of the EU funds. The results discover relationship
between support and changes in business models. Instead of focusing only on the diagnosis of typical support effects like profit growth, income, employment, etc., they show the subsidies impact on changes in the business philosophy of the beneficiaries. Political decision makers, responsible for policy of supporting SMEs, need to be aware of how this financial assistance shapes business models in supported enterprises. Changes in the individual components of the business model, prejudge the long-term assistance effects. So, the results of the study constitute the guidelines helpful for making detailed decisions concerning the policy of SMEs support.

2. THEORETICAL BACKGROUND

The concept of the business model is accompanied by numerous controversies regarding its clarification. Magretta noted that the term of ‘business model’ is one of the most ‘messy’ concepts used in business (Magretta, 2002). Another debatable issue is the capability to develop such a definition that would satisfy both the scientific environment and business practitioners. As noted by Bis, ‘in the subject literature, there is no single generally accepted definition of the business model since researchers dealing with the issue freely select various building blocks and develop multiple classifications’ (Bis, 2013). Some of them argue that the development strategy is part of the business model, while others point to competitive strategy (e.g., Slowotzky, Morrison & Andelman, 2000), and yet, another group of researchers believes that strategy should not be incorporated in the business model at all (e.g., Magretta 2002, Banaszek, 2004). While analysing numerous definitions of a business model, one can infer that the core of the business model is value, in particular, the value for the customer and the company (e.g., Baden-Fuller & Haefliger, 2013, Achtenhagen, Melin & Naldi, 2013, Velu & Stiles, 2013, Amit & Zott, 2010, Casadesus-Masanell & Ricart, 2010, Linder & Cantrell, 2000, Maxwell & Rankin, 2007). Creating customer value and capturing value for the enterprise is at the heart of ‘a business model’. However, there is no consensus on the number and types of elements forming a business model (Timmers, 1998, Mahadevan, 2000, Stewart & Zhao, 2000, Afuah & Tucci, 2001, Osterwalder & Pigneur, 2010). It appears that the cause of the controversy is the excessive desire to include all matters relating to the functioning of the company in this concept. Due to the adoption in the research part of the business model of the constituents based on a popular Business Model Canvas created by Osterwalder and Pigneur (2010), for the purposes of this study, the definition given by both authors referring precisely to this model was taken. The definition has the following wording: ‘business model is a description of the premises behind the manner in which the organization creates values and benefits from the generated value’. This definition emphasizes its two major functions, i.e., creating value and capturing value.

Another theoretical problem with serious practical implications is to define and establish the relationships between specific constituents of the business model. Most frequently one can distinguish from a few to a dozen elements of the business model, taking into account different criteria and the logic behind the grouping of the elements. The study used the ‘Canvas’ model proposed by the above-mentioned Osterwalder and Pigneur (Osterwalder & Pigneur, 2010). Within their model, they distinguish the following nine building blocks of the business model: customer segments, value propositions, channels, customer relationships, revenue streams, key resources, key activities, key partners, and cost structure.
The placement of individual elements in the model is not accidental. The right section is focused on the customer and, according to Osterwalder and Pigneur (2010), is based primarily on emotions. This part of the model includes:

- customer segments (selected groups of consumers, businesses or other organizations, on which the company focuses its activities in the range of offering and delivering value);
- customer relationships (usually understood as all of the company’s activities aimed at acquiring new customers and retaining them);
- channel (the way enterprises communicate with and reach their customer segments to deliver a value proposition);
- revenue streams (money generated by a company from each customer segment).

![Fig. 1 - Osterwalder and Pigneur’s business model Canvas template. Source: developed by the authors based on Osterwalder and Pigneur (2010).]

A value proposition lies in the centre of the model, which is a bundle of products or services of value for a particular client. This proposal is the reason for which the customer selects the offer of a specific company and values it more than a competitive offer. It satisfies the customer’s needs and solves a customer problem. Each individual value proposition consists of a bundle of products and/or services and their function is to meet the requirements of a specific customer segment. The value proposition may be diverse in nature. On the one hand, it may be innovative and represent an entirely new deal ‘disrupting’ the old order. On the other hand, it may only differ slightly from the existing market offer by, for instance, adding to the product or service new features and attributes (Osterwalder & Pigneur, 2010).

The left part of the model contains the elements related to the company of existence of which the customer does not even need to be aware of. The present paper describes it as logical part of the model, in contrast to the right one based on emotions. This part of the model includes:

- key partners (the network of suppliers and partners who make enterprise operating);
- key resources (the most important assets necessary for the proper functioning of the business model);
• key activities (the most important things that a company must perform with a perspective for creating and delivering value);
• cost structure (all costs generated by a business model).

The model used in the study, on the one hand, clearly highlights the role of the customer. On the other hand, however, it also exposes elements associated with the supply side of the company (key resources, activities, partners). This approach is more applicable to companies in which the elements play a significant role in business models – that means to mature entities. It often happens that companies that have been operating in the market for a short time do not possess developed resources, activities or stabilized relations with their partners.

3. RESEARCH OBJECTIVES AND METHODOLOGY

The study covered micro, small and medium-sized enterprises based in rural areas, which received support in the form of investment grants within the Regional Operational Programme 2007-2013 for northern Poland (warmińsko-mazurski, kujawsko-pomorski, pomorski and zachodniopomorski regions). Altogether 155 enterprises were surveyed. These companies received subsidies between 2008 and 2011 (76% of the whole population). Studies were carried out in 2014 with the use of a direct survey method (only business owners and competent managers of these entities were surveyed). Small and medium-sized enterprises (SMEs) are defined in the EU recommendation 2003/361. The main factors determining whether a company is a SME are the number of employees and either turnover or balance sheet total. Small businesses have a number of specific market, financial, location, organizational and technological characteristics that define their operational and strategic behaviours, separate from large entities. This separateness is due to other, weaker market position in relation to large enterprises, their greater vulnerability to changes in the environment, the need for more rapid adaptation to changing external conditions, or to other objectives structure and motives of an activity which reflects the personal characteristics of the company’s owner/manager. Limitations in the operation of small and medium-sized enterprises define the role of the state, which should promote actively the conditions for the functioning of the SMEs sector. One of simpler typologies of support instruments is the division into financial and non-financial ones. Investment grants represent a financial support instrument which, due to their non-refundable character, is a particularly desirable type of help sought by entrepreneurs representing small business. Therefore, further research part of the study is limited only to this kind of support.

The research objective of the study is to assess the impact of grants received by companies on the formation of the business model. The area of implementation of the assumed objectives has been delineated by the following research hypotheses:

1. The implementation of innovative undertakings facilitated profound modifications in the business model,
2. There is a positive relationship between the investment outlay and the resultant size of the grant and changes occurring within the business model,
3. There is dependence between the size of the company and changes in the ‘logic’ part of the model. The larger the company, the greater the scale of changes in the left part of the model resulting from the investment made.

The data were compiled with the use of a statistical program STATISTICA. The following statistical procedures were applied to describe them: the analyses based on standard parameters and dependence test of selected variables (independence test, contingency coefficient C).

4. RESULTS AND DISCUSSION

The research was conducted in mid-2014 using a direct survey method, and covered a total of 155 companies from northern Polish, i.e., from the warmińsko-mazurskie, kujawsko-pomorskie, pomorskie and zachodniopomorskie provinces (out of 204 entities from rural areas which had received grants). Taking into account the fact that the research focused on rural areas (according to the Organisation for Economic Co-operation and Development (OECD), predominately rural areas are ones in which more than 50% of the population lives in rural communes. Rural communes are the communes with a population density below 150 inhabitants/km²), the dominant group were entities from the warmińsko-mazurskie province that is characterised by a low number of municipalities. In the case of the pomorskie and the zachodniopomorskie provinces, a large group were headquartered in close proximity to the Tri-City and the City of Szczecin agglomerations.

The researched companies were grouped according to the following scheme: respondents could choose more than one factor that constituted a single building block of the model. For instance, within ‘key resources’, a total of the following four elements could be indicated: physical, intellectual, human, and financial. Therefore, values greater than nine could be obtained (Osterwalder and Pigneur’s business model template is composed precisely of that number of elements). The obtained results allowed grouping the companies into those that implemented up to two changes both on the left and right sides, from three to five and from six to eight. After taking into account the ninth model element, i.e., value propositions, companies were grouped into those that implemented up to four changes in the business model modified by them, from five to eight and from nine to twelve changes. Moreover, companies were grouped according to criteria such as the investment outlay (a small amount up to 125 thousand €, the average amount ranging from 125 thousand up to 250 thousand €, a large amount from 250 thousand up to 750 thousand €, and a very large amount in excess of 750 thousand €) and the number of modifications in the business model. Also, the dependence between the size of the change in business model and the innovativeness of implemented projects and the size of the company was examined. As regards the generic arrangement, fixed assets were purchased in almost 70% of investments made.
Tab. 1 - The basic numerical characteristics of selected indicators. Source: own

<table>
<thead>
<tr>
<th>Numerical characteristics</th>
<th>Indicator</th>
<th>Logic</th>
<th>Emotion</th>
<th>Total</th>
<th>Investment outlay [in thousands of €]</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>max</td>
<td>max</td>
<td>max</td>
<td>max</td>
</tr>
<tr>
<td></td>
<td></td>
<td>min</td>
<td>min</td>
<td>min</td>
<td>min</td>
</tr>
<tr>
<td></td>
<td></td>
<td>modal</td>
<td>modal</td>
<td>modal</td>
<td>modal</td>
</tr>
<tr>
<td></td>
<td></td>
<td>median</td>
<td>median</td>
<td>median</td>
<td>median</td>
</tr>
<tr>
<td></td>
<td></td>
<td>first quartile</td>
<td>first quartile</td>
<td>first quartile</td>
<td>first quartile</td>
</tr>
<tr>
<td></td>
<td></td>
<td>third quartile</td>
<td>third quartile</td>
<td>third quartile</td>
<td>third quartile</td>
</tr>
<tr>
<td></td>
<td></td>
<td>average</td>
<td>average</td>
<td>average</td>
<td>average</td>
</tr>
<tr>
<td></td>
<td></td>
<td>variation coefficient [%]</td>
<td>variation coefficient [%]</td>
<td>variation coefficient [%]</td>
<td>variation coefficient [%]</td>
</tr>
<tr>
<td></td>
<td></td>
<td>25.0*</td>
<td>75.0*</td>
<td>28.6*</td>
<td>93.7**</td>
</tr>
</tbody>
</table>

* relative to quarterly deviation; ** relative to standard deviation

A detailed list of the surveyed companies by type and nature of the performed project, company size, investment outlay and by the frequency of changes in the business model are shown in Table 2.

Tab. 2 – The selected elements characterizing the surveyed companies and changes in the elements of the business model. Source: own

<table>
<thead>
<tr>
<th>Specification</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
</tr>
<tr>
<td><strong>Innovative project</strong></td>
<td></td>
</tr>
<tr>
<td>yes</td>
<td>61</td>
</tr>
<tr>
<td>no</td>
<td>94</td>
</tr>
<tr>
<td><strong>The ‘logic’ part of the model</strong></td>
<td></td>
</tr>
<tr>
<td>low</td>
<td>6</td>
</tr>
<tr>
<td>average</td>
<td>109</td>
</tr>
<tr>
<td>high</td>
<td>40</td>
</tr>
<tr>
<td><strong>The ‘emotion’ part of the model</strong></td>
<td></td>
</tr>
<tr>
<td>low</td>
<td>136</td>
</tr>
<tr>
<td>average</td>
<td>19</td>
</tr>
<tr>
<td>high</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total number of changes in the model</strong></td>
<td></td>
</tr>
<tr>
<td>low</td>
<td>11</td>
</tr>
<tr>
<td>average</td>
<td>104</td>
</tr>
<tr>
<td>high</td>
<td>40</td>
</tr>
</tbody>
</table>
The obtained results of the study indicate that the investment made and the grant received on its implementation affected significantly the hitherto business model followed by companies, in particular within the area related to its left ‘logic’ part comprising key partners, key activities, key resources, and key costs. In all surveyed companies, at least one of the above-mentioned elements was altered. The nature of grants related mainly to the purchase of modern production lines, innovative and efficient machinery and equipment, or to other investments in modernizing production processes compels significant changes in the model being implemented, especially in its left part. Three companies (the record holders) have indicated up to eight factors that have been changed on the left side of the model (the surveyed enterprises were allowed to indicate more than one factor included in a single model constituent, and hence values greater than four were obtained). Interestingly, in the case of two investments, the investment outlay did not exceed 250 thousand €. Thus, even a relatively small amount can have a significant effect on changes in the business model followed by the company. In case of the third company, the investment value was in excess of one million €. As a result of the grant obtained, slightly more than 25.0% of the companies changed from six to eight elements that make up the left side of the model (Table 3). This result should be evaluated very positively. A significant fact is that this group comprised both companies that received relatively small grants and companies in which the grant amount exceeded half a million €. The amount of investment slightly affected changes in the use of the model elements, at least on its left side.

Tab. 3 - The impact of the investment outlay on changes in individual elements of the business model. Source: own
Only six out of the 155 companies surveyed were in the group where up to two elements making up the left side of the model were changed (Table 3). This group included four micro companies and one small and one medium-sized entities, and the projects implemented by them were mainly non-innovative by nature (Table 4). The amount of the obtained financial support for these companies was at a low level (with one exception). By far, the largest group of companies were the ones that, as a result of the investment made, changed from three to five elements that make up the left side of the model (109 companies). The diversity of the companies in this group was significant, both in terms of the innovativeness of the projects implemented, the company size, and in terms of the amount of the grant received.

Interesting results can be observed while analysing the relationship between the number of the elements on the left side of the model and the innovativeness of the projects implemented (Table 4).

Tab. 4 - The impact of the nature of the implemented project on the magnitude of changes in individual elements of the model. Source: own

<table>
<thead>
<tr>
<th>Nature of the implemented project</th>
<th>Number of companies</th>
<th>Frequency of changes in the ‘logic’ elements of the model</th>
<th>Frequency of changes in the ‘emotion’ elements of the model</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>&lt;0-2&gt;</td>
<td>&lt;3-5&gt;</td>
</tr>
<tr>
<td>Innovative</td>
<td>61</td>
<td>2</td>
<td>41</td>
</tr>
<tr>
<td>Non-innovative</td>
<td>94</td>
<td>4</td>
<td>68</td>
</tr>
</tbody>
</table>

Among the 155 companies surveyed, over 39.0% made investment that was innovative by nature. Innovations should be understood as new products or production technologies applied for the first time in the company. In the group of companies that, as a result of the grant obtained, changed from six to eight elements that made up the left side of the model, 45.0% of the implemented projects were innovative. This means that a slightly bigger number of companies that changed the greatest number of model elements that make up the left side implemented non-innovative undertakings (55%). Similar results were observed in the group of companies that had changed from three to five elements composing the ‘logic’ part of the model. Only in the group of companies that minimally changed the left side of the model, a slightly larger number of non-innovative investments was observed. The surveyed persons very clearly indicated the risk associated with the unsuccessful implementation of innovation, which mostly means that the value intercepted by the company is inadequate in relation to investment outlays made. Nowadays, the costs of creating, developing, and then shipping novel or modified products have risen tremendously. A far cheaper solution seems to be a modification of the business model followed by the company, which does not necessarily entail taking an innovative action. A business model
itself becomes a new kind of innovation that complements a product, process, or organizational innovations in this aspect. As H. Chesbrough states, ‘a better business model often will beat a better idea or technology’ (Chesbrough, 2007). On the one hand, it is responsible for freeing the potential value embedded in new technologies and for converting it into market outcomes. However, on the other hand, as mentioned above, it can be a very profitable innovation in itself.

The results of the research show that 34.0% of medium-sized companies changed from six to eight elements forming the ‘logic’ part of the business model (Table 5), 26.6% of small entities, and only 16.0% of micro-enterprises. Most frequently, these were micro, small and medium-sized entities that changed from three to five elements that make up the left side of the model. Micro-enterprises were the least active in terms of frequency of changes within the ‘logic’ model elements.

Tab. 5 - The impact of the company size on the frequency of changes in individual elements of the model. Source: own

<table>
<thead>
<tr>
<th>Company size</th>
<th>Number of companies</th>
<th>Frequency of changes in the ‘logic’ elements of the model</th>
<th>Frequency of changes in the ‘emotion’ elements of the model</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>&lt;0-2&gt;</td>
<td>&lt;3-5&gt;</td>
</tr>
<tr>
<td>Micro</td>
<td>44</td>
<td>4</td>
<td>33</td>
</tr>
<tr>
<td>Small</td>
<td>64</td>
<td>1</td>
<td>46</td>
</tr>
<tr>
<td>Medium-sized</td>
<td>47</td>
<td>1</td>
<td>30</td>
</tr>
</tbody>
</table>

The study analysed the impact of the grant obtained not only considering a division into the ‘logic’ and ‘emotion’ parts of the model, but also its impact on each element. The results achieved are shown in Table 6.

Tab. 6 - The impact of investment grants on selected elements of the Business Model Canvas. Source: own

<table>
<thead>
<tr>
<th>Business model elements</th>
<th>Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
</tr>
<tr>
<td>Key partners – the impact of support on the level of cooperation</td>
<td>9</td>
</tr>
<tr>
<td>Investors (capital providers)</td>
<td>30</td>
</tr>
<tr>
<td>Suppliers</td>
<td>26</td>
</tr>
<tr>
<td>Other cooperating companies</td>
<td>31</td>
</tr>
<tr>
<td>Specific problems</td>
<td>22</td>
</tr>
<tr>
<td>Supply chain</td>
<td>102</td>
</tr>
<tr>
<td>Production</td>
<td></td>
</tr>
</tbody>
</table>
Key resources – improvement of resources

| Physical resources | 147 | 94.8 |
| Financial resources | 141 | 91.0 |
| Human resources | 151 | 97.4 |
| Intellectual resources | 12 | 7.7 |

Cost structure – reduction

| Fixed costs | 25 | 16.1 |
| Variable costs | 18 | 11.6 |

Customer relationships – implemented or strengthened type of relationship

| Personal relationships | 9 | 5.8 |
| Product co-developer | 27 | 17.4 |
| Automation of relationships | 5 | 3.2 |
| Self-service | 8 | 5.2 |

Channels – creation, modification

| Own channels | 22 | 14.2 |
| Channels shared with partners | 19 | 12.3 |

Customer segments – creation, modification

| Customer segmentation | 5 | 3.2 |
| Diversification | 45 | 29.0 |

Revenue streams – change in methods of acquiring revenue

| Fees for use (subscriber fees) | 0 | 0.0 |
| Granting licences | 3 | 1.9 |
| Intermediary commission | 0 | 0.0 |

Value proposition – changes in value proposition for customers

| Qualitative elements | 91 | 58.7 |
| Quantitative elements | 101 | 65.2 |

The most extreme element of the left side of the model, i.e., key partners, changed only slightly as a result of the grant obtained. One in five surveyed companies pointed to suppliers as the type of partnership which had undergone some modifications. The buyer-supplier relationships to assure reliable supplies were indicated by the surveyed companies as the most important aspect in this element. Nearly 17.0% of respondents indicated a strategic alliance between non-competitors and co-opetition: strategic partnerships between competitors as a model element not impacted by the obtained grant. The obtained financial assistance affected least relationship-building with key the partners understood as investors, or capital providers (Table 6).

Another element of the left side of the model is key activities, i.e., those that from the point of view of the business model are the most significant. Assuming that the central aspect of every business model is value, particularly aspects of the value proposition offered to the customer, the key activities should be those that are essential to the creation and presentation of customer...
value. These activities differ from the business type (the specificity of a particular business model). For manufacturing companies, these are often activities related to design, manufacture, handling of the product, etc. For service companies, these may be activities related to solving common or individualized customer problems, and for traders, the activity associated with matching partners. The company is primarily responsible for creating value through key activities. However, the market is increasingly characterized by the so-called ‘phenomenon of co-creating value’. As noted by Prahalad and Ramaswama (2003), the future of competition is related to a completely different approach to creating value. This approach increasingly emphasizes those key activities that co-create value for the company and customers. The Internet becomes a useful tool in that respect (e.g., matching colours or specific components by customers). The whole idea of the so-called open source software is based on the concept of co-creation of value by customers (in this case by users) by means of performing key activities. The grants obtained had no effect on this type of behaviour (none of the respondents had noticed this effect). The most significant impact was observed in the area of production methods used and related changes in production technologies (65.8% of responses, see Table 6). However, this support had a relatively little impact on changes in supply chain management as well as on changes in the process of providing services (introducing new methods of solving specific customer problems). This may be due to the fact that in the study, manufacturing companies prevailed and implemented projects practically meant investments intended to modernize production facilities.

The key resources constituted a building block of the left side of the business model which, due to the gained support, was subject to the most frequent modifications. It should be emphasized that creating value for the customer is possible only when the company has a set of capacities necessary for its creation. This set of capabilities is referred to differently and is composed of multiple components (in the subject literature, one can come across such terms such as key success factors, tangibles and intangibles, assets and skills, or resources which consist of everything that the organization knows and possesses). In this study, a set of capacities used to produce value for the customer was presented as follows: competences as a representative of intangible assets and resources as components of tangible assets. What the organization possesses are resources (physical and financial) and what “it” knows are skills and competencies (human and intellectual resources). Therefore, resources include manufacturing machinery and equipment, infrastructure and means of transport.

Managerial competences, in turn, comprise three major groups based on knowledge about customers (tastes, trends in changes concerning preferences, the size of the customer and non-customer populations), improved skills, environment (information about competitors, legal regulations, etc.), and about manufactured products (product range, manufacturing technologies, know-how, brands, patents, databases). The results obtained indicate that apart from intellectual resources more than 90.0% of the companies saw a favourable change in the area of the possessed financial, human, and physical resources. This condition indicates a positive impact of the grant obtained on this element of the model. What is important is that as much as 88.0% of the researched companies changed at least three elements that make up the company’s key resources (Table 6).
The last element of the left side of the model is connected with the cost structure and it describes all costs generated by a particular business model. Such activities as creating and delivering value, building and maintaining relationships with customers, or generating revenue contribute to their incurrence. The study distinguishes between fixed costs and variable costs. The respondents were asked to indicate whether the grant obtained could contribute to the reduction of their functioning costs. The results of the research show that there were very few of such companies. Nearly 12.0% of the entities examined in the study pointed to the reduction of their variable costs and 16.0% to the reduction of fixed costs. This result should not be surprising since the projects implemented by the companies related primarily to the purchase of machinery and equipment, or to investments made in modernizing production processes, and, therefore, they rarely contributed to reductions in costs. It is interesting that 40.0% of all entities that indicated a change in this model element, reduced both variable and fixed costs.

In contrast to the left side, the right side of the model comprising the customer relationships, customer segments, channels, and revenue streams elements changed under the influence of the obtained grants, however, to a much lesser extent. Out of the companies surveyed, only 33.0% modified one or two elements of this side of the model. This group consisted of companies that were very diverse both in terms of the implemented project type, grant amount and the company size. More than 55.0% of entities changed no single element of the right side of the model, whereas in the case of the left side, each of the examined companies changed at least one element (Table 3). The main cause of this phenomenon lies in the fact that the dominant group of the researched companies were manufacturing ones and, consequently, they were applying for grants for projects related mainly to the purchase of modern production lines, innovative and efficient machinery and equipment. The nature of the financial aid granted caused, therefore, a much greater tendency of the surveyed companies to change the left side of the model where the main emphasis is laid on the elements associated with those activities of the company the customer does not even need to be aware of. Out of the 155 researched companies, merely 12.0% changed from three up to five elements that form the right side of the model (the surveyed companies could indicate more than one factor being a single constituent of one model element and hence it was possible to achieve values greater than four, there were no such cases noted). They were also characterized by a strong commitment to change these model elements which were on the left side (of the seven most active companies which substantially modified the ‘emotion’ part of the model, two changed more than five elements on the left side, and five companies from three to five). Therefore, we can risk a statement that in the case of seven companies, the received grant affected practically every aspect of a change in the business model used, or initiated building a completely new model, in addition to the existing one. In four cases, the implemented project was innovative in nature and the investment value was less than 250 thousand € in only one case.

The size of the company has little effect on the frequency of changes within the ‘emotion’ elements of the model. The smallest entities were the most active in this respect where in the group of the 44 surveyed micro-companies, 18.2% changed from 3 to 5 elements of the right side of the model. For the remaining two groups of companies, this result was at a level of around 10% (Table 5). Very similar results were obtained for the implemented project type. Innovative in-
investments meant only marginally greater involvement of companies in modifying the right hand side of the business model (13% of companies that implemented innovative projects changed from 3 to 5 of such items - see Table 4). The importance of the investment outlay in case of the modification of elements, such as customer relationships, customer segments, channels, and revenue streams, were also of little significance. The most important modifications of the right side of the model concerned projects with the smallest investment outlay (20% of the companies in which from 3 to 5 elements were modified allocated less than 125 thousand € for investments - see Table 3). Companies that implemented investments amounting exceeding 750 thousand € came only second. In this group, almost 14% altered from 3 to 5 ‘emotion’ elements of the model. Changes in the business model on its right side did not mean that the company had to incur high costs.

The obtained research results have highlighted that the most extreme element of the right part of the model, i.e., customer segments, was the one of the four elements forming this part that had undergone only a slight modification. The received grant in the case of merely five companies influenced a decision to carry out customer segmentation and change this model element. The impact of grants on the diversification of activities, i.e., dealing with an additional customer segment, was emphasized only slightly more frequently (29.0% of the surveyed companies indicated this option – see Table 6).

In the study, respondents were asked to indicate whether, as a result of the grant obtained, the hitherto relationship was strengthened or a new type of relationship with the customer was introduced. This element of the business model often corresponds to another component of that model, i.e., the channels. Customer relationships and channels under certain circumstances conceptually superimpose on each other, particularly where a direct distribution channel is operational, with no intermediate levels. According to Osterwalder and Pigneur (2010), a company should clarify the type of relationship it wants to establish with each Customer Segment. Relationships can range from personal to automated. The customer relationships may be driven by the following motivations: customer acquisition, customer retention, boosting sales. The obtained results of the study indicate that apart from co-creating products with customers, other elements contributing to developing relations with customers were indicated infrequently. This state of affairs may seem surprising, especially since nowadays customer relationships are an essential instrument of competition (Ungermann & Myslivcová, 2014). These relationships are also affected by such elements as use of the internet in communication with current and prospect customers, quick response to customer signals with respect to offered products or liaising with customers at the stage of product conceptualization, design and manufacture (however, this particular element was modified as a result of the grant obtained slightly more often). As already mentioned, the marginal treatment of customer relationships was primarily caused by the grant type, which meant a larger vulnerability to a change in these model elements which are located on the left side.

Similar results were obtained with regard to another element of the Business Model Canvas, i.e., the channels. Supply logistics, production logistics, and distribution logistics fall into that category (Zarzycka, 2008). On the basis of the business model, distribution logistics is of particular interest. It encompasses flows of finished goods from the place of origin to the point
of consumption in order to meet customer needs and requirements. The respondents were to indicate whether the received grant affected the channels used. Merely 14.2% of the companies modified or created new channels, e.g., selling via the internet, or hiring new salespeople. Even less because 12.3% of the companies, as a result of the grant obtained, modified contacts with their partners, such as, for instance, wholesalers, or partner stores (see Table 6). The reasons for this should be sought not only in the area of grants, but also in the characteristics of channels used by the surveyed companies. More than 68.0% of the surveyed companies operate in the manufacturing industry, mostly in low technology segments (especially in the warmińsko-mazurskie province) with the predominance of indirect channels (producer-intermediary-customer) and long ones (a large number of intermediaries). Therefore, direct customer relationships may have less relevance.

The last item of the right part of the business model is revenue streams. In the study, they were only of marginal importance. The respondents were asked to assess whether the received grant had changed the way of obtaining revenues, e.g., by introducing a fee for the use (subscriber fee), new revenues from licensing, or by introducing brokerage commissions. Only three out of all surveyed companies indicated a change in this regard.

As mentioned, the central element of the model is the value proposition. The respondents were to indicate which elements of the value proposition changed as a result of the investment financing obtained. The obtained results indicate a slight advantage of quantitative elements that got modified after receiving the grant. Only slightly more than 65.0% of the surveyed companies pointed to this answer (Table 6). In this group, 80.0% of the companies laid emphasis on technical values, such as durability, efficiency and ease of use, and only 20.0% on economic values understood as those that changed due to the grant obtained. The qualitative elements defined as those that changed as a result of the funding obtained were indicated by slightly more than 58.0% of the surveyed companies. What is very important, only 28 companies did not change their value proposition neither within the quantitative nor within the qualitative groups of elements (17.0% of the surveyed entities) as a result of the grant obtained. Out of this number, more than 89.0% implemented non-innovative undertakings and the obtained grant amount did not exceed 250 thousand €. The opposite extreme were the companies that due to the grant obtained changed both qualitative and quantitative elements. Out of the total number of companies, as much as 35.0% indicated this answer option. This fact should be assessed positively since it testifies that financial assistance for the SME sector brings measurable benefits in a form of significant modifications within the proposed customer value. What is interesting, the number of such companies exceeded those which indicated a change of only one element within the value proposition (26.0% of the surveyed companies indicated only quantitative changes, and 21.0% qualitative ones). Among the companies that changed both elements that make up proposal value, nearly 47.0% implemented innovative undertakings, and 33.0% of entities received a grant for an amount greater than 250 thousand €. This group of companies included also a relatively large group of entities that received a grant of less than 100 thousand € (43.0%). Changes in the customer value proposed were induced primarily by the innovative nature of the undertaking, and not by the amount of the support obtained.
Taking into account the left and right sides of the model and value proposition, it was found that 28 of the 155 surveyed companies, i.e., slightly more than 18%, modified from nine up to twelve elements of the model. In this case the investment made affected significantly the company’s business model that had been implemented up to that moment, or the development of an entirely new one (Table 7). Merely 9.0% of companies modified four components of the model. This group was dominated by micro-enterprises performing mainly a non-innovative project. The investment outlays varied significantly in the most extreme cases. This amount significantly affects the frequency of changes in the elements composing the model in the group of entities which are the most active in this respect. Almost 31% of companies in which the investment outlay exceeded 750 thousand € modified from nine to twelve of all elements of the model. In only one company where the investment exceeded 750 thousand €, the frequency of changes of all model elements was contained within the smallest range (up to four elements). There were fewer entities with investment amounts ranging from one to three million (18% in the group of companies that modified from nine to twelve model elements – see Table 7). In the group of companies that modified from five to eight of all model elements, the investment outlay varied considerably and only slightly affected the activity of the company in that respect. The value of the independence test amounting to $\chi^2 = 26.205$ with a low level of $p$-value indicates some dependence between the ‘logic’ part of the business model and the investment outlay. The contingency coefficient describing the strength of this dependence reaches the value $C=0.380$. The test results $\chi^2$ do not exhibit, however, the existence of dependence between the ‘emotion’ part of the business model and the amount of investment (Table 10).

Tab. 7 - The impact of the investment outlay on the magnitude of change in the business model. Source: own

<table>
<thead>
<tr>
<th>Investment outlay (€)</th>
<th>The frequency of changes in all elements of the model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to 125 thousand</td>
<td>&lt;0-4&gt;</td>
</tr>
<tr>
<td>From 125 to 250 thousand</td>
<td>4</td>
</tr>
<tr>
<td>From 250 to 750 thousand</td>
<td>4</td>
</tr>
<tr>
<td>Above 750 thousand</td>
<td>5</td>
</tr>
<tr>
<td>Total</td>
<td>14</td>
</tr>
</tbody>
</table>

The type of the project being implemented affected the business model elements in two ways. Firstly, the group of companies that modified the highest number of model elements and those that restructured from five to eight of their components were similarly represented by those which implemented innovative projects as well as by those with non-innovative ones. Secondly, clear differences can be observed in the case of entities that changed up to four model elements. Within this group of companies, more than 85.0% implemented non-innovative projects (Table 8). The hypothesis posed by the authors assuming that the implementation of innovative undertakings fostered modifications within the business model was verified positively, though the dependence strength is small. The results of the independence test $\chi^2$ confirm that there is dependence between the total number of changes in the business model and the innovation of
the project being implemented at a small (less than 0.016) level of significance. The contingency coefficient describing the strength of this dependence reaches a value $C = 0.225$ which indicates the average strength of this dependence. No significant relationship was found between the number of changes in the ‘logic’ and ‘emotion’ parts of the model and the type of the implemented project (Table 10).

Tab. 8 - The impact of the type of the implemented project on the magnitude of changes in the business model. Source: own

<table>
<thead>
<tr>
<th>The type of the implemented undertaking</th>
<th>Number of companies</th>
<th>The frequency of changes in all elements of the model</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>&lt;0-4&gt;</td>
</tr>
<tr>
<td>Innovative</td>
<td>61</td>
<td>2</td>
</tr>
<tr>
<td>Non-innovative</td>
<td>94</td>
<td>12</td>
</tr>
<tr>
<td>Total</td>
<td>155</td>
<td>14</td>
</tr>
</tbody>
</table>

Among the most active companies in terms of changes that make up the business model template, the dominant group were medium-sized entities (Table 9). Out of the 47 surveyed medium-sized enterprises, 27.7% modified from nine to twelve elements of the business model. Only two medium-sized entities changed up to four model elements. Within the least ‘active’ companies, micro enterprises took the lead (10 entities). Also, the results of the test $\chi^2$ prove the assumption that there is dependence between the ‘logic’ part of the business model and the size of the company. The contingency coefficient describing the strength of this dependence reaches $C = 0.518$, which reflects a significant strength of the dependence. This strength is even greater in case of the dependence between the size of the company and the total number of changes in the business model resulting from the investment made and the grant obtained. In this case, the contingency coefficient describing it amounts to $C = 0.580$ (Table 10).

Tab. 9 - The impact of the company size on the frequency of changes in all elements of the business model template. Source: own

<table>
<thead>
<tr>
<th>The company size</th>
<th>Number of companies</th>
<th>The frequency of changes in all elements of the business model</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>&lt;0-4&gt;</td>
</tr>
<tr>
<td>Micro</td>
<td>44</td>
<td>10</td>
</tr>
<tr>
<td>Small</td>
<td>64</td>
<td>2</td>
</tr>
<tr>
<td>Average</td>
<td>47</td>
<td>2</td>
</tr>
</tbody>
</table>

A summary of the results obtained from the statistical procedures applied, i.e., examining the dependence between the following selected variables: implemented project type (innovative/non-innovative), investment amount, the size of the company and the number of changes in the business model elements are shown in Table 10.
Tab. 10 - The value of the statistic $\chi^2$ in the independence test of selected indicators with designated contingency coefficients ($C$). Source: own

<table>
<thead>
<tr>
<th>Selected elements describing the surveyed companies*</th>
<th>$\chi^2$</th>
<th>df</th>
<th>p-value</th>
<th>$C$</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Project type</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>logic</td>
<td>0.764</td>
<td>2</td>
<td>0.683</td>
<td>-</td>
</tr>
<tr>
<td>emotion</td>
<td>1.136</td>
<td>2</td>
<td>0.567</td>
<td>-</td>
</tr>
<tr>
<td>total</td>
<td>8.232</td>
<td>2</td>
<td>0.016</td>
<td>0.225</td>
</tr>
<tr>
<td><strong>Investment outlay</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>logic</td>
<td>26.205</td>
<td>6</td>
<td>0.000</td>
<td>0.380</td>
</tr>
<tr>
<td>emotion</td>
<td>1.225</td>
<td>6</td>
<td>0.976</td>
<td>-</td>
</tr>
<tr>
<td>total</td>
<td>7.130</td>
<td>6</td>
<td>0.309</td>
<td>-</td>
</tr>
<tr>
<td><strong>Company size</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>logic</td>
<td>56.848</td>
<td>4</td>
<td>0.000</td>
<td>0.518</td>
</tr>
<tr>
<td>emotion</td>
<td>3.940</td>
<td>4</td>
<td>0.420</td>
<td>-</td>
</tr>
<tr>
<td>total</td>
<td>78.445</td>
<td>4</td>
<td>0.000</td>
<td>0.580</td>
</tr>
</tbody>
</table>

* Independent variable

5. CONCLUSIONS

In general, two different uses of the business model concept can be identified. One of the models refers to what we might call a static approach. In this approach, a business model is ultimately a blueprint - even a recipe - it fulfils important functions such as enabling description and classification (Demil & Lecocq, 2010). The static view [of a business model] allows us to develop typologies and study relationship with performance. Osterwalder and Pigneur’s business model template (2010) represents the most static approach where the dependence within the individual elements of the business model are presented fragmentarily, and virtually, there is no information about the mechanisms of strengthening and regulating the impact on the company’s functioning (Doligalski, 2014). Its main advantage is that it is relatively easy to visualise the business. The transformational view, in turn, is a presentation of feedbacks in the system, and the vast majority of items are dynamic. In this case, the construction of the business model is much more challenging, though its analysis could lead to more innovative insights than in a static model. In the study, due to ‘user friendly interface’, Osterwalder and Pigneur’s static template (2010) was used, though the authors are aware of the fact that a business model is not just a set of elements, but also the way the links are forged between them.

The results of the study indicate that the grant obtained implicitly affected the modification of the business model elements that are placed on the left side of the template. This is primarily due to its type. Purchases of modern production lines, innovative and efficient machinery and equipment, or other investments in modernizing production processes resulted in changes just on this side of the model. By far, the most common modifications resulting from the grant obtained
concerned key resources. The right side of the Business Model Canvas comprising elements, such as customer relationships, customer segments, channels, and revenue streams changed under its influence, however, to a much lesser extent.

Only one in 10 companies modified a total of less than four model elements of Osterwalder and Pigneur’s model (2010), and with regard to its left part, all companies changed at least one element.

Interesting results can be observed while analysing the relationship between the number of changed elements in the business model template and the innovativeness of projects implemented. The hypothesis no. 1 was verified positively, though the strength of dependence in this case was small and only at the level of total modifications in the business model. Only the least active companies in terms of changes in the business model implemented non-innovative projects. Within the remaining two groups of companies, types of implemented projects were very diverse and even for those most active ones in the area of modifications in the implemented business model the type did not reflect their innovative character. A high risk related to the implementation of an innovation causes that a far cheaper solution seems to be modifying the business model implemented in the enterprise, which is not necessarily related to undertaking innovative activities.

The hypothesis no. 2 was confirmed, but only partially, since the amount of grant affected slightly the manner of using elements of the model. Both in the group of companies that changed more than eight model elements and in the group which changed from six to eight elements, companies which obtained less than 250 thousand € in grants and those which obtained significantly higher amounts were strongly represented. Thus, even a relatively small amount of the grant may materially affect the business model implemented in the company. Also, in the least active group of companies in terms of changes in the business model (up to four elements), the differentiation in the amounts of received grants and realized investments was significant.

The greatest strength of the dependence was observed in the case of the relationship between the size of the company and changes in the model elements. The hypothesis no. 3 was thus verified positively. The most active entities in this respect were medium-sized enterprises which, in comparison to small businesses, in particular to micro ones, changed, due to the impact of the grant obtained, the largest number of elements of the business model. This was especially true of its ‘logic’ part and the total number of changes. In the case of the model’s ‘emotion’ part, the exhibited differences were not so great. It appears that management in medium-sized enterprises had a greater awareness of the role of the business model in achieving greater efficiency in operations, cost optimization, or in focusing on the client, and thus investments being made are more complex in nature. This issue, however, requires undertaking further detailed research.

The study included companies established in rural areas, and the vast majority of them operate in traditional sectors related to the agriculture and food processing, wood, furniture, or tourist industries. This fact largely contributed to the situation where most of the companies surveyed did not articulate a specific business model, and, therefore, lacked a process for managing it. According to the Business Model Framework (BMF) proposed by Chesbrough (2007), these type of companies operate as a business model of type 1. The Business Model Framework is a concept
which entails both very simple business structures (and thus generating little value) as well as complex and advanced business models that are very difficult to copy (usually very valuable ones). When applying BMF, companies can evaluate the position of the model used in relation to its potential, and then determine the steps that seek to ensure its further development in the context of creating and capturing larger value. The business model incorporating the undifferentiated model is primarily based on price and availability and is aimed at customers for whom they constitute crucial factors while purchasing. Companies using the business model of type 1 offer mainly commodities in a similar vein to most companies operating in the market and offering similar products (Chesbrough, 2007). The majority of the surveyed companies represented precisely this type, or the ones located at level 2 and 3, which means that the company has some differentiation in its business model or the company develops a segmented business model (type 3). It could mean that the grant obtained often considerably affected changes in individual model elements. However, the lack of awareness among entrepreneurs and executives of its significance meant that the potential of this change was not fully exploited. It appears that it would be valuable to undertake research in this area as the authors focused primarily on determining the impact of the grant obtained for the various elements of the model, and not on managers’ perception of its role in the logic of value creation. Quoting Teece (2010), there are a plethora of business model possibilities, some of which will be much better adopted to customer needs and business environments than others. Selecting, adjusting and/or improving business models is a complex art. Good designs are likely to be highly situational, and the design process is likely to involve iterative processes. New business models can both facilitate and represent innovation as history demonstrates (Teece, 2010). Osterwalder and Pigneur’s business model template (2010) seems to be a very appropriate tool for redefining the business model, of course, not only in terms of the factor such as the grant obtained by the company. Its use is also justified by the ability to analyse enterprises with the exclusion of trade restrictions as well as the ease of identifying individual elements of the business model and thus there is large potential for its modifications.

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Y and Z Generations at Workplaces

Bencsik Andrea, Horváth-Csikós Gabriella, Juhász Tímea

Abstract
At present, more and more researches deals with the characteristic features of generation Y and generation Z. As it is about the present and future generations, corporate success and the competitive operation are determined by the behaviour of these generations in the long-run. Researches justifies that there are significant differences between the two generations despite the similarities. These differences appear rather emphasized in the corporate environment when several questions arise at workplaces in the process of cooperation – especially in the field of knowledge-sharing and knowledge transfer-regarding the characteristics of the two generations. Last year, the authors carried out a quantitative research by questionnaires in order to reveal what the managing of these two generations mean for the managers and also what difficulties occur when the two generations cooperate with each other and with elder generations as well. The main question of the research was how to approach the new generations from the view of HR? Although the research cannot be considered representative (410 respondents participated in the survey), it can give a picture about the examined issues. The hypothesis phrased by the authors was justified according to which of the HR activities have to adapt to the requirements of the new generations upon their appearance.

Keywords: HR, intergeneration, knowledge-sharing Y and Z generation, behavior, work place
JEL Classification: M10

1. INTRODUCTION
Human nature and the basic characteristics of our behavior are often in contrast with the organizational and corporate requirements for the sake of reaching and maintaining competitiveness. The same applies to the field of cooperation, and of knowledge-sharing as well. Corporate cooperation, teamwork and information flow between departments all depend on communication style, of which positive and/or negative impact - based on our way of thinking - can be best observed in the field of knowledge-transfer and knowledge-sharing. It is true for oral, written and electronic communication as well. The applied methods, corporate principles, regulations and tools influence the successful operation of the corporation through communication, but the consistency of the employees’ age-tree influence the method of communication and knowledge-transfer. According to Davenport and Prusak (1998), knowledge-sharing -as a requirement- is unnatural, because people think that their individual knowledge is valuable and important. Piling knowledge and mistrust towards knowledge coming from others is natural. Although, providing knowledge-sharing – as managing condition – means pressure and opportunity at the same time for companies. Therefore it is important to encourage people to transfer their knowledge and to build trust. Several international researchers examine the connection between these two factors (Krishnan et al, 2013; Singh, 2014; Schaffer, 2015; Bencsik – Machova, 2015). With regard to this, the increase in the value of human resources, the utilization of results of mental activities
in the corporate’s activities and consequently, increasing the corporate’s market competitiveness are a serious challenge for the management. Reaching the cooperation of different age-groups, managing conflicts originating from generational problems are aggravating factors in the challenge. These problems emerge more often in the field of knowledge-sharing. As a result of increasing the retirement age, it is often 3 or 4 generations who are forced to cooperate and to work together in the majority of companies. The difference between these age groups’ way of thinking, attitude, behaviour and value system, their flexibility and their technical knowledge can easily become the source of several conflicts, and it is sometimes very difficult to manage these problems. Nowadays it is quite an up-to-date and unsolved issue how to manage requirements of the two youngest age-groups on behalf of serving the interest of knowledge-sharing by satisfying their requirements. There are corporate solutions, which are specifically forced by the youngest age-groups from the management (Singh, 2014). Such solutions are e.g.: opportunities of atypical employment, home-office or using technical devices where previously it was not typical; or ergonomics, as a workplace organizational solution has again come to the front, but there are other solutions in the front again, such as satellite workplace, hot desk, shared desk, open space, break out or mobile centre.

Beyond harmonizing the corporate processes with the operability of the knowledge-management systems, it assumes the presence of basics, which are manifested in culture, building trust, common thinking and the real cooperation. Based on the results of the research, it is obvious that the key-question behind the operability of knowledge-management is culture and it depends on the know-how of developing trust. In this case, the challenge for the management is easy to phrase.

As all the above mentioned is well-known, it is absolutely right to ask the question: if we know this all in theory, then why does not practice work? Why do managers have to cope with newer and newer unsolved situations (and sometimes the employees as well), and if they do not handle or simply ignore these situations, it is absolutely impossible to create the desired pre-conditions, which is the seal of the corporate’s success, the operation of the knowledge-management system and knowledge-sharing. This is the development of the study-organization which is built on trust.

This paper aims to reveal the background and connections of those challenging problems which have to be handled essentially in order to step further. The mentioned managerial tasks created a new term in the professional literature and justified its implementation in corporate practice, which is called intergenerational management. This new managerial task means the recognitions and proper handling of problems originating from the cooperation of different generations; in our case, focusing on the role of knowledge-sharing. In order for the management to be able to take appropriate measures in the new situation, they have to be aware of the most important characteristic features which rank the workplace attitude of each generation. The authors give a brief review on them.
2. LITERATURE BACKGROUND

It is difficult to terminate the groups of each generation precisely, but the time-lanes in the borders mean certain common territories. Therefore, the generations are not sharply divided, but their characteristic features are adequate for the whole age-group in general. Professional literature use different names for depicting the categories of the generations and their time-categorization is also sometimes differently defined. (Although it does not influence the basic characteristics). In the followings you can find the classification we used in our research. Characteristically, we can differentiate 6 generations which are shown in chronological order in Figure 1.

<table>
<thead>
<tr>
<th>Generation</th>
<th>Time Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>Veteran generation</td>
<td>1925 - 1946</td>
</tr>
<tr>
<td>Baby boom generation</td>
<td>1946 - 1960</td>
</tr>
<tr>
<td>X generation</td>
<td>1960 - 1980</td>
</tr>
<tr>
<td>Y generation</td>
<td>1980 - 1995</td>
</tr>
<tr>
<td>Z generation</td>
<td>1995 - 2010</td>
</tr>
<tr>
<td>Alfa generation</td>
<td>2010 +</td>
</tr>
</tbody>
</table>

A question should be put why it is necessary to deal with the topic. Why do we need to examine the behaviour of generations and their characteristics? Why do we need to think about an emphatic challenge, how these newer generations at workplaces of earlier generations can be fitted? The older generations have doubts about the younger ones every time and the often cited expression is 'these youngsters of today'. (It is not a positive opinion accent.) To tolerate the conventional differences among generations is insufficient nowadays. Why is this situation special? Why is it a hot issue? What does the term 'new generational employees' mean? What generational features cause bigger problems today in case of employing young graduates than earlier? All the questions cannot be answered in the framework of this article, but we present one portion of our research, which is mainly built on the behaviour of the generations. To answer these questions, firstly, the most important characteristics of generations have to be shown. Then the HR activities are presented briefly in order to show the readers the direction of the necessary changes.

2.1. Characteristics of youngest generations

Apart from detailed characterization of each generation, the paper rather focuses on the most important features of the target audience, the generation Y and generation Z. Thus it prepares the readers’ thoughts for evaluation of the questionnaire’s research results.

Generation Y: Generation Y is also called millennium generation. (Schäffer, 2012) The ‘Y’ comes from the English word youth. They were the first wave of the digital generation born into the world of technology. They are highly qualified in digital knowledge; therefore it is easy for them to quickly acquire the use of new tools and devices in IT. They easily accept changes, they live for today, they do not like to plan for long periods; they rather want to enjoy themselves in their own world. Their circle of friends is virtual, they mainly nurse their relations on social sites, they eas-
ily accept cultural differences and they really like living a quick life (Krishnan et al, 2012). Family is not everything for them, traditional values are fading. Majority of generation Y is already present at the labour market, they have university degrees and they work together with a lot of people from generation X and with fewer people from generation Z. They possess unique ideas about their future positions at the workplaces. It is important for them to work where they want and to do what they really enjoy doing. If they feel that they are in captivity, they quickly step further. Generation Y is characterized by „multitasking”, the multi-sided and shared attention (Schäffer, 2015). For them, the concept of success, career and money is of top priority, because they have learned that it is the only thing that can advance them in consumer society (Tari, 2010). Using modern technological devices, their communication mainly happens in the virtual space and their online presence is never-ending. They are motivated by pushing, advancing and reaching success, work is always highlighted for them and family remains in the background. The feeling of free-time and relaxation is inevitable for them, they have wide-spread and diverse desires; they usually make decisions or act accordingly to reach these goals. Money and success are basic motivational tools for them in their work, which come to the front opposite family values. From the view of success in the quality of life is important their work and it appears in their relaxation pointedly, as well. The desires, ambitions of newer generations are comprehensive, the young often grow out of their abilities and possibilities, therefore, their requirements culminate in varied forms. Their experience determine their decisions and actions (Bittner et al, 2013).

Generation Z: Generation Z has the features of „net generation” due to highly developed digital era, which they were born into. They were also characterized as „Facebook-generation”, „digital natives” or sometimes „iGeneration”. (Tari, 2011). The norms of generation Z are different from the norms of the previous generation. Words, slangs and expressions used by generation Z are quite strange to their parents and the two parties sometimes move apart. As generation Z was born into the world of technology and they feel good in that world, thus it is primarily important for them to be surrounded by that environment. They are always online on any technical device virtually, with no stop. It can be seen through their actions, as well which are in connection with their technical environment and which can appear as a tool or as a milieu in their life. Other forms of socialization are very difficult for them. Compared with generation Y, the generation Z is not aware of the concept of struggling. They are practical, rather intelligent than wise and they like to take the lead as they are brave. They are more impatient and more agile than their predecessors and they look for new challenges and impulses continuously. They are not afraid of continuous changes and due to the world of internet they possess much information, but just to a certain extent. To solve problems, they try to find the solutions on the internet (Tari, 2011).

The Forbes Magazine has made a survey about generation Z in North and South America, in Africa, in Europe, in Asia and in the Middle East. 49 thousand youngsters were asked (Dill, 2015). On the basis of the results it can be said that Z generation is the first real global generation. High-tech is in their blood, they have grown up in uncertain and complex environment which determines their viewpoint about work, studying and the world. Arising from their habit, they have different expectations in their workplaces. We can speak about a careerist, professionally ambitious generation, but their technical- and language knowledge are on a high level. Therefore, they are excellent workforces. Employers have to prepare to engage Z generation with regard to speaking to them efficiently, to fit them into the community, the organizational culture and to make them effective employees in the digital age (Elmore, 2014).
Employers have to face the fact that this generation will choose a career of their own interest, not because they want to meet demands of anybody. The result of this behaviour is an intrinsic motivation, they have a tough enterprising spirit and they want to influence the world. At the same time, their most important career goals are the work-life balance and a workplace stability. Z generation is not as optimistic as their predecessors were from the viewpoint of the workplace. A part of them worry about unemployment, or if their career can get stuck and they cannot evolve their talent. The members of Y generation are afraid of becoming an adult and of responsibility, and they think the world of work is cold and rejecting. These two generations handle the process of job-hunting negatively because they cannot receive feedback at all. The X generation had a bit easier situation in the labour market, they faced rejection as adults (Durbák, 2013). A virtual world is natural for Y and Z, but a lot of them cannot fit their online life into their offline life. They feel some gap between reality and desires is irreconciable, and they feel the uncertainty of existence. They are anxious, disappointed, they sit at home and they are waiting for somebody to pay attention to them and to give a feedback to them that was often told by their parents: they are fantastic (Tari, 2011).

Using smart applications is quite widespread among them, and these applications further make their everyday life easier, but faster. Generation Z is just partly present at the labour market, but they surprise their colleagues and the HR managers. The key to the classical market success and at the same time, the requirement of the corporate management is to have people who reach their aim by cooperating and by sharing their knowledge. In order to reach this aim, it is necessary for different generations to cooperate with each other (team work, knowledge sharing), they have common goals, they are devoted to do their job, they provide and ask for help and of course, they trust each other to share their knowledge (Elmore, 2010).

Table 1 below shows the two determining characteristics which play the most important role in both daily life and in the life of a successful company as well. These characteristics arise most frequently when attention is focused onto the kind of behaviour expected if the generational differences are to be addressed (Tóth-Bordásné & Bencsik, 2011).

<table>
<thead>
<tr>
<th>Teamwork</th>
<th>Baby - boom</th>
<th>X generation</th>
<th>Y generation</th>
<th>Z generation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural environment (multinational companies)</td>
<td>Unknown</td>
<td>Belief in the success of common effort</td>
<td>On a virtual level (only if forced)</td>
<td></td>
</tr>
</tbody>
</table>

In Table 2 we can see the noted characteristics which represent a challenge from the respect of knowledge sharing and intergeneration management (Bencsik & Machova, 2016).
Tab. 2 - Generational behavioural characteristics of different age-groups Source: Bencsik & Machova, 2016.

<table>
<thead>
<tr>
<th></th>
<th>Baby – boom</th>
<th>X generation</th>
<th>Y generation</th>
<th>Z generation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>View</strong></td>
<td>Communal, unified thinking</td>
<td>Self-centred and medium-term</td>
<td>Egotistical, short-term</td>
<td>No sense of commitment, be happy with what you have and live for the present</td>
</tr>
<tr>
<td><strong>Relationship</strong></td>
<td>First and foremost personal</td>
<td>Personal and virtual networks</td>
<td>Principally virtual, network</td>
<td>Virtual and superficial</td>
</tr>
<tr>
<td><strong>Aim</strong></td>
<td>Solid existence</td>
<td>Multi-environment, secure position</td>
<td>Rivalry for leader position</td>
<td>Live for the present</td>
</tr>
<tr>
<td><strong>Self-realization</strong></td>
<td>Conscious carrier building</td>
<td>Rapid promotion</td>
<td>Immediate</td>
<td>Questions the need for it at all</td>
</tr>
<tr>
<td><strong>IT</strong></td>
<td>It is based on self-instruction and incomplete</td>
<td>Uses with confidence</td>
<td>Part of its everyday life</td>
<td>Intuitive</td>
</tr>
<tr>
<td><strong>Values</strong></td>
<td>Patience, soft skills, respect for traditions, EQ, hard work, practicality</td>
<td>Hard work, openness, respect for diversity, curiosity, practicality</td>
<td>Flexibility, mobility, broad but superficial knowledge, success orientation, creativity, freedom of information takes priority</td>
<td>Live for the present, rapid reaction to everything, initiator, brave, rapid information access and content search</td>
</tr>
<tr>
<td><strong>Other possible characteristics</strong></td>
<td>Respect for hierarchy, exaggerated modesty or arrogant playfulness, passivity, cynicism, disappointment</td>
<td>Rule abiding, materialistic, fair play, less respect for hierarchy, has a sense of relativity, need to prove themselves</td>
<td>Desire for independence, no respect for tradition, quest for new forms of knowledge, inverse socialization, arrogant, home office and part-time work, interim management, undervalue soft skills and EQ</td>
<td>Differing viewpoints, lack of thinking, happiness, pleasure, divided attention, lack of consequential thinking, no desire to make sense of things, the boundaries of work and entertainment overlap, feel at home anywhere</td>
</tr>
</tbody>
</table>
The table shows similarities, easily handled gaps and discrepancies. Management, however, has to deal with serious generational differences if the aim that knowledge sharing, as the result of the work of a collaborative organisational community, is to be realized.

2.2. HR challenges

Although the traditional HR activities have developed in methodology a lot recently, they remained at their original fields, such as recruitment, employing, performance evaluation, developing motivation and payment systems, career management, etc. The requirements of the youngest generations rewrite these activities radically. Not only the mentioned fields, but their tools mean challenges for the HR. New and previously not used solutions should be used such as developing satellite workplaces, hot desk, shared desk, open space, break out, mobile centre, green HR, activity based working, developing business partners, etc. All these activities strongly relate to the behaviour of the above mentioned new generations and to the changes in the requirements. Market competition, staying alive and the need to get and to share knowledge mean significant stress towards the direction of change, which will become the basic principle of the competitive operation in the future. The HR fields have to be prepared for these challenges. Table 3 represents an extract of the necessary changes depicting the features, which are important from the aspect of the present research. Of course the HR challenges will not stop at this level. Further theoretical and practical examinations are necessary in order to adapt the present changes to the corporate practice. The table summarizes the most important HR challenges, which have been in the focus since the new generations appeared at the workplaces.

It aims to show that the methodology which supports collaboration and knowledge sharing in these critical areas can be successfully realized if the characteristics of different generations are kept in focus.

Tab. 3 - Challenges of the HR in the light of different generational characteristics Source: Bencsik & Machova, 2016.

<table>
<thead>
<tr>
<th></th>
<th>Baby - boom</th>
<th>X generation</th>
<th>Y generation</th>
<th>Z generation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incentive/ motivation</td>
<td>Promotion opportunity, new paths, fixed work place</td>
<td>Status, materialism</td>
<td>Individual freedom of movement, opportunity to make decisions, competition, self-realization</td>
<td>Immediate remuneration, freedom, non-commitment</td>
</tr>
<tr>
<td>Performance evaluation</td>
<td>Fact based, correct, based on the past</td>
<td>Future-oriented, active participation, goal setting, career planning</td>
<td>Future-oriented, direct feedback, discussion, talent management</td>
<td>Own limits not recognised, self-confident, values and self-image is distorted</td>
</tr>
</tbody>
</table>
It goes without saying that success always depends on the level of preparation, on the leadership style and on other circumstances. This means that the challenges, as introduced in this chapter, faced by company HR departments should not be neglected and it can be of great help to know the family background of employees and the emotional baggage that they bring with them. If these factors are kept in mind, generational problems can be alleviated. If the trust is established, then cooperation and a more pliable form of knowledge sharing will follow and will contribute to the successful, competitive running of a company. It is worth taking a look into the family background of future colleagues, key personnel and managers whilst carrying out the more familiar HR processes such as training, the manager selection process, skills management and career planning (Bencsik 2010). Building and maintaining an atmosphere of trust where collaboration, knowledge sharing can thrive, considered as the key factor to company success and competitiveness, all depends on the behaviour of those who have either experienced, or indeed never felt, the power of trust.

Based on the above presented generation features and HR challenges the question that motivated the research of the authors was asking how to reveal, motivate or perhaps influence the two youngest age groups’ workplace attitudes, and their willingness to help and to cooperate by the tools of HR. The test of practical life gives the following results.

### 3. DETAILS OF THE RESEARCH

#### 3.1. Materials and Procedures

The research was carried out last year (2015). The aim of the authors was to get to know as many age groups’ opinion as they could about the generation Y and Z and about the ways how these two generations can fit into their workplaces and what challenges their appearance mean for the HR managers and for the management. The research on one hand consisted of secunder research, that it focused on studying the previous literature in that topic, while on the other hand the research contained quantitative (questionnaires) and qualitative (in-depth interviews and focus group) studies. The results of the questionnaire-based research will be shown in the followings; and their verification was implemented by the qualitative methods.

The respondents had to fill in a questionnaire on the internet, which mainly consisted of closed
questions, and there were only three open questions to answer. The closed questions were built on nominal and metric scales, and within this the authors used the 5-points Likert scale. The questions were divided into three groups. The first group of questions discussed the conflicts between the different generations, also it discussed their form of appearance in work and in human relations at workplaces; furthermore it examined the opportunities how to solve these conflicts. The second group of questions was about age-groups, while the last group of questions was about the specification of the sample.

Filling the questionnaire was anonymous, the method for collecting samples was the snowball method, and therefore the sample cannot be considered representative.

The evaluation was carried out with the help of SPSS program by using one-or more variable-statistical methods such as frequency, average, deviation, crossboard-analysis, and Khi-square test and ANOVA method.

The specification of the sample is the following:

A sample of 410 pieces was collected in the research and all the questionnaires could be used in the evaluation process.

The youngest respondent was 18 years old, while the oldest was 64. The authors divided the sample into 5 age-groups, according to which the classification of the respondents is the following: 3.2% of the respondents were under 20, 48.1 % of them were between 20 and 30, 22.9 % were between 30 and 40, 18.1 % were between 40 and 50; while 7.7 % of the respondents were over 50 years old. The authors considered it useful to divide the sample by ages, because the answers of the respondents could be analysed in more details, rather than dividing the respondents ‘just’ by generations. The other reason justifying this classification is that the research did not especially focus on generation X.

According to the highest qualification of the respondents, 1.3 % of them finished only primary school, 56.5 % -had high school degree, while 42.3 % had university degree. The results of the crossboard based on the qualification and age-groups revealed that the age-group between 20 and 30 had secondary school education in the biggest proportion (57.8%); more than 50 % of the respondents between 30 and 50 also had secondary school education, while almost half of the respondents over 50 had higher education degree as well.

As far as the company, where the respondents were working is concerned, 26.7% of them were micro company with less than 10 employees, 41% were small enterprise with 11-49 employees, 15.6% were middle-sized enterprise with 50-249 employees, while 16.6% of them were big company employing at least 250 people.

Analysing the crossboard made from the age and size of the company, it could be seen that almost every seventh respondent between 20 and 40 in the sample was working for a big company, while in case of the employees over 50 this index increased to 12. In the sample those with higher education qualification were mainly employed at middle-sized companies (53.8%), while in cases of the employees with secondary qualification this ratio was divided between small enterprises and middle-sized companies (31.8%-31.8%).
4. RESULTS AND DISCUSSION

In the research, the authors performed -among others- the justification of the validation of the following hypothesis.

Hypothesis

According to the respondents participating in the sample, certain changes should be implemented in the activities of HR due to the appearance of generation Z and generation Y.

In the first part of the research, the authors analysed the opinions of the respondents about the employees under 30. Numerous features were enumerated and the respondents had to value on a 5-point Likert-scale how that given characteristic feature was typical of that age-group (table 4).

Tab. 4 - Judgement of the age-group who is under 30 (average and deviation) Source: authors’ construction

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>Statistics</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Valid</td>
<td>Mean</td>
<td></td>
</tr>
<tr>
<td>Moderate</td>
<td>308</td>
<td>2.31</td>
<td>0.894</td>
</tr>
<tr>
<td>Committed</td>
<td>308</td>
<td>2.80</td>
<td>0.979</td>
</tr>
<tr>
<td>Disrespectful</td>
<td>312</td>
<td>2.82</td>
<td>1.014</td>
</tr>
<tr>
<td>Working hard</td>
<td>306</td>
<td>2.82</td>
<td>1.003</td>
</tr>
<tr>
<td>Having no values</td>
<td>307</td>
<td>2.83</td>
<td>0.998</td>
</tr>
<tr>
<td>Well-mannered</td>
<td>313</td>
<td>2.90</td>
<td>0.925</td>
</tr>
<tr>
<td>Warmly welcome by the others</td>
<td>315</td>
<td>2.91</td>
<td>1.06</td>
</tr>
<tr>
<td>Work hard</td>
<td>308</td>
<td>2.93</td>
<td>1.023</td>
</tr>
<tr>
<td>Share their knowledge</td>
<td>314</td>
<td>2.96</td>
<td>0.918</td>
</tr>
<tr>
<td>Persistent</td>
<td>311</td>
<td>2.98</td>
<td>0.975</td>
</tr>
<tr>
<td>Help others with pleasure</td>
<td>312</td>
<td>2.99</td>
<td>0.945</td>
</tr>
<tr>
<td>Bad</td>
<td>312</td>
<td>3.01</td>
<td>1.07</td>
</tr>
<tr>
<td>Selfish</td>
<td>311</td>
<td>3.02</td>
<td>1.062</td>
</tr>
<tr>
<td>Having good problem-solving skills</td>
<td>312</td>
<td>3.08</td>
<td>0.849</td>
</tr>
<tr>
<td>Work independently</td>
<td>313</td>
<td>3.11</td>
<td>0.908</td>
</tr>
<tr>
<td>Cooperative</td>
<td>311</td>
<td>3.13</td>
<td>0.885</td>
</tr>
<tr>
<td>Motivated</td>
<td>310</td>
<td>3.26</td>
<td>0.986</td>
</tr>
<tr>
<td>Smart</td>
<td>312</td>
<td>3.29</td>
<td>0.781</td>
</tr>
<tr>
<td>Expect help</td>
<td>312</td>
<td>3.31</td>
<td>0.986</td>
</tr>
<tr>
<td>Purposive</td>
<td>309</td>
<td>3.33</td>
<td>1.000</td>
</tr>
</tbody>
</table>
Like teamwork & 306 & 104 & 3.38 & 0.962 \\
Full of ideas & 312 & 98 & 3.45 & 0.961 \\
Can communicate well & 310 & 100 & 3.50 & 0.88 \\
Having strong career desire & 311 & 99 & 3.60 & 0.988 \\
Creative & 313 & 97 & 3.68 & 0.776 \\
Having too much self-confidence & 308 & 102 & 3.84 & 1.055 \\

From the table it can clearly be seen that according to the respondents, most typical characteristic features of the youngest age-groups were the following: they have too much self-confidence, they are creative, they have strong career desires and their communication is perfect while they are not at all moderate, committed or work hard.

The authors examined whether there was difference between the judgements of each feature based on the age-groups. Therefore, the ANOVA test found significant differences based on the following features at the level of 0.05 significance: smart (F: 2.522 sign. .041), motivated (F: 3.071 sign. .017), selfish (F: 4.182 sign. .003), work hard (F: 3.045 sign. .018), expect help (F: 3.295 sign. .012), persistent (F: 3.052 sign.: .017). Based on the average values, the authors concluded that it was the generation Z and Y, who typically judged themselves more positive than the older age-groups judged them.

The authors asked the respondents about the activities, where the generation Z and generation Y performed better than the older generations. According to the respondents, the employees under 30 perform better mainly in the field of IT and in activities which require creativity or innovation. At the same time the respondents valued that the above mentioned generations did not like monotony, individual activities, marketing and they also performed poorer than their older colleagues in the field of administration.

It is natural to ask the question whether the age-consistency caused any problems at work within an organization. 34.4% of the respondents answered yes, 14.8% could not answer. However, almost half of the sample answered that it did not cause any conflicts. Based on the Khi-square test, it was examined whether there was significant correspondence in the answers based on the ages. The results of the test did not show such correspondence (Pearson's Khi-square: 6.494 df: 8 sign. .592 p > .05). The results of the crossboards showed that among the people between 30 and 50, every second respondent did not feel any problems; less than half of the people between 20 and 30 shared the same opinion; and people over 50 had the same opinion as well.

The respondents who answered that this cooperation was problematic had to answer another question answering where these conflicts appear during common work. The respondents had to choose among problems given by the authors and they had to tell whether that given question emerged or not. The respondents could mark more options in the research. The frequency of the answers can be seen in table 5.
Tab. 5 - Sources of conflict (N, %) Source: authors’ construction

<table>
<thead>
<tr>
<th>Features</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Usage of tools</td>
<td>10</td>
<td>3%</td>
</tr>
<tr>
<td>Incompatibility</td>
<td>14</td>
<td>4%</td>
</tr>
<tr>
<td>Problem concerning method of work</td>
<td>21</td>
<td>7%</td>
</tr>
<tr>
<td>Problem caused by the working style</td>
<td>26</td>
<td>8%</td>
</tr>
<tr>
<td>Disrespect</td>
<td>42</td>
<td>13%</td>
</tr>
<tr>
<td>Problem caused by work-speed</td>
<td>46</td>
<td>15%</td>
</tr>
<tr>
<td>Problems concerning sharing work</td>
<td>47</td>
<td>15%</td>
</tr>
<tr>
<td>Problem in their way of thinking</td>
<td>52</td>
<td>17%</td>
</tr>
<tr>
<td>Communication problem</td>
<td>55</td>
<td>18%</td>
</tr>
<tr>
<td>Total</td>
<td>313</td>
<td>100</td>
</tr>
</tbody>
</table>

Based on the data, it is mainly the communication and the difference in the way of thinking that can cause difficulties in the process of working together. Of course, this tense situation has to be solved. According to the participants, the best way to solve the difficulties is discussion and managerial intervention. It was interesting to see that 24 respondents answered that the best solution is shouting, while 16 of them said that this question was not worth dealing with.

The question is whether it is the labour market-presentation of the generation under 30 who induces the change in the managing of the staff within an organization or in the activities connected to them. 44.5% of the participants in the research answered yes, 33.2% said no, while 22.3% could not answer the question. There was no significant correlation between the answer and the age-groups: Khi- square test: Khi-square: 14.122 df: 8 sign. .079 p > .05. Half of the respondents over 30 answered that it was necessary to change in the management. The authors enumerated different changes for the respondents and they could choose more than one from the list. The frequency of the answers is summarized in table 6.

Tab. 6 - Solution possibilities (N, %) Source: authors’ construction

<table>
<thead>
<tr>
<th>Alteration possibilities</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corporate culture</td>
<td>21</td>
<td>5%</td>
</tr>
<tr>
<td>Expected competencies</td>
<td>37</td>
<td>9%</td>
</tr>
<tr>
<td>Team work</td>
<td>42</td>
<td>10%</td>
</tr>
<tr>
<td>Selection process</td>
<td>45</td>
<td>11%</td>
</tr>
<tr>
<td>Working method</td>
<td>45</td>
<td>11%</td>
</tr>
<tr>
<td>Qualitative level</td>
<td>50</td>
<td>12%</td>
</tr>
<tr>
<td>Work-speed</td>
<td>55</td>
<td>13%</td>
</tr>
<tr>
<td>Communication</td>
<td>61</td>
<td>14%</td>
</tr>
<tr>
<td>Performance expectation</td>
<td>70</td>
<td>16%</td>
</tr>
<tr>
<td>Total</td>
<td>426</td>
<td>100%</td>
</tr>
</tbody>
</table>
The respondents mostly believed that expecting competencies and changing communication could lead to change in the handling of generation Z and generation Y.

Phrasing the question further, the dilemma is conceived by the management and the HR colleagues regarding the tools and possibilities, which could help to keep these young adults at the given workplaces. Are new tools necessary or are the traditional ones appropriate enough? If they are, then what are the suggested solutions? The respondents had to value the enumerated possibilities on a 5-point Likert scale to what extent they thought that solution was typical or not.

Tab.7 - Incentives for the young adults (N. %) Source: authors’ construction

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>with money</td>
<td>316</td>
<td>4.53</td>
<td>.741</td>
</tr>
<tr>
<td>with career opportunity</td>
<td>308</td>
<td>4.19</td>
<td>.820</td>
</tr>
<tr>
<td>with position</td>
<td>308</td>
<td>3.85</td>
<td>.860</td>
</tr>
<tr>
<td>with good workplace atmosphere</td>
<td>312</td>
<td>3.71</td>
<td>.869</td>
</tr>
<tr>
<td>with challenging work</td>
<td>310</td>
<td>3.06</td>
<td>.992</td>
</tr>
<tr>
<td>with extra cafeteria elements</td>
<td>302</td>
<td>2.98</td>
<td>.938</td>
</tr>
<tr>
<td>with high salary</td>
<td>302</td>
<td>2.80</td>
<td>1.003</td>
</tr>
<tr>
<td>with non-material incentives</td>
<td>299</td>
<td>2.25</td>
<td>1.006</td>
</tr>
<tr>
<td>with nothing</td>
<td>298</td>
<td>1.70</td>
<td>1.006</td>
</tr>
</tbody>
</table>

Based on the answers, it is mainly money and career opportunities which can motivate the young adults to stay at a company: it means that the traditional tools are more motivating than the non-material incentives. This research results are somehow similar to the research carried out by Czeglédi-Juhász in 2013, where the authors examined what opportunities were ensured for entrants by the employers. From the results, it could be seen that the employers mainly offer opportunities in career development for the entrants and furthermore, they can provide good workplace atmosphere and training opportunities. At the same time it is important to note that the entrants knew that their salary requirement could not be high (35.8 % of the respondents answered that out of 157 entrants).

In the research the authors examined whether the different age-groups had different opinions regarding each aspect. Significant difference can only be observed in case of position, where the highest average was judged by the age-group 20-30, thus they considered position important. At the same time the people over 51 and under 20 did not consider it that important in the dimension of generation Y and Z.

Finally it was discussed in the questionnaire which age-groups they could work together with. Almost 44.4 % of the respondents could establish good working relationship with the young adults in their 20’s; 37.6 % answered that that they would rather work with the young adults over 30; while 15.6 % of the respondents would have that relationship with people over 40 and only 2.4% could work together with the youngest age-groups, with youngsters under 20. The cross-
boards showed that in case of each generation, it is their own age-group they can work together with the most. Of course, the cooperation of different generations can have more positive benefits for the companies. According to the respondents the advantages are among others: mutual help, respect, better ideas and motivating atmosphere, which by all means can motivate the work of the individuals and the company.

5. DISCUSSION

The aim of the research was to examine the characteristic features, which emerge in case of the youngest generations in the labour-market and what challenges their different behaviour mean in the workplace environment during the cooperation of more generations. The research was based on questionnaires, and in the evaluation process we could justify our hypothesis, namely that the HR managers have to cope with new tasks if they want to capture and keep the young employees and to ensure knowledge-sharing, which is the key to competitiveness. Because this topic is relatively new, the results can be compared only with some earlier results. Some studies deal with the possible workplace problems in theory, which mean challenges for the management. Table 8 shows the difficulties Smith observes. (The newest generation, generation Z is not mentioned in his work). Although the features summarized in the table are slightly different from what we examined, the majority of the features justify our hypothesis and are in correlation with our results. Terepocki (2013) also summarizes in theory the eight most important fields, where the management have to cope with serious challenges and he draws the attention to the necessary tasks. These fields are the following: The fields mentioned by the author correspond with our research results totally. The study of Chen (2015) specifically deals with HR-activities, where he offers theoretical solutions focusing on the main activities. He believes that the majority of problems come from getting the employees, cultural background, managing the communication problems between generations, the opportunities for career-building and replacing lost knowledge due to retirement. The thoughts of Chen also comply with our own results. As it was previously mentioned above, the researches primarily deal with the challenges theoretically and it is not yet possible to compare our results with results of practical researches. Results of practical researches can rather be seen in situations outside workplaces. Previous articles examined the behaviour of new generations and their willingness to share their knowledge (Bencsik, 2015; Gutierrez, 2016), but not the work environment first of all. (The results of these papers are in harmony with the results of ours.) As the Z generation is on the labour market and in the workplaces only in a fewer number that is why, their problems do not appear too sharply and in a bigger measure. The leaders, managers and HR experts have to prepare for these challenges and the researches have started in this area (Olšovská et al, 2016). Intergeneration communication and information sharing, their technics are very different from the previous generations which will lead to a lot of conflicts and give rise to a misunderstanding (Dill, 2015). The members of Y generation achieve antipathy of their surroundings and cause conflict situations by their self-assurance, by their persuasions which do not tolerate criticism or contradiction, by their overconfidence and career desire. According to our results, these young people do not tolerate monotony, individualistic actions or tasks which require thinking (Olšovská et al., 2015). Their behaviour is determined by the culture and value system which are brought from home. The effects of these
features require additional researches. Y and Z generations are distrustful, they do not help each other, they build connections only superficially (Elmore, 2014). An interesting result that these two generations which are closest to each other can least work together. Y generation can work together with X generation for common goals, but Z generation wants to achieve success alone (The Forum, 2016). Previous researches confirm that these young people are clever, they have such abilities which are necessary in the labour market. But to adapt them and to keep them in the companies, to find the best motivational tools are really serious tasks for companies (Cook, 2016). Although the previous researches of Czeglédi-Juhász (2013, 2015) also justified the fact that the needs of the employers and employees with the age-group under 30 and the workplace requirement are not always in balance claim a new way of thinking from the HR, which was justified by the present research.

The difficulty of financing is one obstacle of the research, which was rather problematic in case of collecting samples and in case of the method of sampling. In case of getting financial support, we would expand the samples and we would prepare international comparison in the future.

6. CONCLUSIONS
The present paper illustrates some results of last year’s research, which examined the organizational effects and HR activities connected to appearance of generation Z and Y in labour market. In the light of the research results, the hypothesis conceived by the authors can be accepted. Although it has to mentioned that the validity of the given hypothesis is justified only within the frame of the given research, which cannot be considered representative. Nevertheless the study draws the attention to several thought-provoking issues. The research justified that the cooperation of different age-groups could provide not only conflicts, but positive results as well for the organisation, of which additive implementation the HR has important roles. Changing present HR activities is by all means necessary in order to have the new generation with their new requirements and new features as active and productive members of the organisation. These changes primarily affect communication, motivation and development of corporate culture. Authors’ results correspond with the results of the previous years (Krishnan et al, 2012; Singh, 2014; Schaffer, 2015; Tari, 2011) they see these generations as open and purposeful, but researchers have identified a lot of features which mean challenges for HR experts. Establishing patience, understanding, empathy and re-arranging organisations, establishing the technical background all mean managerial challenges and all the organisations have to start preparing for these changes in time.

References


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Strategic Performance Management System and Corporate Sustainability Concept - Specific Parametres in Slovak Enterprises

Rajnoha Rastislav, Lesníková Petra

Abstract
Nowadays, a well-performing enterprise can be considered the one that is able to use many opportunities, to adapt to continual changes in the environment, to achieve better performance. Business performance is often seen as an indicator of the enterprise’s results and effects. In the area of business performance and strategic performance measurement system, many studies have been realized which identify the major factors affecting the performance of the company itself. The paper is focused on the analysis and identification of specific factors in the form of localization, turnover of enterprise and others which may have a potential impact on performance. Current trends are focused not only on the performance, but also the consequences of corporate activities of environment. This leads to better competitiveness of companies. In this context, attention is drawn to the orientation of enterprises on particular dimensions of corporate sustainability concept and factors such as company size or capital structure in relation to its application.

Keywords: business performance, strategic performance measurement system, specific factors, corporate sustainability concept

JEL Classification: M14, M21, Q56

1. INTRODUCTION

The increasing number of conducted researches relating to business performance only emphasizes the importance of this issue. Performance management can be specified as a way of managing and motivating employees based on targets defined mainly of quantitative performance indicators (Hudymáčová & Hila). A number of foreign authors and their research results bring much knowledge in a field of business performance. Many of them are devoted mutually to the cohesion of business performance with parameters such as corporate strategy, strategic decision making tools to support performance in the form of the Balanced Scorecard (BSC), system of key performance indicators (KPI), information support by Business Intelligence (Bisbe & Malagueño 2012; Gimbert, Bisbe & Mendoza, 2010; Chenhall 2005; Rajnoha et al. 2013; Rajnoha, Štefko Merková & Dobrovič, 2016). In addition to the above mentioned factors, business performance can affect other specific parameters such as the impact of the company location, its size, capital structure, legal status, size or turnover. From the point of view of the complexity, we consider the knowledge of all parameters affecting performance important.

A preferred focus on achieving higher business performance does not necessarily mean that the enterprise cannot be oriented to the corporate sustainability concept. This concept requires
that enterprises respect and observe the principles of sustainable development (Financial Times Lexicon), which means that the responsibility of a business is much broader than just being linked to the economic aspects of products and services that customers want, hence the profits. The concept of triple bottom line (TBL) and on this issue based the corporate sustainability concept add to the social (towards the community) and environmental (use of resources and reduce disposal) indicators of measuring business performance (Hubbard, 2009). An important issue is prioritization of the corporate sustainability concept and its understanding. In connection with the concept, we are interested in specific parameters such as the impact of the company size and capital structure on the corporate sustainability application.

2. LITERATURE REVIEW

2.1 Characteristics of performance measurement system

Success and its achievement affects management decision-making with regard to further strategic development. This decision also depends on the adequate assessment of business performance, confirming the importance of choosing a set of indicators - financial and non-financial as well as their evaluation.

Performance measurement system, as stated by Nelly et al. (2003), relates to the use of multidimensional set of indicators (financial, non-financial, internal, and external). The role of performance measurement system as a subsystem is identified as part of the strategic performance management, whereby the performance management system is responsible for the implementation process. Strategic performance measurement system (SPMS) allows enterprise to plan, measure and monitor its performance, such that making decisions, resources and activities can be better aligned with the business strategies to achieve the desired results and creating value for shareholders (Bento, Bento & White, 2014). Other study indicates that there is a positive significant relationship between management tools and techniques utilization and organizational performance (Afonina, 2015). Other research in Germany interprets that due to some significant correlations between innovations and financial and quality performance, it is not possible to provide a clear statement about the impact of innovations on the performance (Heurich & Vignali, 2015). The research in Romania, where sample consisted of 73 multinational companies, investigated a linkage between corporate social performance and financial performance. The authors, according to statistical analysis results state that improving CSR does not necessarily lead to better financial performance (Miron & Petrache, 2012). Strategic management system should be able to follow and ‘control’ the process of implementation (de Lima et al., 2009).

In terms of tools to support, the SPMS is a typical representative of the BSC methodology which covers three key functions in the enterprise: the measurement, the strategic management system and tool for communication (Striteska & Spickova, 2012). The primary essence of BSC is that success is achieved through a combination of financial and non-financial key indicators. The implementation of methodology can help managers to identify those key non-financial indicators that are linked to the achievement of certain financial indicators (Davis & Albright, 2004). BSC have vindicated more and more enterprises, and on the basis of research, it is evident that BSC positively contribute to the operational performance of enterprises (De Geuser, Mooraj & Oyon, 2009).
In relation to BSC, the Tableaux de Bord is less used tool for decision support and business management. It enables the company to achieve its overall objectives and successfully implement the business strategies. This tool is based on models of the trading system / area of responsibility. Its aim is to reduce complexity and focus attention of managers on the parameters and key areas that are relevant to the decision, the individual managers to ensure complex information in the form of indicators that need for (operational) control (Daum, 2005).

The development and the rate of use of tools to support business performance over the years has changed. From using only financial indicators, the promotion of indicators of non-financial areas, through their mutual combination to the implementation and use of information technology to support performance improvement. Based on comprehensive research of the business performance, it is clear that the above mentioned BSC methodology is an integral part of the SPMS. It is necessary to support BSC through knowledge information system BI, leading to achieve a higher business performance (Rajnoha, Štefko Merková, & Dobrovič, 2016). The consulting firm Bain & Company annually carries out extensive research concerning the use of management tools. Each survey highlights regional differences in the use of tools as well as satisfaction with their usage. According to survey carried out in 2015, we can see the difference between regions, preferring traditional tools and those that focus on newer tools linked to the trend of digital transformation. Such differences may be based primarily on various perspectives of key trends - growth, innovation, cost and complexity, investment in e-transformation and a better understanding of customers (Rigby & Bilodeau, 2015). Some examples are presented in Table 1.

Tab. 1 - The utilization rate of selected management tools in enterprises by region in 2015.
Source: Rigby & Bilodeau, 2015

<table>
<thead>
<tr>
<th>Management tool</th>
<th>North America</th>
<th>Europe Middle East</th>
<th>Asia Pacific</th>
<th>Latin America</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer Relationship Management</td>
<td>48 %</td>
<td>50 %</td>
<td>48 %</td>
<td>38 %</td>
</tr>
<tr>
<td>Benchmarking</td>
<td>50 %</td>
<td>50 %</td>
<td>29 %</td>
<td>42 %</td>
</tr>
<tr>
<td>Strategic Planning</td>
<td>50 %</td>
<td>31 %</td>
<td>42 %</td>
<td>52 %</td>
</tr>
<tr>
<td>Balanced Scorecard</td>
<td>39 %</td>
<td>44 %</td>
<td>28 %</td>
<td>39 %</td>
</tr>
<tr>
<td>Change Management Programs</td>
<td>37 %</td>
<td>39 %</td>
<td>24 %</td>
<td>31 %</td>
</tr>
<tr>
<td>Big Data Analytics</td>
<td>27 %</td>
<td>24 %</td>
<td>52 %</td>
<td>17 %</td>
</tr>
<tr>
<td>Total Quality Management</td>
<td>22 %</td>
<td>25 %</td>
<td>47 %</td>
<td>28 %</td>
</tr>
<tr>
<td>Business Process Reengineering</td>
<td>22 %</td>
<td>21 %</td>
<td>32 %</td>
<td>35 %</td>
</tr>
<tr>
<td>Organizational Time Management</td>
<td>22 %</td>
<td>17 %</td>
<td>31 %</td>
<td>14 %</td>
</tr>
<tr>
<td>Digital Transformation</td>
<td>14 %</td>
<td>14 %</td>
<td>33 %</td>
<td>15 %</td>
</tr>
</tbody>
</table>

From the table above, it is clear that the preferences and satisfaction with management tools is significantly different from region to region. The data highlight clear split between North American companies, strongly preferring traditional tools, Chinese and Indian companies, which re-
corded greater use of tools of a new phase as a Disruptive Innovation Labs (Rigby & Biladeau, 2015). The study points out that understanding the differences between regions and countries can produce interesting results, based on survey in the regions where enterprises with higher performance are concentrated.

Performance measurement is currently also used to assess the impact of corporate activities on all parties interested. That measurement can be considered 'to quantify the efficiency and effectiveness of operations', which makes the actual reporting of the enterprise. In the case of measuring the impact of performance on customer satisfaction, it is not as obvious as in the case of measuring the impact of activities and performance on satisfaction of employees and local communities (Bourne et al., 2003).

2.2 Corporate sustainability as a business concept

The corporate sustainability concept has evolved from a globally oriented concept of sustainable development, especially the popular term from the Report of the Brundtland Commission. It consists of an acceptance of three pillars: economic, social, environmental. In the case that an enterprise incorporates sustainable development, it is called a corporate sustainability (Baumgartner & Ebner, 2010). From a microeconomic point of view, in the research terminology there is used multiple terms. Some examples: sustainable development of enterprises, corporate sustainability, sustainable enterprise, the sustainability promoting firm, and so on. In connection with this fact, it is necessary to distinguish, as the Hyršlová (2009), the ‘sustainable’ companies and companies which adopt the concept of sustainable development and try to make business activities consistent with the concept. In such a meaning, there are required changes in all business processes, objectives and target values.

In general, the sustainability can be understood in terms of efforts to maintain, respectively maintain the status quo. The different understanding of sustainability implies achieving balanced economic, environmental and social factors in the course of further development. From the view of J. Zelený (2007, p. 257), the concept represents 'the strategy and practices ensuring the current requirements of stakeholders so that they satisfy it in accordance with the principles of sustainable development, so that existing activities allow to meet the needs of future generations, especially from the view of sufficiency, range of natural resources, development and environmental protection'. It touches particularly the businesses and industry because just these fields play an important role in the context of implementation of the rules and principles of sustainable development.

M. Wilson (2003) states that the concept is a mix of several concepts, including sustainable development, corporate social responsibility and stakeholder theory (see Fig. 1). Sustainable development means a broad social goal for all stakeholders and it promotes areas that it is necessary to focused on (environmental, social and economic performance). The arguments why enterprises should pay attention to these areas appear from social responsibility and stakeholder theory. If society as a whole believes in sustainable development as a useful target, enterprises have an ethical obligation to help achieve it.
The enforcement of sustainable development concept at enterprise level can be motivating for several reasons (Hyršlová, 2009, pp. 10-11): tends to increase economic and environmental efficiency of technological processes; a mitigates the negative impacts on health, environment and property; the relation of business and sustainable development can be “marketing” element that can improve economic results; the prevention of potential problems when dealing with state authorities, local government and other leaders of society; the acceptation of principle increases the positive attitude of employees to the company, making it possible to achieve significant economic effects; the increase of attractiveness for potential investors and international cooperation.

Porrit (University of Cambridge Programme for Industry, 2003) notes that not all potential presented motives, respectively benefits are linked to each establishment. It depends primarily on the sector in which the company operates, as well as at the level of direct contact with the consumer, by legislative pressures and so on. Shirastava and Hart (1995) as the main reason consider in particular the fact that corporate sustainability is increasingly becoming a competitive advantage, where people and businesses are evaluated in the sense that they have a moral responsibility to minimize own impact on the planet.

Enterprises are inherently more and more focused on short-term economic performance, as a long-term vision of environmental and social sustainability. This is apparent primarily from the anthropocentric character and values, creating a shortage of a holistic view of the business (Setthasakko, 2007; Ionescu-Somers, 2012). Grayson et al. (2008) consider for a major barrier of concept implementation based on TBL ambiguity of the concept in terms of changes for the better. Problem areas can be seen in the negligence on the part of management, the involvement of stakeholders, and in integrating sustainability into business objectives and strategies.

As the external environment changes, these changes need to be integrated in business management. Among the most basic environmental factors that managers have experienced in recent years is the impact of products and services to the world community and environment. In this
way the element of corporate sustainability is integrated to the field of strategic management. These procedures are the summary of sustainable strategic management (Stead & Stead, 2012). Sustainable strategic management, on the one hand, creates a linkage between social, environmental aspects and strategy of the company; on the other hand, it integrates social and environmental information to knowledge management. This means that the company and its strategic management makes it sustainable if the business reflects the relationship to social and environmental mission, values and vision, taking into account social and environmental impacts, has provided performance measurement and so on (Fülöp & Hernádi, 2014). Top management must set the values and vision of sustainable development and ensure that they are not only integrated into corporate strategies, policies and corporate culture, but also communicated to all employees. Businesses that not only identify and transmit core values, but also clearly define priorities of economic, environmental and social nature, it can reach a competitive gap just by proactive management of the organization’s performance (Knirsch & Székely, 2005).

3. METHODOLOGY

The objective of this paper is to analyze specific parameters that can potentially have an effect on the performance. As the specific parameters, we consider the business location, turnover, legal form and etc. Current trends point to the need that company should be mentioned not only as a separate entity but also as a part of the wider world, representing all stakeholders to extend responsibility of the company not only from the economic perspective. In connection with the corporate sustainability concept, we focused on the enterprises orientation on particular dimensions as well as parameters such as company size, capital structure in respect of its application. The paper is a synthesis of researches conducted on a sample of businesses operating in the Slovak Republic in the areas of business performance and corporate sustainability.

3.1 Material and methods used in the analysis of business performance

For the purposes of the currently presented research and in order to achieve the objectives set, we have decided to obtain the necessary data and information on the enterprises in Slovakia with help of an extensive online questionnaire. We have asked 1.457 chosen businesses to participate in the survey, representing selected industry segments in Slovakia.

The particular data about the primary database of 1.457 enterprises from selected industries of the Slovak Republic were received from information of various industrial associations. This database was subsequently supplemented by other companies on the base of extensive online survey. After these two consecutive rounds the questionnaires were correctly completed by 164 enterprises in the end. We consider the size of the research sample – 164 enterprises as being sufficiently representative and this is 11.26 % share of the total number of companies surveyed.

The greatest extent was represented by businesses of engineering, wood and automotive industries. In order to identify and analyze the parameters for measuring and managing business performance, a key issue was the size of ROE. Based on this, we have incorporated enterprises in various performance categories with six scaled intervals. The differentiation of enterprises into the performance groups is shown in Figure 2.
The results obtained by questionnaire survey were processed by statistical methods. Selected variables were processed by descriptive statistics. For one variable (frequency, relative proportions) we have used mainly Chi-square test of independence. It is used to test the categorical variable weather there is a relationship between these variables or not. In analyzing this relationship, we started from Pivot Tables and Pivot coefficients. For the analysis of the difference between observed (empirical) and expected (theoretical) frequency, we used the Pearson chi-square test. Besides this, we also used a similar M-V chi-square test, which is based on the theory of maximum likelihood that is used in the case that there is a real dependence between variables. If the value corresponds to the chi-square probability \( p > 0.05 \), this means that the relationship between variables is not statistically significant, and vice versa, if \( p \leq 0.05 \), it is possible strong relationship between two variables tested using one of the contingency factors. The Phi coefficient determines the degree of correlation between two categorical variables for 2x2 tables. Its value ranges from -1 to 1 (total dependence) or 0 (variables are not correlated with each other). The hypothesis was verified at 5% significance level (\( \alpha = 0.05 \)). All data about enterprises were processed using MS Excel software Statistica and Statistica 10 CZ 10 Data Mining and Statistic program SPSS.

In the analysis, we focused on specific parameters and we have formulated the following hypotheses:

**H1:** We assume that the business performance was affected their location, which will be categorized by the region SR.

**H2:** We assume that enterprises which increase their turnover will achieve it proportionally to higher performance.

**H3:** We assume that the corporate legal form will also affect the performance, especially the limited liability companies and joint stock companies will achieve higher performance.

**H4:** We assume that the size of enterprises, linked to the number of employees, will affect the performance only to a certain extent, so we assume that the high-performance enterprises will be medium-sized enterprises with 50-250 employees, which they are able to flexible adaptation to changing market conditions.
3.2 Material and methods used in the analysis of corporate sustainability

In the analysis of the impact of specific parameters with the application of corporate sustainability, was also used an electronic questionnaire. After a phase of pre-research on a sample of 31 enterprises, the completed questionnaire was transmitted to the manufacturing sector enterprises. The basic enterprise database was using the database of the Statistical Office in 2,793 enterprises, whereby directly were interviewed 2,125 businesses. Overall, we obtained 455 correctly completed questionnaires, which represent a 21.41% return.

The basic file consists of small, medium and large enterprises in selected industries. Due to the nature of the corporate sustainability concept, we decided to exclude micro-enterprises from the survey. In the area of capital structure, we proceeded without any restriction. In order to apply the results and conclusions to the basic file, we verified the sample in terms of its representativeness. For verification, we used the nonparametric Chi-square test of homogeneity. Two basic characteristics of representativeness we chose size of the business and core competencies, respectively type of industry. The usage of Chi-square test is based on the hypothesis H0, which claims that empirical class frequencies are equal to the theoretical share (classroom frequency) and the hypothesis H1 that the claim is rejected. For verifying hypotheses at 5% significance level, the research sample can be considered representative of the company size (p = 0.591) as well as the main areas of the company (p = 0.052). The following tables show the output of the statistical program SPSS which was used to verify representativeness of the sample by size of the enterprise and core business (see Tab. 2 and Tab. 3).

Tab. 2 - Verification of representativeness of the survey sample by size of enterprise. Source: own

<table>
<thead>
<tr>
<th></th>
<th>Observed N</th>
<th>Expected N</th>
<th>Residual</th>
<th>Test Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small enterprises</td>
<td>287</td>
<td>297.3</td>
<td>-10.3</td>
<td>Chi-Square 1.051</td>
</tr>
<tr>
<td>Medium-sized enterprises</td>
<td>128</td>
<td>120.9</td>
<td>7.1</td>
<td>Df 2</td>
</tr>
<tr>
<td>Large enterprises</td>
<td>40</td>
<td>36.8</td>
<td>3.2</td>
<td>Asymp. Sig. .591</td>
</tr>
<tr>
<td>Total</td>
<td>455</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Tab. 3 - Verification of representativeness of the sample used by main areas of the company. 
Source: own

<table>
<thead>
<tr>
<th>Core of business</th>
<th>Observed N</th>
<th>Expected N</th>
<th>Residual</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mining</td>
<td>14</td>
<td>9.0</td>
<td>5.0</td>
</tr>
<tr>
<td>Leather industry</td>
<td>8</td>
<td>11.2</td>
<td>-3.2</td>
</tr>
<tr>
<td>Wood-processing and furniture industry</td>
<td>56</td>
<td>60.6</td>
<td>-4.6</td>
</tr>
<tr>
<td>Pulp and paper industry</td>
<td>20</td>
<td>21.8</td>
<td>-1.8</td>
</tr>
<tr>
<td>Chemical industry, manufacturing of rubber, plastic production, coke and related products</td>
<td>59</td>
<td>60.6</td>
<td>-1.6</td>
</tr>
<tr>
<td>Pharmaceutical industry</td>
<td>4</td>
<td>2.5</td>
<td>1.5</td>
</tr>
<tr>
<td>Metallurgical industry</td>
<td>12</td>
<td>11.2</td>
<td>.8</td>
</tr>
<tr>
<td>Engineering industry (including automotive)</td>
<td>202</td>
<td>193.2</td>
<td>8.8</td>
</tr>
<tr>
<td>Electrical engineering</td>
<td>42</td>
<td>46.3</td>
<td>-4.3</td>
</tr>
<tr>
<td>Manufacturing of other non-metallic mineral products</td>
<td>19</td>
<td>28.8</td>
<td>-9.8</td>
</tr>
<tr>
<td>Other production</td>
<td>19</td>
<td>9.8</td>
<td>9.2</td>
</tr>
<tr>
<td>Total</td>
<td>455</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Test Statistics

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Chi-Square</td>
<td>18.176</td>
</tr>
<tr>
<td>Df</td>
<td>10</td>
</tr>
<tr>
<td>Asymp.Sig</td>
<td>.052</td>
</tr>
</tbody>
</table>

In the analysis, we examined the attitude of enterprises with how to deal with particular dimensions of corporate sustainability. The options led us to create a sequence of potential business direction, i.e. from an occasional direction, through systematic and long-term engagement, to incorporation of dimensions into the business strategy. We set the following hypotheses:

H5: We assumed that there is the existence of a mutual relation between the business size and the intensity of business’s involvement in business sustainability.

H6: We assume that there is the existence of a mutual relation between the form of ownership and the intensity of business’s involvement in business sustainability.

4. SELECTED RESEARCH RESULTS AND DISCUSSION

4.1 The impact of specific parameters on business performance

We state that our research did not confirm statistically significant dependence of the performance of enterprises on the business sector in which they operate.

In the analysis of business performance, we were interested in specific parameters affecting the business performance. As mentioned in Part 3, we assumed that performance will affect such parameters as size, location of the company, and the origin of the capital. We must point out that
in this case, it is not a primary significance as it is the case of studying the effects of time and use of instruments in the enterprise, use of strategic tools in the form of BSC, KPI information system or BI. We believe that an analysis of these specific parameters can yield interesting findings related to performance.

As follows from the results of descriptive statistics, at the sight of the six performance groups, the greatest frequency is represented in the order of the second performance group - the label is group 1 with performance at the level of 0-2% ROE, where is ranked only 47 companies (28.66 %) of the total business sample (see Tab. 4).

Tab. 4 - Frequency: sorting parameter ROE. Source: own

<table>
<thead>
<tr>
<th>Group (ROE)</th>
<th>0 (negative)</th>
<th>1 (0-2%)</th>
<th>2 (2-4%)</th>
<th>3 (4-7%)</th>
<th>4 (7-10%)</th>
<th>5 (over 10%)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>All enterprises</td>
<td>25</td>
<td>47</td>
<td>35</td>
<td>26</td>
<td>12</td>
<td>19</td>
<td>164</td>
</tr>
<tr>
<td>Cumulatively</td>
<td>25</td>
<td>72</td>
<td>107</td>
<td>133</td>
<td>145</td>
<td>164</td>
<td></td>
</tr>
<tr>
<td>Percentage (%)</td>
<td>15.24</td>
<td>28.66</td>
<td>21.34</td>
<td>15.85</td>
<td>7.32</td>
<td>11.59</td>
<td>100.00</td>
</tr>
<tr>
<td>Cumulatively (%)</td>
<td>15.24</td>
<td>43.90</td>
<td>65.24</td>
<td>81.10</td>
<td>88.41</td>
<td>100.00</td>
<td></td>
</tr>
</tbody>
</table>

In this paper, we focus on the statistically significant dependencies (p-value > 0.05), and for each dependency, we present the results of statistical indicators and pivot tables: the observed frequencies, expected frequencies and residue.

Tab. 5 - Pivot: Localization x Performance - statistics. Source: own

<table>
<thead>
<tr>
<th>Statistics</th>
<th>Chi-square</th>
<th>sv</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson’s chi-square</td>
<td>31.57994</td>
<td>df = 20</td>
<td>p = .04799</td>
</tr>
<tr>
<td>The M-V chi-square</td>
<td>26.06009</td>
<td>df = 20</td>
<td>p = .16384</td>
</tr>
<tr>
<td>The contingency coefficient</td>
<td>.4018310</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cramer’s V</td>
<td>.2194086</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Tab. 6 - Pivot: Localization x Performance – frequency. Source: own

<table>
<thead>
<tr>
<th>Localization</th>
<th>ROE - 0</th>
<th>ROE - 1</th>
<th>ROE - 2</th>
<th>ROE - 3</th>
<th>ROE - 4</th>
<th>ROE - 5</th>
<th>Row total</th>
</tr>
</thead>
<tbody>
<tr>
<td>PO</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>NR TN TT ZA</td>
<td>4</td>
<td>10</td>
<td>9</td>
<td>6</td>
<td>1</td>
<td>1</td>
<td>31</td>
</tr>
<tr>
<td>KE</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>BB</td>
<td>16</td>
<td>33</td>
<td>23</td>
<td>16</td>
<td>9</td>
<td>15</td>
<td>112</td>
</tr>
</tbody>
</table>
The results of Tables (5 and 6) show the highest performance (enterprises with ROE in the range of 7-10 %, respectively over 10 % of group 4 and 5) reach businesses established in the region Bratislava, respectively Banská Bystrica. The lowest performance (group 0 and 1; where ROE is negative, respectively 0-2 %) was reached by enterprises in the region Prešov. Due to a lower frequency representation of enterprises in other regions and in terms of relatively equal performance achievement, we included regions Nitra, Trenčín, Trnava and Žilina to the same group. This group is typical that the most businesses achieved 0-4% ROE.

Tab. 7 - Pivot: Turnover x Performance – statistics. Source: own

<table>
<thead>
<tr>
<th>Statistics</th>
<th>Chi-square</th>
<th>sv</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson’s chi-square</td>
<td>31.34774</td>
<td>df = 15</td>
<td>p = .00789</td>
</tr>
<tr>
<td>M-V chi-square</td>
<td>33.51585</td>
<td>df = 15</td>
<td>p = .00398</td>
</tr>
<tr>
<td>The contingency coefficient</td>
<td>.4005889</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cramer’s V</td>
<td>.2524181</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Tab. 8 - Pivot: Turnover x Performance – frequency. Source: own

<table>
<thead>
<tr>
<th>Turnover</th>
<th>ROE - 0</th>
<th>ROE - 1</th>
<th>ROE - 2</th>
<th>ROE - 3</th>
<th>ROE - 4</th>
<th>ROE - 5</th>
<th>Row total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>13</td>
<td>32</td>
<td>17</td>
<td>9</td>
<td>7</td>
<td>7</td>
<td>85</td>
</tr>
</tbody>
</table>
The statistically significant dependence in the set of enterprises resulted in relation to turnover and business performance with corrected CC 0.45. The results clearly show (see Table 7 and 8) that higher turnover has an impact on achieving greater efficiency, and this fact was reflected in all categories. The boundary results show that companies with the highest turnover (over 50 mil. €/year) achieved an excellent performance (group 4 and 5 -7-10% ROE, above 10%). The enterprises with the lowest value of turnover to 2 million €/year achieve positive but the lowest ROE 0-2%.

After the examination of parameters, such as localization and turnover of the company, the results show that there is dependence of these parameters on performance of the company expressed through ROE. On the other hand, the dependence of performance has not been confirmed in the case of the enterprise sector, legal form or size of the business. This means that the hypothesis cannot be confirmed.

### 4.2 The impact of specific parameters on the corporate sustainability concept

The corporate sustainability concept essentially consists of economic, social and environmental dimensions. Business attitudes with how to deal with particular dimensions of corporate sustainability may vary. The attention was focused on various options on which we have set up a sequence of possible direction of enterprises – from occasional focusing on areas, through the systematic and long-term dedication to the areas, to including areas in corporate strategy. The aim was to find out how individual companies deal with subject areas in the implementation of their activities. Among all the options, we have chosen only relevant options (see Fig. 3).
Based on the obtained responses, we divided enterprises into the following categories:

The occasional focus on particular areas: in this group, small businesses occasionally focusing on all three areas prevail. Medium-sized enterprises occasionally focus on social and environmental issues in a larger extent. Only 3.70 percent of large enterprises occasionally focus on the economic area.

Businesses primarily focusing on environmental or social areas: from the results, it is evident, that the ratio of the focus on one or the other area is relatively same (151/176). When mutually compared, however, businesses are more engaged in the social area. In all businesses, the environmental area slightly lags behind (the differences are 17 within small businesses and only 4 within medium-sized and large businesses). The result is also similar in respect to the capital structure rate.

The systematic focus on all three areas: based on the results of the research, we included 67 businesses to this group; the majority of them are small businesses with 63 percent share, medium-sized enterprises have 34 percent share and large businesses represent 1.5 percent.

Businesses having the areas incorporated in the strategy: this group contains 44 businesses which, besides that they are involved in all areas, also have them incorporated in the business strategy. As can be seen in Figure 3, half of them are medium-sized businesses (50 %). The rest is represented by small businesses (27 %) and large businesses (almost 23 %). If we take the size structure of businesses into account, 10 large businesses out of 40 have the areas incorporated in their strategy. The same applies to 22 medium-sized businesses out of 128 and only 12 small businesses out of 287. As expected, larger businesses are more engaged in the strategy than small or medium-sized ones. As for the explicit focus on environmental or social areas in the strategy, the social area is prevailing in small businesses, in medium-sized and large enterprises the environmental area dominates.

\[\text{Fig. 3 - The business focus on corporate sustainability concept areas according to the enterprise size. Source: own}\]
In the analysis, we focused on the correlation of corporate sustainability in relation to variables such as company size and form of ownership of the company. We investigated whether these variables have an effect on what intensity the company is dealing with the concept. On this basis, we defined the hypothesis, where we assume that there is a correlation between how the company deals with the corporate sustainability issues and enterprise size. It means that the intensity of how the business is concerned with the areas (economic, environmental, and social) depends on the size company. To verify the hypothesis, we used the nonparametric Spearman's rank correlation coefficient (see Tab. 9).

Tab. 9 - The relationship between the corporate sustainability concept and size of business. Source: own

<table>
<thead>
<tr>
<th>Spearman’s rho</th>
<th>Size</th>
<th>H5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Correlation Coefficient</td>
<td>1,000</td>
<td>,373</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td>,000</td>
</tr>
<tr>
<td>N</td>
<td>455</td>
<td>455</td>
</tr>
<tr>
<td>H5 Correlation Coefficient</td>
<td>,373</td>
<td>1,000</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>,000</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>455</td>
<td>455</td>
</tr>
</tbody>
</table>

From the results, it is evident that there is a moderate dependence between the given variables (p-value = 0, Spearman’s rank coefficient = 0.373), whereby the strongest dependence is currently on environmental opportunities. This implies that the larger the enterprise is, the greater the focus on environmental issues and social opportunities is. Based on this fact, this hypothesis could be confirmed.

In our research, we also focused on the capital structure of company. In the hypothesis H6, we examine the assumption of the existence of dependency between how the company deals with sustainability and capital structure of the company. To verify this assumption, we used the Chi-square test of independence. We found that investigated characters are not independent (p-value = 0). To determine the power, we used the correlation coefficient Cramer’s V (see Tab. 10 and 11).

Tab. 10 - Analysis of the corporate sustainability and capital structure. Source: own

<table>
<thead>
<tr>
<th>Value</th>
<th>Df</th>
<th>Asymp. Sig. (2-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson’s Chi-Square</td>
<td>53,699</td>
<td>24</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>57,059</td>
<td>24</td>
</tr>
<tr>
<td>Linear-by-Linear Association</td>
<td>24,027</td>
<td>1</td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>455</td>
<td></td>
</tr>
</tbody>
</table>
The results show that between the research variables there is moderate dependence. This means, as in the previous case, that application of the corporate sustainability concept also affects the capital structure \((CV = 0.243)\) so the hypothesis H6 could be confirmed.

5. CONCLUSION

The strategic performance management as well as the corporate sustainability concept is gradually coming into the center of attention of Slovak enterprises. The paper is a synthesis of researches conducted on a sample of enterprises in the area of business performance and corporate sustainability. From several studies carried out in the management and measurement performance issue, it is evident that performance is affected by many factors. These factors are important for improving business performance. In the present paper, we focus on other specific factors, which may also affect the performance. For the specific parameters, we consider business location, the turnover, the legal form and so on. The results show that the business location and turnover affect the performance measuring by ROE. On the other hand, the dependence of performance has not been confirmed in the enterprise sector, legal form or size of business. In the field of further research (analyze of turnover and ROE), it would be useful to monitor ROE not only in categories but also in concrete values with the possibility of applying correlation analysis.

In connection with corporate sustainability concept, we focused on the enterprises orientation on particular dimensions as well as parameters such as company size, capital structure of its application. In both examined cases, hence the size of the business and capital structure has a moderate impact on the actual application of the corporate sustainability concept. Also, these parameters are important with the application of corporate sustainability. In further research, it would be useful to focus on exploring other specific indicators (legal form, location and so on) as well as the relationship with corporate sustainability concept and business performance in the form of ROE.

Acknowledgements
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References


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The Relationship between the Risk of a Change of the Interest Rate and the Age of Entrepreneurs among Slovak SMEs

Sobeková Majková Monika

Abstract

Young entrepreneurs and start-up founders are considered to be a drivers of innovation which is an important element of knowledge economy and competitiveness of each country. But their early age could be perceived as a factor causing the increasing impact of the credit risk because young entrepreneurs usually have a short company history, weak capital power and a lack of the guarantees. The main objective of this paper is to bring scientific evidence that the age of the entrepreneur should be considered as a factor with the significant impact on one part of the credit risk of a company— the risk of a change of the interest rate. The research was carried out among 438 Slovak companies in 2016. Based on Pearson’s chi-square analysis of the results of our research, we bring statistical evidence that age has a significant impact on the ability of the company to protect the firm against the change of the interest rate. We also found out that there is dependence between the age of the owner and the opinion that SMEs in the other EU countries have better loan conditions, especially lower interest rates, than Slovak SMEs. Research findings indicate that young entrepreneurs have problems with obtaining capital and increasing interest rates and collaterals because of their higher risk profile. But effective state support of young and innovative companies through venture financing can lead to increasing global competitiveness of the Slovak Republic.

Keywords: young entrepreneurs, venture firms, start-up, SMEs, credit risk, interest rate risk

JEL Classification: G11, G32

1. INTRODUCTION

Small and medium-sized enterprises (SMEs) are the backbone of each market economy (Sobeková – Majková, 2011; Karpak and Topcu, 2010). Their share on total number of companies in the EU, the US and also in Slovakia is almost 99% (Bhaird, 2010; Belás et al., 2015a, Kozubíková et al., 2015; Sobeková – Majková, 2011). Their small size is according to such authors as Stein-erowska-Streb and Steiner (2014), Irwin and Scott (2010), Mercieca et al. (2009), Belás (2015b), Dong and Men (2014), Cheng, Tang and Shi (2012) often a reason why they more intensively face the financial risk and also the credit risk. Also Vos et al. (2007), Bottazzi et al. (2014), Lazányi (2014), Oliveira and Fortunato (2006), Dong and Men (2014), Hernández-Cánovas and Martínez-Solano (2010), Bougheas et al. (2006), Pickernell et al. (2011), Riding et al. (2012) declare that the credit risk is higher in the group of younger entrepreneurs. The aim of this paper is to prove by the statistical method that the age of entrepreneurs (SMEs) should be considered as a relevant factor with the significant impact on the intense of credit risk in general, and its part - the risk of a change of the interest rate - in particular in Slovakia. Based on the results from
the research carried out among Slovak SMEs in 2016 we found out that there is a dependence between the age of owner and the ability to manage interest rate risk, and also between the age of the entrepreneur and the opinion that SMEs in other EU countries have better loan conditions, especially lower interest rates, than Slovak SMEs.

2. LITERATURE REVIEW

SMEs play a significant role in each market economy (Sobeková – Majková, 2011 and Karpak and Topcu, 2010) and in economic growth (Beck and Demigruc-Kunt, 2006). But their size has a significant impact on the availability of suitable capital for them. Dong and Men (2014) and Abor et al. (2014) consider the limited access to external financing including bank loans as one of SMEs growth obstacle. Several other authors like Garwe and Fatoki (2012), Roper and Scott (2009), Mijid (2009), Constantinidis et al. (2006), Zwan et al. (2010), Mama and Ewoudou (2010), Freel et al. (2010), Nkundabanyanga et al. (2014), Ključnikov and Belás (2016) and Krasniqi (2010), etc. devote their attention to this topic. Young entrepreneurs are a special segment of SMEs. Belás and Sobeková (2016) explain that young companies and start-ups are the drivers of innovation, but they face the credit risk more intensively than others. Young entrepreneurs often have problems with collateral requirements and raising interest rate in the process of obtaining a bank loan.

Many authors declare that firm size is a relevant factor of financial and credit risk all over the world, including Slovakia (Beck et al., 2008; Mercieca et al., 2009; Bena and Ondko, 2012; Gambini and Zazzaro, 2013; Beck and Demigruc-Kunt, 2006; Ključnikov et al. 2016; etc.) while the external finance is having a positive impact on their growth (Gambini and Zazzaro, 2013; Behr and Guttler, 2007). According to their research, smaller companies use bank finance less responsibly than larger companies. This is also the case of Slovak SMEs (Jakubec et al., 2012).

Majková (2008) and Irwin and Scott (2010) prove that the firm size is an important factor in the assessment of credit risk. Smaller companies have the biggest problem with collateral requirements (Sobeková, 2011). Also, Cheng and Tang (2012) and Shi (2012) declare that weak capital power belongs to the most significant problems in SME financing.

Firm size has also has an impact on the interest rates for credit of SMEs. In the study of Rostamkalaei and Freel (2015), it was proven that small and growing firms in the UK are likely to have higher interest rates for credit than large firms. They present the smaller the firm is the higher the interest rates are. The results of Oliveira and Fortunato (2006) were similar.

The age of the owner is one of the significant factors with an impact on the capital structure and debt financing. Colombo, Cumming and Vismara (2016) state that these companies suffer from financing constraints, that limits their growth and menaces their survival. Lack of cash flow and collateral are ones of the main reasons in external capital rising. Many literature studies and evidences declare that venture capitalists play a crucial role in their financing.

There are not so many studies focused on the impact of age on the credit risk and company finance. Bottazzi et al. (2014) and Vos et al. (2007) bring the evidence that smaller and younger firms have more limited possibilities of external financing than larger and older firms. Vos et al.
(2007) state that there are coherences among the age and the level of education of entrepreneur and the interest rate of drawing finance from external funds. According to their study, younger and less educated entrepreneurs are more likely to use external finance for their business growth, while older and more educated entrepreneurs are less likely to use external financing. According to Lazányi (2014) younger entrepreneurs pay higher interest rates because they are of smaller firm size and their liquidity to pay in time is lower than of the older entrepreneurs. Younger entrepreneurs perceive credit risk more intensively than older. Their access to bank credit is worsened and this fact has an impact on their growth (Dong and Men, 2014). The relation between the age and the credit risk was proved in the studies of Bougheas et al. (2006), Pickernell et al. (2011) and Riding et al. (2012). According to their results, younger entrepreneurs more intensively face the credit risk than older ones.

Hernández-Cánovas and Martínez-Solano (2010) state that firms with the longer relationship with banks have an easier access to external finances, but they also get loans with higher cost. On the other hand, firms with the relationships with at least two banks get improved loan access and reduced loan costs, as well as trustful relationship between the entrepreneur and the bank. This fact indicates that the age could have an impact on credit risk; respectively older entrepreneurs with longer relationship with the banks have an easier access to bank financing and face lower credit risks. The rejections of credit or higher interest rates are mostly common for small and young firms (Oliveira and Fortunato, 2006). According to the research based on Portuguese entrepreneurs, the authors state that small and young entrepreneurs are highly cash-flow sensitive, which is caused by the fact that financial restraints are being more serious than in case of larger firms. Efficient collateral in case of young entrepreneurs can be a restraint in loan acquisition. Werner and Faulenbach (2008) found out that older entrepreneurs have fewer difficulties to get start-up finance than the younger ones.

Dong and Men (2014) and Sobeková et al. (2014) prove that small and young companies face more severe financing obstacles. Hegarty and Jones (2008) examined that the readiness after graduation and the level of use of external financing are important factors of young entrepreneurs.

The risk of a change of the interest rate as a part of credit risk was observed in the study of Neuberger and Räthke-Döppner (2014). The authors compare the interest rates in the region of East Germany with stress on demographic indicators. They bring results that young entrepreneurs are more likely to pay higher interest rates because their businesses are smaller and their liquidity to pay in time is lower than of the older entrepreneurs. This fact was also confirmed by the OECD study (2014). The study bring evidence that banks provide more finances to people with larger personal wealth which further penalises women, young and ethnicminority entrepreneurs. In principle, banks could apply higher interest rates to compensate the higher risk-profile of disadvantaged entrepreneurs. All presented studies declared relation between the age of the entrepreneurs and the interest rate risk. Coleman et al. (2014) proved that owner age is a significant factor in explaining the composition of start-up capital. They stated that young firm are more likely to access less formal debt and that the reasons for that are raising interest rates and collateral requirements. However, not all researches agree with the opinion that the age is a relevant factor of financial and credit risk. The Slovenian researcher Slavec (2014) found out that in Slovenian
business environment the age is not negatively related to bank loans or trade credit. However, an education has more significant role in bank loans than the age of entrepreneurs.

3. METHODOLOGY OF RESEARCH AND WORKING HYPOTHESES

The research was focused on the current situation in Slovak business environment. It was carried out in 2016 by the questionnaire called Financial Risks of SMEs in Slovakia which was distributed online. The research data were collected by three specific ways. First, random selection of appropriate companies was made from the free database of Slovak companies available on www.vsetkyfirmy.sk. The selected companies were contacted by the research team via email. The questionnaire was also placed on specialized economic web-portals, focused on SMEs. Finally, the sample of companies selected by the team experts was contacted by the researchers directly. Total number of 438 questionnaires was collected during the research. This number of respondents fulfils the requirements for a stochastic selection.

Actual statistics (Table 1) from the Slovak Statistic Bureau declare that there were 555,314 companies in 2014, of which SMEs were 554,743 (99.8%). The share of young entrepreneurs was in the basic data set 28.1%, and in the sample it was 37.2%.

According to the calculated sample, the research team assumed that the data are representative, and have the reliability of 95%. The sampling error of +/- 5% should be considered. The minimum size of the sample should be counted by the formula

\[ n = \frac{(1.96)^2 \times p \times (1 - p)}{0.05^2} \]

where \( p \) is the share of the sample. The minimum sample size was 310, while the real size of our sample was 438.

Tab. 1 - Number of entrepreneurs in Slovakia in 2014 – comparison of the basic data set and the selected sample

<table>
<thead>
<tr>
<th>Legal Form (2014)</th>
<th>Basic data set</th>
<th>Selected sample</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total values</td>
<td>Share (%)</td>
</tr>
<tr>
<td>Micro enterprises (0-9 emp.) and individual entrepreneurs</td>
<td>538,330</td>
<td>96.9 %</td>
</tr>
<tr>
<td>Small enterprises (10-49 emp.)</td>
<td>13,743</td>
<td>2.5%</td>
</tr>
<tr>
<td>Medium enterprises (50-249 emp.)</td>
<td>2,661</td>
<td>0.50%</td>
</tr>
<tr>
<td>Large enterprises (250+ emp.)</td>
<td>580</td>
<td>0.1%</td>
</tr>
<tr>
<td>Total number of business units</td>
<td>555,314</td>
<td>100%</td>
</tr>
<tr>
<td>SMEs from total</td>
<td>554,743</td>
<td></td>
</tr>
<tr>
<td>Share of SMEs in %</td>
<td>99.8 %</td>
<td></td>
</tr>
<tr>
<td>Young entrepreneurs up to 35 years old*</td>
<td>28.1 %</td>
<td></td>
</tr>
</tbody>
</table>

Source: Company register of the Statistical office of the Slovak Republic, own processing

*Young entrepreneur data 2012
Regional structure of the sample was similar to the structure of basic file. Differences in each category reach values are approximately 2 – 4 % except Bratislava and Košice region.

Tab. 2 - Comparison of the regional structure (basic data set and selected sample)

<table>
<thead>
<tr>
<th>Region</th>
<th>Selected sample</th>
<th>Basic data set*</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number of</td>
<td>% of</td>
<td>% of</td>
</tr>
<tr>
<td></td>
<td>respondents</td>
<td>respondents</td>
<td>enterprises</td>
</tr>
<tr>
<td>Bratislava</td>
<td>199</td>
<td>45.4%</td>
<td>34.70%</td>
</tr>
<tr>
<td>Trnava</td>
<td>28</td>
<td>6.4%</td>
<td>9.2%</td>
</tr>
<tr>
<td>Nitra</td>
<td>34</td>
<td>12.3%</td>
<td>10%</td>
</tr>
<tr>
<td>Trenčín</td>
<td>44</td>
<td>10%</td>
<td>8.3%</td>
</tr>
<tr>
<td>Žilina</td>
<td>56</td>
<td>12.8%</td>
<td>9.4%</td>
</tr>
<tr>
<td>Banská Bystrica</td>
<td>20</td>
<td>4.6%</td>
<td>8.8%</td>
</tr>
<tr>
<td>Prešov</td>
<td>21</td>
<td>4.8%</td>
<td>9.2%</td>
</tr>
<tr>
<td>Košice</td>
<td>16</td>
<td>3.7%</td>
<td>10.3%</td>
</tr>
</tbody>
</table>

Source: Source NADSME 2012

According to comparison of the data in the basic data set and the selected sample, it is obvious that differences between the basic data set and the selected sample are negligible (up to 5 %). The sample contains 37.8 % of service companies, 22.4 % of trade companies, 13 % of construction companies, 9.8 % of manufactures, 8.2 % of other types of companies, 4.6 % of agricultural companies and 4.1 % companies from transport.

The data presented in Table 1 a 2 and in previous paragraphs indicate and allow to make conclusion that the construction of selected sample and the basic data set of SMEs are virtually identical and have similar characteristics.

Formulating of the Survey Hypotheses

For the analysis of the obtained data we used Microsoft Excel (Office 2007) and its possibilities in the data processing using pivot tables. The tools of descriptive statistics (averages and percentage) were important research instruments. The methods of comparison and deduction were used for the data analysis. A statistical method of Pearson’s chi-square at the significance level of 5 % was applied by using the statistical software available at www.socscistatistics.com for the verification of the existence of the statistically significant dependences and differences between the selected factors. If the calculated p-value was lower than 5%, the null hypothesis was rejected, and the alternative hypothesis was adopted. Due to the length limitations the paper presents the results of some selected problems. Arguments were built according to experience and estimations of the research team.

The each alternative hypothesis was assigned with a null hypothesis that assumes that there are no statistical verified differences between observed groups.
Null hypothesis: $\pi_1 = \pi_2$ so $\pi_1 - \pi_2 = 0$

Alternative hypothesis: $\pi_1 - \pi_2 \neq 0$

The research was focused on the impact of the age in relation to the special type of credit risk – the risk of the change of the interest rate. The author defined two alternative working hypotheses (H1, H2), the accuracy of which was verified by the statistical methods. Formulation of the null hypothesis was as follows: There is not statistically significant dependence between the age and the perception of the interest rate risk on the Slovak financial market.

H1: There is a statistical significant dependence between the age and ability of company to protect against change of the interest rate.

H2: There is a statistical significant dependence between the age and opinion that SMEs in other EU countries have lower interest rates from credits than Slovak SMEs.

4. RESULTS AND DISCUSSION

Literature research indicates the risk of a change of an interest rate is a considerable business risk that SMEs and young entrepreneurs face, which is also confirmed by the newest study of the OECD (2014). This document signed as one of the barriers for young entrepreneurs in European Union poor understanding of the credit market (e.g. loan application process, interest rates, time value of money, etc.) and considers interest rate risk as a relevant business risk of SMEs in Europe.

The study (OECD, 2014) informs: “The impact of the crisis and new banking regulations The economic crisis has dragged on in Europe since 2008, firstly through the failure and retrenchment of financial institutions and then because of the sovereign debt crisis. The crisis has had a severe impact on small business financing. Loan rejections at EU-27 aggregate level rose from 12% to 18% between the first and second half of 2009 and then fell back to 11% in 2010 and 2011. Loan terms for small firms also worsened comparatively to large firms, and the interest rate spread between SMEs and large enterprises widened.”

They (OECD, 2014) also declares that banks provide more finance to people with large personal wealth which further penalises women, young and ethnic minority entrepreneurs. In principle, banks could apply higher interest rates to compensate for the higher risk-profile of disadvantaged entrepreneurs.

4.1 The impact of age on the interest rate risk

The first, we examine the relation between the age and the interest rate risk (H1). The aim was to research if the young entrepreneurs have a different opinion in comparison with the other age groups of entrepreneurs. We postulated that the age is a significant factor that older entrepreneurs are more experienced in this area and perceive the interest rate risk more intensively.
At the beginning we investigate if they know how to protect the firm against the change of the interest rate. We considered 3 age categories. Chi-square statistic is \( \chi^2 = 4.7096 = \chi^2_{0.05 \text{ with } 1 \text{ df}} \), the p-value is 0.094914, at the base of this result we reject working alternative hypothesis H1. Having this result we decided to merge group 36 – 45 and 45 and more. After the merge of the research data (Table 3) we found statistically significant differences between these two groups of entrepreneurs – up to 35 and 36 and more. This calculation brings evidence about statistically significant dependence between the age and ability of the company to protect the firm against the change of the interest rate. Value of chi-square statistic is \( \chi^2 = 4.2981 = \chi^2_{0.05 \text{ with } 1 \text{ df}} \). The p-value of 0.038154 indicates that the result is significant at \( p < 0.05 \).

Table 4 Comparison of Pearson chi-square calculations among the chosen age groups in relation to the interest rate risk

<table>
<thead>
<tr>
<th>Ability to protect the firm against the change of interest rate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>To 35</td>
</tr>
<tr>
<td>36 - 45</td>
</tr>
<tr>
<td>46 and more</td>
</tr>
<tr>
<td>To 35</td>
</tr>
<tr>
<td>36 more</td>
</tr>
</tbody>
</table>

Despite of the initial negative calculation after merging the data we confirm working alternative hypothesis H1 at 95 % level of probability. The biggest differences are in the group up to 35 and more than 35 years old. We present the comparison of chi-square calculations in different age groups in Table 4.
4.2 The impact of the age on the opinion that SMEs in other EU countries face the lower interest rate risk than Slovak SMEs

In this part, we examined the dependence between the age and the opinion of domestic SMEs that SMEs in other EU countries have better interest rates than Slovak SMEs. We made comparison in the same way as in a previous cause. At the beginning, we found statistically significant differences among three age groups of entrepreneurs and then, between two groups (up to 35 and 36 and more – Table 5). In both cases, we found statistically significant dependence between the age and the opinion that SMEs in other EU countries have lower interest rates than SMEs in Slovakia.

Table 5 Pearson chi-square calculation according to the age

<table>
<thead>
<tr>
<th></th>
<th>Agree</th>
<th>Disagree</th>
<th>Neutral position</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>AV and chi-square subtotals</td>
<td>%</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>-</td>
<td>187</td>
<td>-</td>
<td>187</td>
</tr>
<tr>
<td>To 35</td>
<td>36.81</td>
<td>(69.59)</td>
<td>60 (69.59)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(1.32)</td>
<td>3.68</td>
<td>6 (9.30)</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>59.51</td>
<td>(84.11)</td>
<td>97</td>
</tr>
<tr>
<td></td>
<td></td>
<td>100.00</td>
<td>163</td>
<td></td>
</tr>
<tr>
<td>36 and more</td>
<td>46.18</td>
<td>(117.41)</td>
<td>127 (117.41)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.78)</td>
<td>6.91</td>
<td>19 (15.70)</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td></td>
<td>46.91</td>
<td>(141.89)</td>
<td>129</td>
</tr>
<tr>
<td></td>
<td></td>
<td>100.00</td>
<td>275</td>
<td></td>
</tr>
</tbody>
</table>

Source: own processing research data

The value of chi-square statistic is $\chi^2 = 7.1228 = \chi^2_{0.05\text{ with } 2 \text{ df}}$. The $p$-value of 0.028399 indicates that the result is significant at $p < 0.05$ so we confirm alternative hypothesis $H_2$ at 95% level of probability. There are statistically significant differences among all three groups of entrepreneurs. If we change distribution of the age groups (Table 6), we are still successful in confirming alternative hypothesis $H_2$. 
Table 6 Comparison of Pearson chi-square calculations among the chosen age groups in relation to the interest rate risk

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Yes in %</th>
<th>Not in %</th>
<th>Neutral position in %</th>
<th>Chi-square</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>To 35</td>
<td>36.81</td>
<td>3.68</td>
<td>59.51</td>
<td>9.761</td>
<td>0.044651 &lt; 0.05</td>
</tr>
<tr>
<td>36 - 45</td>
<td>51.75</td>
<td>7.02</td>
<td>41.23</td>
<td>7.1228</td>
<td>0.028399 &lt; 0.05</td>
</tr>
<tr>
<td>46 and more</td>
<td>42.24</td>
<td>6.83</td>
<td>50.93</td>
<td>9.761</td>
<td>0.044651 &lt; 0.05</td>
</tr>
</tbody>
</table>

Source: own processing research data

In both cases the research findings confirm statistically significant dependence between the age and the perception of the interest rate risk. This result is contrary to the findings of Slovenian researcher Slavec (2014), who doesn’t consider the age for a relevant factor in relation to credit risk. Our findings are conformal with the results of the majority of studies that prove significant relations between these two factors, e.g. surveys of Bottazzi et al. (2014) and Vos et al. (2007). They bring evidence that younger firms face the financial and credit risk more intensively than older and larger firms. The authors Lazányi (2014), Dong and Men (2014), Boughchas et al. (2006), Pickernell et al. (2011) and Riding et al. (2012) present the opinion that younger entrepreneurs the credit risk and interest rate risk more intensively than older ones. Younger entrepreneurs pay higher interest rates because they are of a smaller firm size and their liquidity to pay in time is lower than of the older entrepreneurs. Neuberger and Räthke-Döppner (2014) in their study compare the interest rate in the region of East Germany with stress on demographic indicators. They find out the results that young entrepreneurs are more likely to pay higher interest rates because their businesses are smaller and their liquidity to pay in time is lower than of the older entrepreneurs. Also, Oliveira and Fortunato (2006), Werner and Faulenbach (2008) and Hegarty and Jones (2008) bring similarly statements. Coleman et al. (2014) proved the owner age is significant factor in explaining the composition of young firm capital structure. They state older individuals are more risk averse and they use debt financing less than younger ones.

Studies presented in the literature review, in research results and also in the survey of OECD (OECD, 2014) indicate that the group of young entrepreneurs and start-ups is more threatened by the credit and interest rate risk than older ones. They are more risky clients so banks apply higher interest rates to compensate for the higher risk-profile of disadvantaged entrepreneurs. Despite of the significant risk it is important to realize they are referred to as drivers of innovation (Belás and Sobeková, 2016; Colombo, Cumming and Vismara, 2016). If the state supports them by appropriate tools it could lead to reducing the interest rate risk for start-ups and young entrepreneurs. Our research team assumes that support of the young entrepreneurs by government could lead to the strong support of business development and make it easier to obtain external banking capital. This will support innovative companies and helps to increase the competitiveness of the Slovak economy.
At the base of the research findings we recommend to policy makers to eliminate the interest rate risk for young entrepreneurs to support the segment of young entrepreneurs and start-ups by special tools e.g.: guarantees for risky projects, supporting the venture capitalists and business angles in the region by special tools (for example tax and insurance relief) for a greater supply of venture finance and support the financing of venture and innovative projects that help to increase competitiveness of the country. This proposal is recommend also by authors Sobeková, Sipko and Solík (2014). They consider the lack of venture capital to be one of the key barriers of young entrepreneurs. They often have problems with a raising interest rate because of their higher risk profile and lack of guarantees. State guarantees on risky projects and for young companies with a short history allow the banks to provide loans to young entrepreneurs even if they have a higher risk-profile. Now there are special types of guarantees provided by Slovak guarantee and development banks but a majority of companies are still not well informed about its activities (Majková, 2008). The Slovak Republic was a co-founder of four state-private venture funds that support financing of innovative projects. We agree with the authors Colombo, Cumming and Vismara (2016, p. 21) who state: “Policy makers consider government venture capital programs to be an important part of a broader economic development strategy and to address the problems of financing gaps by intervening in multiple areas.”

5. CONCLUSION

The main objective of the paper was to bring scientific evidence that the age of the entrepreneur should be considered as a factor with the significant impact on the one part of credit risk of the company- the risk of the change of interest rate - in Slovakia. This hypothesis was supported by many authors and studies presented in the literature review of the paper. It is obvious that younger entrepreneurs are more risky for banks. They pay higher interest rates because they are of a smaller firm size and their liquidity to pay in time is lower than of the older entrepreneurs. The basic finding of the research team agrees with them. The age has a significant impact on the interest rate risk. The history of doing business with younger entrepreneurs is mostly short. They are less experienced and often have a worse ability to protect the firm against the changes of the interest rate. It seems that older entrepreneurs also mostly agree with the opinion that SMEs in other EU countries have lower interest rates. In both cases, we found that the biggest differences are between the group up to 35 and 36 and more. This fact indicates that young entrepreneurs face the interest rate risk more intensively than other age groups of entrepreneurs.

The solution of the problem lies in hands of the government. On the one hand the state could decrease the high risk profile of young entrepreneurs by providing guarantees for loans on innovative products and services. On the other hand it could sustainably supply the formal and informal venture capital on the Slovak market that may cause the external finance to be affordable for them. A support of young and innovative companies will lead to increasing global competitiveness of the Slovak Republic.

The strength of the research was in the size and the homogeneity of the selection sample. However, the research has some weaknesses. The most important is the fact that respondents fulfilled the questionnaire online, and we were unable to organize a more detailed face to face interview.
The future direction of the presented research will be focused on a comparative analysis of the entrepreneurial perception of the financial and credit risk in a wider geographical area of the countries of V4 – the Czech Republic, Slovakia, Hungary and Poland.

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