Measurement of Rate of Return in Education. Research Directions

Jozef Z. Dziechciarz, Wroclaw University of Economics

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Welcome to FIKUSZ 2015!

Over two decades or so I was member of a workshop developing a knowledge-based decision support system. Although our ‘master’, the leader of the workshop was not an easy man, many aspired to be apprentices in this workshop. It was simply good to belong… Sometimes the conversation went on long into the night, other times it was just an email or two to keep us on track.

Having thumbed a book for a few minutes out master was able to tell which books may be worth reading, and which are the must-reads. He always discouraged us from reading the works of authors who did not have much to say, only wrote to add another few points to their publication lists. He was not short on encouragement, and tried to get his apprentices engage in real-life problems, those that Popper called the ‘felt problems’. He made every possible effort to foster interpersonal theorising about the real-life problems and the lived experience of decision takers in their lifeworld, in the context of the lived experience in which both they and the problems are embedded, what Edmund Husserl calls the ‘dasein’. With the master’s guidance we started using the concepts developed by Thomas Kuhn and Karl Popper in our discussions and gradually it became possible to recognise who belonged to the workshop by the way we spoke. Soon the vocabulary of trans-disciplinary problem solving became our native language.

Our master always encouraged our attendance at conferences. We browsed the calls for conference papers with great excitement, but sometimes we returned from the conferences disappointed. On one occasion we spent the flight time from San Francisco to Frankfurt discussing the conference experience, and our master explained that the value of attending the conferences is to find our place amongst scholars from Brazil, Japan, and other non-native English speakers.

Our intention with this conference proceedings is to help early career researchers find their place in the world of scholars.

Jolán Velencei, Ph.D.
Conference Chair
Óbuda University and the Keleti Faculty of Business and Management

In the first of January, 2010 Budapest Tech became a university called Óbuda University. Budapest Tech was established in 2000 as a result of the merger of three technical colleges. Its history together with its predecessors bridges three centuries. Indeed, in the 2009 Jubilee Year Budapest Tech celebrates 130 years of education including 40 years of higher education. Today Óbuda University is responsible for training altogether 13,000 students in Budapest and Székesfehérvár. In Budapest the campuses can be found in Óbuda (3rd district) and Józsefváros (8th district). The head office and training premises of Keleti Faculty of Business and Management are located in Józsefváros.

When Budapest Tech was founded, the formerly separately taught economics and social science subjects were integrated into one independently managed organizational unit, the institutes of which are as follows:

- Institute of Economics and Social Sciences
- Institute of Enterprise Management
- Institute of Management and Organization
- Institute of Physical Education and Sport

Our faculty offers training courses in compliance with the Bologna System. In the new educational structure the first level is basic training (BSc, BA). Such first degree courses focus on practical professional training demanded by potential employers, and at the same time provide a good grounding for theoretical knowledge enabling students to further their studies on a Master’s degree course (MSc, MA) if desired. In the linear training system such a Master’s course normally takes 4 semesters. After graduating from a Master’s, a student can start working or opt to continue with his or her studies by applying to enter a PhD programme, the peak of tertiary education. The Faculty offers the following courses:

- Engineering Manager (BSc),
- Management and Business Administration (BA)
- Commerce and Marketing (BA)
- Business Development(MSc)
- Teacher of Engineering (engineering manager) (MA)

Students must obtain 210 credits during the 7 semesters of BSc and BA courses, while 120 credits are necessary on the 4-semester Master’s courses. The courses are tailored to the demands of the labour market. Óbuda University’s PhD programme in Applied Informatics has been recently accredited completing the range of educational programmes at Óbuda University.
The Reasons for SME’s Failure, Comparative Analysis and Research

Ivan Mihajlović
University of Belgrade, Technical Faculty in Bor, Engineering Management Department, Serbia
imihajlovic@tf.bor.ac.rs

Nenad Nikolić
University of Belgrade, Technical Faculty in Bor, Engineering Management Department, Serbia

Zhaklina Dhamo
University of Tirana, Tirana, Albania
zhdhamo@gmail.com

Peter Schulte
Institute for European Affairs INEA Senden, Germany
Dr.Peter.Schulte@gmx.de

Vasilika Kume
University of Tirana, Tirana, Albania

Abstract: This manuscript is presenting the preliminary results of research of the factors which are influencing the failure of SMEs. The manuscript is just the starting base for the larger research that will address the analysis of the most important factors that lead to closure of SMEs in different regions of the Europe. Basic factors of interest, which can be segmented as the individual characteristics of the entrepreneur or non-individual characteristics of the SMEs, based on wide literature review, were used to define the measuring scale for assessment of the most important factors which can lead to failure of SMEs, in previous research [1].
Such defined initial questionnaire form was used, in a pilot test research, to assess the opinion of the real entrepreneurs who suffered the failure of their previous businesses in Serbia. The idea of the research is to develop adequate measuring scale, which will be used to measure the potential failure of the existing SMEs, based on the rates developed in accordance to the factors which lead to the failure of the real SMEs in the past, which will be useful tool for wide European business environment.

Keywords: SMEs, Failure of SMEs, Statistical data analysis

1 Introduction

In recent years, a great number of studies have focused on the success of SMEs, while only few studies were related to the reasons for the failure of SMEs and finding the factors affecting it. Pointing out these factors can provide entrepreneurs with critical information for improving their businesses by reducing the risk of failure and increase chances of success [1]. This is actually the attempt to help entrepreneurs to learn from somebody else mistakes. If we discover the most influential factors for the SMEs failure and in accordance develop the measuring scale, we can use it to define the potential optimization of the operations of any SMEs.

In previous research of the authors of this paper, scientific papers were analyzed with aim to discover all potential factors that influences on failures of SMEs [1]. All identified factors were subsequently grouped into two main groups: (1) individual and (2) non-individual. The non-individual factors were, also, divided into two groups: (2.1) internal and (2.2) external influences. Individual factors are concerned with the abilities and characteristics of entrepreneurs. Internal non-individual factors are describing the operations inside the SMEs, while external are dealing with the environment and the influences from outside the enterprise on its performances.

Based on above defined factors, the questionnaire was developed to be used as a measuring scale for rating the importance of each factor on SMEs failure. Although, the main measurement scale, for assessing the importance of individual and non-individual factors for SMEs failure, was based on those two main groups, the final analysis of the factors, presented in this paper, will also address their intersections. Meaning, the correlation among individual and non individual factors influencing the success and failure of the SMEs will give additional outlook on the possibility to search the reason for SMEs bad performances, based on parallel influence of both groups of factors.

For example, some of the characteristics of SMEs could depend on their internal non-individual factors, but at the same time on characteristics of their owners/managers. This way the mode of organization and the type of decision making (centralized or decentralized management) or internal business
communication; can be correlated to type of leadership (authoritarian, participative), business ethics of the owners/managers and his/her business ethics (social responsibility). This also gives additional novelty to the research presented in this manuscript, because in majority of previous researches authors were dealing with separated influences of those two groups of factors. The correlation of those two, and their joint influence, will be the new issue, addressed in this manuscript.

2 Research Methodology

The research objective of this paper is to understand the level at which the reasons of SMEs failure may be characterized by a set of elements marked by the entrepreneurs as the most significant, and which are in accordance with the wide range of data available in literature related to this topic. The listed elements of significance were grouped in several groups of research questions.

The methodology of the questionnaire for data collection was used in the conducted research. The questionnaire was developed according to the available existing literature and attempts of other researchers to create an appropriate instrument for the analysis and evaluation of SMEs failure [2-14].

The questionnaire consisted of two parts. The first part contained 20 control questions of a demographic character, describing the respondent and his/her entrepreneurial characteristics, presented in Table 1. The second part of the questionnaire included 41 questions describing the influencing factors for SMEs failure, divided into appropriate groups. Based on this questionnaire, the opinions of entrepreneurs on the importance of individual factors, related to the personal characteristics of the entrepreneurs for the analysis and assessment of the reasons of SMEs failure were reviewed (groups of questions: I1, I2, I3). Along with individual, also non – individual factors were assessed. The non individual factors were further classified in two subgroups: external – resulting from actions from the surroundings of the SMEs (groups of questions E1 and E2) and internal – resulting from the conditions within the SMEs operations (group of questions E3).

Based on a questionnaire defined in this way, the survey of entrepreneurs, suffered from the failure in the past, was conducted. The replies obtained were entered in a single database and the statistical processing of the data was then performed. As a result, certain elements of influence on factors affecting the SMEs failure – presented through questions in the questionnaire – were combined into final factor groups, while some were eliminated from further analysis. Then, using the appropriate statistical tools, analysis was conducted on potential interrelations between the reviewed factors of influence. In this way, based on the assumed correlations between certain groups of questions and their impact on key question
(Y), the hypothetical models for analyzing the connection between the level of the recovery from the previous failure and the overall assessment of the important factors were formed.

2.1 Sample and the Collection of Data

The survey of entrepreneurs, in order to collect data, was performed in enterprises in Serbia whose owners’ suffered from failure in previous years, or at list, had changed their entrepreneurial activity. A total of 150 questionnaires were used for collecting their demographic descriptives and opinion on the influence of each of the defined factors. For collecting the data, questionnaires were used by researchers in direct “face to face” survey. Accordingly, large percentage of valid completed questionnaires was obtained – 130, which presents 86.6 %. A relatively high response rate was achieved owing to persistent, direct contact between the authors of this paper and the entrepreneurs who were asked to fill the questionnaire.

Detailed demographic indicators of the enterprises, who were included in this survey, as well as the entrepreneurs themselves, are presented in Table 1. Apart from demographic questions, the surveyed entrepreneurs responded to 42 questions with objective of obtaining their personal opinion on the importance of certain factors for failure of SMEs, which they have suffered from in the past. The respondents answered the questions through the gradation of the offered answers. The Likert scale was used for the gradation, where 1 represents the lowest significance (I absolutely disagree) while 5 represent the highest significance (I absolutely agree). Also, answers to a certain number of questions were of a dichotomous character (yes/no type).

3 Results and Discussions

In the following text, the results of the analysis, of data obtained using the questionnaire in order to confirm the initial hypothetical framework of the research, are presented. Data obtained using the questionnaire was entered into a database, which was then processed using the corresponding statistical analysis tools. The statistical analysis included the measurement of adequacy of the whole sample and the validation of the data structure. Then the analysis of the reliability of the opinion of the entrepreneurs on importance of individual and non – individual reasons for the SMEs failure, placed within the appropriate factor groups was performed, along with testing the initial hypothetical frameworks through the application of structural equations modeling. The statistical analysis of the collected data was performed using the software packages SPSS 18.0 and LISREL 8.80.
Table 1 presents the basic demographic features of the surveyed sample (entrepreneurs who changed their entrepreneurial activities or suffered from failure in the past).

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Failed SMEs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(N=130)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The sector of the previous business</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manufacturing</td>
<td>25</td>
<td>19.2</td>
</tr>
<tr>
<td>Service</td>
<td>99</td>
<td>76.2</td>
</tr>
<tr>
<td>Agriculture</td>
<td>6</td>
<td>4.6</td>
</tr>
<tr>
<td>Business age in time of failure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;3</td>
<td>32</td>
<td>24.6</td>
</tr>
<tr>
<td>3-5</td>
<td>29</td>
<td>22.3</td>
</tr>
<tr>
<td>&gt;5</td>
<td>69</td>
<td>53.1</td>
</tr>
<tr>
<td>Business life cycle in time of failure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Establishment</td>
<td>12</td>
<td>9.2</td>
</tr>
<tr>
<td>Growth</td>
<td>17</td>
<td>13.1</td>
</tr>
<tr>
<td>Stagnation</td>
<td>52</td>
<td>40</td>
</tr>
<tr>
<td>Decline</td>
<td>49</td>
<td>37.7</td>
</tr>
<tr>
<td>Number of employees in the SMEs that suffered from failure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;10</td>
<td>109</td>
<td>83.8</td>
</tr>
<tr>
<td>11-50</td>
<td>19</td>
<td>14.6</td>
</tr>
<tr>
<td>51-100</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>101-250</td>
<td>2</td>
<td>1.5</td>
</tr>
<tr>
<td>Newly established SMEs after the failure or new entrepreneurial activity (N=85)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The sector of the current SMEs business</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manufacturing</td>
<td>24</td>
<td>28.2</td>
</tr>
<tr>
<td>Service</td>
<td>51</td>
<td>60</td>
</tr>
<tr>
<td>Agriculture</td>
<td>10</td>
<td>11.8</td>
</tr>
<tr>
<td>Number of employees in the current SMEs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;10</td>
<td>62</td>
<td>72.9</td>
</tr>
<tr>
<td>11-50</td>
<td>19</td>
<td>22.4</td>
</tr>
<tr>
<td>51-100</td>
<td>2</td>
<td>2.4</td>
</tr>
<tr>
<td>101-250</td>
<td>2</td>
<td>2.4</td>
</tr>
<tr>
<td>Respondent Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;29</td>
<td>19</td>
<td>14.6</td>
</tr>
<tr>
<td>30-44</td>
<td>43</td>
<td>33.1</td>
</tr>
<tr>
<td>45-54</td>
<td>32</td>
<td>24.6</td>
</tr>
<tr>
<td>&gt;55</td>
<td>36</td>
<td>27.7</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>96</td>
<td>73.8</td>
</tr>
<tr>
<td>F</td>
<td>34</td>
<td>26.2</td>
</tr>
<tr>
<td>Age in Failure time</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;25</td>
<td>26</td>
<td>20</td>
</tr>
<tr>
<td>25-45</td>
<td>71</td>
<td>54.6</td>
</tr>
<tr>
<td>&gt;45</td>
<td>33</td>
<td>25.4</td>
</tr>
<tr>
<td>Previous experience in related sector</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;5</td>
<td>85</td>
<td>65.4</td>
</tr>
<tr>
<td>6-10</td>
<td>26</td>
<td>20.0</td>
</tr>
<tr>
<td>&gt;10</td>
<td>19</td>
<td>14.6</td>
</tr>
<tr>
<td>Previous entrepreneurial</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;5</td>
<td>42</td>
<td>32.3</td>
</tr>
</tbody>
</table>
experience | 5-10 | 32 | 24.6 |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;5</td>
<td>56</td>
<td>43.1</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Level of education</th>
<th>High school diploma and under</th>
<th>84</th>
<th>64.6</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B. Sc.</td>
<td>31</td>
<td>23.8</td>
</tr>
<tr>
<td></td>
<td>M. Sc.</td>
<td>2</td>
<td>1.5</td>
</tr>
<tr>
<td></td>
<td>Ph. D.</td>
<td>2</td>
<td>1.5</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>11</td>
<td>8.5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Field of education</th>
<th>Technical-technological</th>
<th>69</th>
<th>53.1</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Legal-economics</td>
<td>30</td>
<td>23.1</td>
</tr>
<tr>
<td></td>
<td>Social-humanistic</td>
<td>31</td>
<td>23.8</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Marital status</th>
<th>Single</th>
<th>30</th>
<th>23.1</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Married</td>
<td>85</td>
<td>65.4</td>
</tr>
<tr>
<td></td>
<td>Divorced</td>
<td>15</td>
<td>11.5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Age in failure time</th>
<th>Top manager / director</th>
<th>27</th>
<th>36.5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Middle management</td>
<td>11</td>
<td>14.9</td>
</tr>
<tr>
<td></td>
<td>Operational level of management</td>
<td>20</td>
<td>27.0</td>
</tr>
<tr>
<td></td>
<td>Employees</td>
<td>16</td>
<td>21.6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hours spent at work, weekly</th>
<th>&lt;40</th>
<th>8</th>
<th>6.2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>40-50</td>
<td>65</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>&gt;50</td>
<td>57</td>
<td>43.8</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hours spend in solving strategic problems/decision making/addressing the operational challenges, weekly:</th>
<th>&lt;20</th>
<th>93</th>
<th>71.5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>20-30</td>
<td>17</td>
<td>13.1</td>
</tr>
<tr>
<td></td>
<td>&gt;30</td>
<td>20</td>
<td>15.4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hours spend in administrative work, weekly:</th>
<th>&lt;20</th>
<th>105</th>
<th>80.8</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>20-30</td>
<td>13</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>&gt;30</td>
<td>12</td>
<td>9.2</td>
</tr>
</tbody>
</table>

Table 1
Profiles of analyzed SMEs and respondents

The key research question (Y) was considering the level to which entrepreneurs managed to recover from the failure. The statistics for the key question is presented in Table 2.
In addition, for those entrepreneurs who recovered from the failure, it was interesting to know the amount of time required. The results are presented in the table 3.

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 3 years</td>
<td>43</td>
</tr>
<tr>
<td>Between 3 and 5 years</td>
<td>22</td>
</tr>
<tr>
<td>More than 5 years</td>
<td>13</td>
</tr>
<tr>
<td>Total</td>
<td>78</td>
</tr>
</tbody>
</table>

Table 3
The time that was necessary to reach the level of recovery above 1

In accordance to the results presented in Tables 1-3, it is obvious that from the number of 130 entrepreneurs, 78 of them recovered from the previous failure. On the other hand, 85 entrepreneurs started their new business venture. This means that seven entrepreneurs started new business venture, even without recovery from the previous failure.

In order to assess which type of statistical analysis should be further used on the obtained data; correlation analysis between different factors as the reasons of SMEs failure was conducted. If considerable number of questions from the survey can be correlated among each other, with statistical significance, this is the clear signal that linear statistical analysis can be applied. The results of correlation analysis of paired questions from this survey are presented in Table 4. In this table, only the statistically significant correlations (p<0.05), and with coefficient of correlation r>0.5 are presented. Based on the results in Table 4, it can be concluded that 15 correlation pairs do have statistical significance, pointing to a
significant internal correlation between the listed factors, and thus the use of factor analysis in further research is justified [15, 16].

Evaluation of the internal consistence of the initial instruments for data collection was performed using the Cronbach alpha, Spearman–Brown and Ω tests [17-21]. According to these tests, values of a Cronbach α, Spearman–Brown and Ω coefficient higher than 0.70 represent a good option for modeling the questionnaire results within the reviewed population [21].

When conducting the above consistence tests, all the factor groups of individual and non-individual factors, had values above 0.7, with exception of group I1, which includes the questions (I1Q1: If I would have more time for private activities I would spend it with my family; I1Q2: If I would have more time for private activities I would spend it with my friends; I1Q3: If I would have more time for private activities I would spend it on my hobby; I1Q4: If I would have more time for private activities I would spend it going on vacation; I1Q5: If I would have more time for private activities I would spend it on voluntary work; I1Q6: If I would have more time for private activities I would spend it CSR). Accordingly, this group of questions was omitted from the further quantitative analysis, however, will be the subject of qualitative analysis in subsequent research.

<table>
<thead>
<tr>
<th>Correlation pairs</th>
<th>Value of p</th>
<th>Value of Pearson Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>I1Q5: If I would have more time for private activities, I would spend it on voluntary work</td>
<td>.000</td>
<td>.774**</td>
</tr>
<tr>
<td>I1Q6: If I would have more time for private activities, I would spend it on social responsible work</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I2Q1: Self confidence is the most important personal characteristic of entrepreneur for success of SMEs</td>
<td>.000</td>
<td>.537**</td>
</tr>
<tr>
<td>I2Q4: Creativity is the most important personal characteristic of entrepreneur for success of SMEs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I2Q5: Internal locus of control is the most important personal characteristic of entrepreneur for success of SMEs</td>
<td>.000</td>
<td>.502**</td>
</tr>
<tr>
<td>I3Q4: My motivation for SMEs startup was self fulfillment</td>
<td>.000</td>
<td>.577**</td>
</tr>
<tr>
<td>I2Q2: Need of achievement is the most important personal characteristic of entrepreneur for success of SMEs</td>
<td>.000</td>
<td>.515**</td>
</tr>
<tr>
<td>I2Q3: Risk taking is the most important personal characteristic of entrepreneur for success of SMEs</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
I2Q3: Risk taking is the most important personal characteristic of entrepreneur for success of SMEs

I2Q5: Internal locus of control is the most important personal characteristic of entrepreneur for success of SMEs

I2Q6: Independence is the most important personal characteristic of entrepreneur for success of SMEs

I3Q3: My motivation for SMEs startup was job satisfaction

I3Q4: My motivation for SMEs startup was self fulfillment

E1aQ1: Political issues, as external factor, can have importance for SMEs operational problems.
E1aQ2: Economic issues, as external factor, can have importance for SMEs operational problems.

E1bQ1: Technological issues, as external factor, can have importance for SMEs operational problems.
E1bQ2: Ecological issues, as external factor, can have importance for SMEs operational problems.

E3Q2: Delay in fulfilling bank obligation, as internal factor, can have importance for SMEs problems.
E3Q3: Fall of motivation, as internal factor, can have importance for SMEs problems.
E3Q4: Delegation of responsibilities, as internal factor, can have importance for SMEs problems.
E3Q7: The level of fixed assets free from any burden/inscription, as internal factor, can have importance for SMEs problems.
E3Q8: The level of clearing/barter transaction, as internal factor, can have importance for SMEs problems.

E2aQ1: Transportation system is important infrastructural issue of the surrounding region of my SMEs which suffered from failure
E2aQ2: Supply of the electricity is important infrastructural issue of the surrounding region of my SMEs which suffered from failure

D1: Number of employees in your SMEs that suffered from failure
D2: Number of employees in current SME

Table 4
Internal correlations between factors influencing the SMEs failure

As the basis for subsequent construction of the structural model for this research, a good starting point for establishing connections and relations between the proposed groups can be based on the factor analysis of the remaining set of 34
variables, divided into the groups (I2, I3, E1, E2 and E3). The obtained results of factor analysis are presented in Table 5. Factor analysis is measuring the internal coexistence of the questions divided in group. If the factor analysis give the results of the internal consistence tests values above 0.7, than the questions of the questionnaire are well defined and structured. This is a clear signal that such questionnaire can be used for development of the final structural model [22].

According to the results of the factor analysis, presented in Table 5, following conclusions can be constructed: Largest positive values of factoring coefficients of the questions in group I2 (bold values in the table), are almost all located in the first grouping factor, with exception of the question I2Q7: „Education is the most important personal characteristic of entrepreneur for success of SMEs“. This means that respondents subconsciously placed this question outside the frame of the group I2. Considering the group I3, five questions are inside the same factor, and two questions I3Q6: “My motivation for SMEs startup was employment creation” and I3Q7: “My motivation for SMEs startup was access to additional financial resources” are outside this scope. Considering the group E1, from 6 questions in this group, 3 are in one factor group and 3 in another. This means, that this group of questions should be divided in two separate subgroups E1a and E1b (Table 5). For the group E3, almost all questions remained in the same factor group, with exception of question E3Q4:“Delegation of responsibilities, as internal factor, can have importance for SMEs problems”, which is outside this frame. Finally for the group E2, six questions are equally divided in two subgroups E2a and E2b (Table 5). Based on above observations, the Structural Equation Model (SEM), which can describe the influence of each of the individual and non/individual parameters on the level of recovery of entrepreneurs, can be developed. One example of SEM, which presents the influence of non-individual factors on the level of recovery, is presented in Figure 1.
I2Q1: Self confidence is the most important personal characteristic of entrepreneur for success of SMEs.

I2Q2: Need of achievement is the most important personal characteristic of entrepreneur for success of SMEs.

I2Q3: Risk taking is the most important personal characteristic of entrepreneur for success of SMEs.

I2Q4: Creativity is the most important personal characteristic of entrepreneur for success of SMEs.

I2Q5: Internal locus of control is the most important personal characteristic of entrepreneur for success of SMEs.

I2Q6: Independence is the most important personal characteristic of entrepreneur for success of SMEs.

I2Q7: Education is the most important personal characteristic of entrepreneur for success of SMEs.

I3Q1: My motivation for SMEs startup was desire to be independent.

I3Q2: My motivation for SMEs startup was financial motives.

I3Q3: My motivation for SMEs startup was job satisfaction.

I3Q4: My motivation for SMEs startup was self fulfillment.

I3Q5: My motivation for SMEs startup was good networks.

I3Q6: My motivation for SMEs startup was employment creation.

I3Q7: My motivation for SMEs startup was access to additional financial resources.

E1aQ1: Political issues, as external factor, can have importance for SMEs operational problems.

E1aQ2: Economic issues, as external factor, can have importance for SMEs operational problems.

E1aQ3: Social issues, as external factor, can have importance for SMEs operational problems.

E1bQ1: Technological issues, as external factor, can have importance for SMEs operational problems.

E1bQ2: Ecological issues, as external factor, can have importance for SMEs operational problems.

E1bQ3: Legislative issues, as external factor, can have importance for SMEs operational problems.
E3Q1: Management of receivables/payables, as internal factor, can have importance for SMEs problems.

E3Q2: Delay in fulfilling bank obligation, as internal factor, can have importance for SMEs problems.

E3Q3: Fall of motivation, as internal factor, can have importance for SMEs problems.

E3Q4: Delegation of responsibilities, as internal factor, can have importance for SMEs problems.

E3Q5: Difficulties in absorption/acquisition of new technologies/innovation, as internal factor, can have importance for SMEs problems.

E3Q6: Inability to find new potential shareholders/partners, as internal factor, can have importance for SMEs problems.

E3Q7: The level of fixed assets free from any burden/inscription, as internal factor, can have importance for SMEs problems.

E3Q8: The level of clearing/barter transaction, as internal factor, can have importance for SMEs problems.

E2aQ1: Transportation system is important infrastructural issue of the surrounding region of my SMEs which suffered from failure

E2aQ2: Supply of the electricity is important infrastructural issue of the surrounding region of my SMEs which suffered from failure

E2bQ1: Possibility to increase capacity is important infrastructural issue of the surrounding region of my SMEs which suffered from failure

E2bQ2: Existing share of market for products/services is important infrastructural issue of the surrounding region of my SMEs which suffered from failure

E2bQ3: Existing resources for important raw material is important infrastructural issue of the surrounding region of my SMEs which suffered from failure

E2aQ3: Enough qualified work force in the region is important infrastructural issue of the surrounding region of my SMEs which suffered from failure

Table 5

The Component Matrix of the factor analysis
Extraction Method: Principal Component Analysis.

<table>
<thead>
<tr>
<th></th>
<th>Component 1</th>
<th>Component 2</th>
<th>Component 3</th>
<th>Component 4</th>
<th>Component 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>E3Q1</td>
<td>.705</td>
<td>-.229</td>
<td>-.180</td>
<td>-.040</td>
<td>.132</td>
</tr>
<tr>
<td>E3Q2</td>
<td>.579</td>
<td>.292</td>
<td>-.131</td>
<td>.341</td>
<td>.080</td>
</tr>
<tr>
<td>E3Q3</td>
<td>.597</td>
<td>.263</td>
<td>.042</td>
<td>-.354</td>
<td>-.309</td>
</tr>
<tr>
<td>E3Q4</td>
<td>.408</td>
<td>.574</td>
<td>-.079</td>
<td>-.287</td>
<td>-.188</td>
</tr>
<tr>
<td>E3Q5</td>
<td>.568</td>
<td>.273</td>
<td>-.069</td>
<td>-.179</td>
<td>.027</td>
</tr>
<tr>
<td>E3Q6</td>
<td>.611</td>
<td>.088</td>
<td>-.036</td>
<td>-.264</td>
<td>.082</td>
</tr>
<tr>
<td>E3Q7</td>
<td>.590</td>
<td>.171</td>
<td>-.271</td>
<td>.463</td>
<td>.080</td>
</tr>
<tr>
<td>E3Q8</td>
<td>.657</td>
<td>.057</td>
<td>-.291</td>
<td>-.178</td>
<td>.123</td>
</tr>
<tr>
<td>E2aQ1</td>
<td>.014</td>
<td>.614</td>
<td>.421</td>
<td>.067</td>
<td>.031</td>
</tr>
<tr>
<td>E2aQ2</td>
<td>.685</td>
<td>.313</td>
<td>.121</td>
<td>.098</td>
<td></td>
</tr>
<tr>
<td>E2bQ1</td>
<td>.664</td>
<td>.264</td>
<td>-.014</td>
<td>.167</td>
<td>.205</td>
</tr>
<tr>
<td>E2bQ2</td>
<td>.489</td>
<td>.191</td>
<td>.008</td>
<td>.160</td>
<td>.161</td>
</tr>
<tr>
<td>E2bQ3</td>
<td>.523</td>
<td>.361</td>
<td>.023</td>
<td>.136</td>
<td>.033</td>
</tr>
<tr>
<td>E2aQ3</td>
<td>.091</td>
<td>.532</td>
<td>.387</td>
<td>.296</td>
<td>.054</td>
</tr>
</tbody>
</table>

a. 5 components extracted.
4 Conclusions

This manuscript presents the results of the joint research work of the group of authors from the International Resita Network for Entrepreneurship and Innovations. The subject of the research was the reasons for the SMEs failure. Based on the wide literature review initial measuring scale was developed, which was used to assess the opinion of the entrepreneurs who suffered from the failure in the past. The accuracy of the measuring scale was subsequently tested, using the adequate statistical tools. Obtained results are presented in this manuscript.

Based on the obtained results we can conclude that most of the entrepreneurs, who suffered from failure in their previous venture, decided to start again with new SMEs which are usually based on completely different scope of entrepreneurial activities. Actually 85 out of 130 entrepreneurs started new SMEs, from which 78 recovered from the failure at some level and seven, decided to start new venture even before financial recovery.
The correlation of some of the individual questions from all the groups was proven. This way, for example, entrepreneurs who believe that the most important personal characteristic of entrepreneur, which will lead to success of his/her SME, is self confidence, also stated that their motivation to become entrepreneurs was self fulfillment (question I2Q1 correlated with I3Q4, in Table4). Another interesting finding is that political issues are strongly connected with economic issues, as external factors which can cause SMEs operational problems. The strength of this connection is evident with coefficient of correlation equal to 0.511, between questions E1aQ1 and E1aQ2 in Table 4.

Based on the results of this research, it can also be concluded that there are lots of combination of influence of different factors, which caused the failure of the SMEs. Those factors are collected in three groups of internal factors I1, I2 and I3 and three groups of external factors (E1, E2 and E3). Grouping of those questions was based on the factor analysis, presented in Table 5.

The grouping of the variables can result with development of SEM describing the influence of each of the factors group on the level of recovery of SMEs. Just one example of such SEM is presented on Figure 1. The results in this figure, leads to following conclusions. For example, entrepreneurs who believe that the most important factors for SMEs failure are political (question E1aQ1), economic (question E1aQ2) and social issues (question E1aQ3), also have expressed high level of recovery from the failure (question Y). The level of correlation of the E1a groups of factors and the level of recovery (Y) is 0.62. On the other hand, entrepreneurs who believe that important factors for their SMEs failure were technological issues (question E1bQ1), ecological issues (question E1bQ2) or legislative issues question (E1bQ3), did not have high level of recovery from the previous failure. The correlation between the group of non-individual factors (E1b) and level of recovery Y is negative and equal to – 0.46, in Figure 1.

Obtained results give the possibilities for further research on this topic, which will include development of the structural equation model (SEM) of all investigated items. The final outcome of this research will result with the measuring scale which will enable the measurement of the “health condition” of the existing SMEs, based on the historical reasons of failure of SMEs in the past. This will give the opportunities to SMEs owners, to learn from their own and from somebody else mistakes in the past, and to keep their enterprises from failure, by identifying the most acute factors which are challenging their business, using the developed measuring scale.

Acknowledgement

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Research and Innovation (www.resita.eu), which is financially supported by DAAD.

References


Knowledge Management as a Challenge of Hungarian Companies

Prof. dr. habil Andrea Bencsik
J. Selye University Komarno, Slovakia;
I. Szechenyi University Győr, Hungary
bencsik.andrea@yahoo.com

Abstract: Knowledge and these notions have become more and more important and we speak about a knowledge based society today. A lot of small and big companies have reacted upon these new challenges. But there is a deep abyss about knowledge conception and practice between the professional researchers and company - life. Questionnaires were used in this research and a special segment of the native knowledge based on economy was focused on. The question was: How can small and medium-sized companies be equal to the demands of new economy? Researchers would have liked to know what the sources of success are and how they can be in connection with questions of knowledge acquisition, knowledge transfer, knowledge utilization in small and medium-sized companies. These companies know that they have to change their behaviour and thinking, but they are not on the suitable level that they can compete with bigger or multinational companies.

Keywords: knowledge, management, small and medium-sized companies, study

1 Introduction

Experts of theory and praxis have been focusing on the about researches of success and successful operating of companies for a long time. Uniform models cannot be given to reach the success at all, because beyond economical regularities there are individual specialities that can influence the successful functional mechanisms of companies. In traditional industry capital and labour use to be the essential factors of production, nowadays they are in the background and they hand over their places to human knowledge. [4]

Nowadays it can be realized in the areas of management - and in other areas of economy as well, - some notions such as innovation, information, knowledge, study have came to light that are in a incoherent connection with each other. Knowledge and these notions have become more and more important and everybody speaks about a knowledge based society today. A lot of small and big companies have reacted upon these new challenges. But there is a deep abyss about knowledge
This area is frequently researched, but this survey was motivated by the following conception: researchers would have liked to know how the Hungarian companies are touched by this new system of requirements that demand changes. As these changes are fundamentally important from the view of development of Hungarian economy in the future.

In this research a special segment of the native knowledge based on economy was focused on. The question was: How can small and medium-sized companies be equal to the demands of new economy? Researchers would have liked to know what the sources of success are and how they can be in connection with questions of knowledge acquisition, knowledge transfer, knowledge utilization in small and medium-sized companies. This question is very important because these small enterprises have a disadvantage compared big or multinational companies at the competitive market. It could be clearly felt at the beginning of this research that the connection is knowledge between demand and success. It can be a good question why researchers wanted to focus on the small and medium-sized companies?

This area is not in the middle of scientific researches but this segment is very important in Hungary and in the other western countries as well because it has a very significant influence on the economy. Their importance can be felt in their numerical superiority. In Hungary they are 99,87% out of all the companies, and they have 70% of the employed workers. This sector has 50% the added value. [3]

Companies which are called small and medium-sized can have maximum 250 employees, turnover can be under 50 million Euros or total amount of their balance sheet can be maximum 43 million Euros.

The research hypothesis has been justified from two directions. First researchers approached the problem from the view of theory. This will be shown in Chapter 1. A practical survey was aimed to be described but to understand it, it is needed to go back to the basis of theory.

In the second chapter the method of the primary research will be shown and after that the processes of knowledge based economy will be analysed. During the research it was noticed that this area is very defective in scientific literature, because examination of knowledge processes is a little researched area in case of small and medium-sized enterprises. The lack of native experience has had to be coped with in this problem. The essentials of this paper are about the primary research in that researchers focused on the following main groups - which can follow the interpretation possibilities of the survey of knowledge and competitiveness in small and medium-sized enterprises.

- Organizational culture and leader’s style as prerequisites
- Elements of study as significant factors
Employees of a higher degree and connection with higher education as a pledge of future
Rate of intellectual capital as index number

2 Approach of Business Theory

This research has been continued from the view of practice, but scientists cannot work without theoretical basis. Economic operators have to find answers to the provocations of the environment – it is similar to that of nature where people have to adapt very fast to development. Changes of environment launch a process of adaptation at companies that proceed in a competitive surrounding. There are operators who can get advantages in this process and the others run into a disadvantageous situation. The solutions that are advantageous can spread and the others can fall into the background.

On the basis of these analogies the changes of knowledge-based economy can be caught [2].

This new economy is only a challenge for companies they need to fit to survival. This is a threat on the one hand, because who cannot adapt to this demand well enough, they can fall into the background. But on the other hand every change is a possibility for companies to get a competitive advantage. These changes can be possibilities, if the needed resources – knowledge - are at the companies on a suitable level. Otherwise changes have to be handled as a threat. In this new knowledge-based economy the economic operators can have chance to adaptation or increase their competitiveness that can accumulate suitable resources - knowledge - in a proactive way. The function of small and medium-sized enterprises depends on their capabilities to catch knowledge, how they use it during their value creation, because the added knowledge-value becomes more and more significant in the economic processes [6].

It is documented by a report of OECD that was published in the year of 1996. According to this report about half of GDP of well developed countries comes from knowledge industry and 8 workplaces out of 10 are called into being at a knowledge intensive sector [5]. The biggest problem for small and medium-sized enterprises is a special process at the market, where companies concentrate their forces as multinational companies. It is only the “tip of the iceberg” because they can push the small enterprises form the market in this way. This process can be seen especially in the area of food trade, where hypermarkets are called into being after each other and in parallel with this process the number of small shops is decreasing [9].
3 Knowledge Capital

People have talked about knowledge a lot, but it has not been defined it. This task is not too simple because knowledge is an inconceivable and complex notion so it can be only circumscribed. To this a definition of Davenport – Prusak [1] can be used that is a practical viewing: Knowledge is a heterogeneous and continuously changing mix from limited experiences, values and joined information. It is expertise that can give a frame to judgement and attainment of new information and experiences and it originates and useful in the knowledge possessing people’s mind. Companies take care of this knowledge not only in documents and stock-lists, but they store it up in their proceedings, practical activities and standards as a part of organizational routine [1].

Knowledge has value therefore it can be caught as an element of property. Knowledge is capable of value creation, so it can be caught as an element of capital. Intellectual capital is an amount of special knowledge that can give competitive advantages and it is in possession of companies [8].

4 Method of Primary Research

A representative sample was not aimed, but to collect information about the connection between knowledge and small enterprises was purposed by the way of experience. In spite of the measure of the sample it could be analysed widely, because the examined companies have very different functions. They are from the following sectors:

- Property protection
- Trade
- Catering
- Insurance
- Financial Sector
- Transport
- Constructing
- Agriculture
- Production
- Else

The method of research was a survey by a questionnaire. The essential new thing was in it that the non-measurable characters at companies were measured with a big sample. These features are studying, intellectual capital and their connection with competitiveness. The aim was to collect as big a sample as possible and to increase willingness to give an answer, parallel with it to decrease the falling of the sample. To reach this researchers departed from the rules of the traditional methods. The time limits were respected and the filling time was reduced to the minimum. A
very simple structure was used in questionnaires. To answer subjective questions (elements) the Likert scale was used with 5 grades in order to have an easy lucidity. This range of scale was a good compromise to keep information content and review. The questions were structured, but the logical schemas were held, at the same time well separable blocks were formed.

It was endeavoured to compose very simple and easy to understand questions, because leaders have a very different education, culture, intellect, so it was tried to avoid complex and difficult to understand economic expressions. But it means that a compromise had to be found between the usage of exact economic expressions and unambiguousness.

Some important financial data were asked for that can show the characters of companies. From these researchers tried to conclude the size and the development of companies. But this information is defective. Companies did not give this information with pleasure. 400 questionnaires were collected and the rate of answers was very imposant 92.4%.

Varied statistical methods were used. In the first step simple descriptive statistical methods were used with MS excel, but later the answers were analysed in complex way with SPSS 16.0 program. Sampling was a simple random sample at country level.

5 Analysis of Questionnaires

Functions

The functions of companies were examined from 3 points of view: capital intensity, labour intensity, knowledge and information intensity. The research results can be seen in the table 1.

<table>
<thead>
<tr>
<th>Function</th>
<th>Very low %</th>
<th>Low %</th>
<th>Average %</th>
<th>High %</th>
<th>Very high %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital intensity of function</td>
<td>2,86</td>
<td>11,43</td>
<td>37,14</td>
<td>31,43</td>
<td>17,14</td>
</tr>
<tr>
<td>Labour intensity of function</td>
<td>0,00</td>
<td>0,00</td>
<td>28,57</td>
<td>47,14</td>
<td>24,29</td>
</tr>
<tr>
<td>Knowledge and information</td>
<td>0,00</td>
<td>1,43</td>
<td>32,86</td>
<td>37,14</td>
<td>28,57</td>
</tr>
</tbody>
</table>

Table 1
Functions of Companies
As for capital intensity it can be said that it is not too important for companies, labour, knowledge and information intensity of function are more significant. Values can be seen in the table 1.

Labour intensity has a bigger significance because for the business profit it is the most important factor. According to the interviewed people their work has very high requirements in this area.

Nowadays knowledge and information requirement has become more valuable. Information is very important for every company because 37% of the questioned people marked a high level and in this case researchers had the highest rate of people (28.6%), who chose the very high categories.

On the basis of these results it can be said that most parts of small and medium-sized enterprises need to use knowledge capital. This appears as a necessity of information and knowledge. Compared to practice it is not a surprise.

**Organizational culture and leadership**

Factor analysis was completed with this group of questionnaire. To the examination a test in Bartlett style was continued and on the basis of this result the zero-hypothesis (correlations among factors) was rejected, consequently the variables are not in correlation with each other. It was supported by the Kaiser-Meyer-Olkin’s indicator and at the end factor analysis could be used as a suitable method. On the basis of the 20 elements the six factors were born. They are:

1. Employees trust in each other
   - In our company it is typical that people are in a close connection with each other
   - I am a determined person as a leader
   - Our conceptions are always realized by my employees
   - I always give concrete aims and tasks to my employees

2. Initiatives frequently come up from the ground
   - Top management supports this movement from the ground up
   - We decide upon our aims and tasks with my employees

3. Our employees have considerable independence in decision making
   - Studying is an accepted demand among our employees
   - I encourage my employees to form their own aims and tasks

4. In our company there is an open atmosphere
   - We use teamwork in our daily work
   - Employees frequently work together spontaneously

5. Motivation is below among our employees
   - Fluctuation is very big among our employees
   - Conflicts frequently are among our employees
I urge my employees frequently to keep deadlines

6. Spheres of activity are strictly regulated
• There is a hierarchic relationship between leaders and employees

The first factor is called leader’s definiteness and trust, the second is employees’ initiative, the third is independence and possibilities, the fourth is collaboration, the fifth is the negatives and sixth is regulation. Expectations from organizational culture can be summarized in these factors that are conditions for studying and development of small and medium-sized enterprises. Leaders agree with the first factor (definiteness and trust). Generally it can be said if people have to work together in a team, it is indispensable to be with each other in a trustful atmosphere. If they lack this condition, they cannot work in a team effectively. In the form of close connections among employees time has an essential role. The new employees can fit in workplaces with difficulties because everybody is concerned about their workplace and position. Connections in work for a long time can support trustful atmosphere. To operate companies successfully the leader’s definiteness is indispensable. People agreed with this fact during this survey. Most employees do not take the opportunity to be independent, they expect instructions and allocation of tasks from the top management. Nowadays it is characteristic of the small and medium-sized enterprises that leaders decide upon simple and concrete tasks, limit the sphere of activity for effectiveness. So leaders agreed totally that employees have to do their conceptions.

About variables in the second group (employees’ initiative) has to be said that the rate of initiatives from the ground up is low. In most places leaders refuse these, due to the hierarchical structure, and commands. Employees’ independence is rather limited. Collaborations with top management to determine aims and tasks are at a middle level, but we can feel a little opening in this area.

In case of the third factor (independence and possibilities), considerable independence in decisions is disproved by the regulated sphere of activity, and by obligations towards the top management. In this way it is rather on the middle level or under it. Studying is an accepted factor, because everybody knows that it is one of possibilities that can make people feel secure at their workplaces for a long time. Most leaders want to encourage employees to realize their aims, because leaders are frail people as well. In most cases money is all they offer to motivate employees, and to reach the purposes of the companies they will use this tool.

The fourth factor is collaboration. It contains teamwork and willingness to use it and atmosphere. Most of the questioned leaders agreed with the necessity of the open atmosphere. Teamwork is a generally used method of work, but spontaneous cooperation causes some problems. Most employees want to work alone and solve problems without help. We think they are not flexible enough.

The fifth factor can show the negatives. At most organizations leaders did not answer these questions, because they are afraid of their own positive judgement.
They disclaimed fluctuation, conflict and the lack of motivation. But reality is
darker than it seems from these results. According to leaders only urge to keep
deadlines is an acceptable feature at their companies.

The sixth factor is about regulation. Leaders agreed with the regulated sphere of
activity but about relationship between leaders and employees they had a different
opinion. Most leaders declare themselves as flexible people and they said that
employees can talk to them at any time. But the reality is different from this
declaration. Leaders are very busy they run all day and they keep the hierarchical
rules. So employees have to register in advance to meet their leader.

Elements of studying

According to most leaders (31.4%) it is not characteristic to support employees’
studies with money. Only few leaders think that it is important to study, top
management does not motivate employees’ willingness to develop and they do not
give a financial assistance. During our research it became clear that at the
questioned enterprises manual work is characteristic, but there are a lot of
employees in intellectual occupations as well. May be this is the cause of leaders’
way of thinking that 47% do not support their employees’ higher education. It does
not mean that leaders do not support their employees’ studies at all simple they do
not need degree holder employees. In leaders’ opinion (53%) they support
employees’ development in some kind of way by money, too. Altogether we can
say that companies’ willingness to support their employees’ study is very different
and it depends on their style of work, the rate between manual work and intellectual
work and other additional factors. (table 2.)

Organized internal training at companies/ external training out of companies

It would have been good to know if companies organize internal or external training
for their employees or not. They can do it by their own organization or with outsider
companies on the basis of contracts. This situation is the same as the earlier one.
According to the questioned leaders (47%) it is not important to teach employees,
but the others (53%) keep it significant and they do it in some kind of form. Only
few leaders said that they organize a training and teaching for employees regularly
and they give lectures frequently. (table 2.)

Leaders’ attitude to support individual study

Leaders’ attitude is very negative in this area. Most questioned leaders (64%) said
that is not characteristic to support individual study and only the rest said that they
support it in some kind of way. What can the causes be? It is thought that leaders,
who do not support organized training, will not support individual study either.
Leaders’ opinion is that these study methods do not bring effective results at all,
they prefer practical experiences. (table 2.)
**Regular teamwork**

Successful teamwork depends on the quality of communication inside the team, leadership and leaders’ individual attitude in team. A team can operate in a more effective way if they can bring purposes, aims and interests of organization closest to them. Some questioned enterprises (20%) said that they do not work in team at all, but the others (72.8%) hold it as an important form of work and they use it regularly. (table 2.)

**New employees’ coaching by skilled workers**

It is very important for every company that their employees fit in the organization and to study work style and rhythm. They can support this problem solving that experienced workers help the new employees to study the new work style and to be aware of the expectations. There are only few companies where it is not a characteristic or a general method. In their opinion it is the most important basis of collaboration to help each other and to teach the younger employees by the older workers. (table 2.)

**Participation in professional programmes**

Some questioned leaders think (17.2%) that it is not significant for them. Most of them think about it in the other way. They find it important to be a participant at these programmes, because these can move their companies to reach a higher level in their work and at the market, and by this way they can increase their profit. Altogether it can be said that leaders do not support individual and organized trainings, but they find it important to participate in professional programmes. They think that they can change (get and give) useful information between each other at these forums. (table 2.)

**Employees share their information and experiences with each other with pleasure**

The question is how characteristic the open atmosphere, helpfulness, adaptive skills and knowledge sharing is at companies. A positive picture about this area was formed. Most leaders (84.3%) think that their employees help each other and share their experience and information with pleasure to make their work easier. But it has to be said that this attitude and behaviour depend on organizational culture and leadership in the biggest measure. (table 2.)
Employees with a higher degree

Leaders believe this demand very important that their employees should have suitable professional skills and knowledge, namely most of all considered this fact more important than moderate. On the basis of these professional experience this demand is there among the most important expectations at the companies. Only a few of the questioned leaders consider it important that new employees with a higher degree should have practical experiences. (But it is typical in Hungary that bigger companies demand from young people to have more higher education degrees, they should speak more languages, they are not older than 25 years, but they should have minimum 3-5 years experiences.) (See table 3.)
Table 3
Expectation from Young People with a Higher Degree

Companies demand employees to fit changes fast and should work together with other colleagues in an effective way to help the success of enterprises. It is advantageous if new employees with a higher degree can study new work fast enough and can fit to the moral of the company. This demand is called flexibility. This demand (to be flexible), is not a surprise. This feature was appreciated on the important or very important level by most of the questioned leaders (85.7%).

Leaders expect from employees with a higher degree that they should be reliable, loyal, leaders can trust these people and they can empower responsibility and give tasks too. On one hand companies demand these employees with a higher degree to be independent, creative, reliable, suitable for teamwork and motivation. But on the other hand leaders are dissatisfied with some characteristics, for example: knowledge of languages, skills for problem solving, creativity, flexibility. And some companies signed that they miss from these people their willingness to development, precision, system thinking (to see connections among things).

The conclusion can be drawn that at universities there are very few lectures where students can study these skills. They do not have enough seminars or practices where students have to work in team or individually, where they should use their own brain, where they should solve real problems in real situations.
In the questioned leaders’ opinion to speak languages is not too important. It was said by 40% of the leaders. May be these enterprises do not want to work with other nations, they plan their activity only at the inside market. This thinking is for a very short-distance and it will bring problems in the future. Demand to know PC and PC programs and to use them very well, is significant from the view of leaders. These demands (languages and informatics) are influenced by the area of activity at the companies.

About students’ communication skills leaders’ opinion was very good. Most of them recognize that employees with a higher degree have an extended professional vocabulary, they have a selected way of expressions and these facts can become later their advantages. Leaders reckon university informatics teaching is a strong point, because young people can use not only basic programs, but special and high level programs, too. This competitive knowledge can increase the standard of companies and it can contribute to successful operating.

**Connection with higher education**

It is very sad that these enterprises do not keep connection with universities or colleges at all. If they have something, it is limited only to help students collect some information about experience and practice to write their thesis. But it is sadder that these companies do not want any connection in the future at all. It was said by 65% of the questioned leaders. Only 27% of the leaders plan that they will teach or train their employees together with universities. They can imagine this collaboration not only at a higher degree but other professional trainings and teaching. It was a surprise too that these leaders (73%) do not keep informal connection with employees of universities (teachers, professors, etc.) at all. Their satisfaction with the younger with a higher degree can be seen in the table 4.

<table>
<thead>
<tr>
<th>Subcategory</th>
<th>Serious problem %</th>
<th>Problem %</th>
<th>Little bit problem %</th>
<th>Little bit pozitiv %</th>
<th>Pozitiv %</th>
<th>Hard pozitiv %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional skills level</td>
<td>14,29</td>
<td>5,71</td>
<td>8,57</td>
<td><strong>27,14</strong></td>
<td>12,8</td>
<td>0,00</td>
</tr>
<tr>
<td>Experience focused education</td>
<td>12,86</td>
<td><strong>17,14</strong></td>
<td>21,43</td>
<td>12,86</td>
<td>2,86</td>
<td>1,43</td>
</tr>
<tr>
<td>Development of communication skills</td>
<td>0,00</td>
<td>10,00</td>
<td>11,43</td>
<td><strong>32,86</strong></td>
<td>12,86</td>
<td>1,43</td>
</tr>
<tr>
<td>Development of problem – solution skills</td>
<td>0,00</td>
<td>15,71</td>
<td><strong>22,86</strong></td>
<td>21,43</td>
<td>8,57</td>
<td>0,00</td>
</tr>
<tr>
<td>General intelligence</td>
<td>0,00</td>
<td>1,43</td>
<td>11,43</td>
<td><strong>34,29</strong></td>
<td>21,43</td>
<td>0,00</td>
</tr>
<tr>
<td>Language knowledge</td>
<td>0,00</td>
<td>5,71</td>
<td>10,00</td>
<td><strong>30,00</strong></td>
<td>5,71</td>
<td></td>
</tr>
<tr>
<td>IT education</td>
<td>0,00</td>
<td>2,86</td>
<td>2,86</td>
<td><strong>44,29</strong></td>
<td>5,71</td>
<td></td>
</tr>
<tr>
<td>Development of teamwork skills</td>
<td>5,71</td>
<td>4,29</td>
<td>10,00</td>
<td><strong>40,00</strong></td>
<td>8,57</td>
<td>0,00</td>
</tr>
</tbody>
</table>

Table 4
Satisfaction with the Younger with a Higher Degree
Rate of intellectual capital

The rate of intellectual capital at enterprises was intended on our side to be estimated as well. Leaders were asked to appraise what the rate is of the value of intellectual capital out of the aggregated capital on the basis their experience. To this appraisal some important associated facts were given, the most characteristic examples of the types of capital were listed. Summarizing the parts of intellectual capital can be said that about half of the total capital consists of intellectual capital (human, organizational, customer) at these enterprises. This fact can be seen:

An average rate of capital elements at questioned enterprises:

- Financial capital: 27%;
- Physical capital: 25%;
- Human capital: 19%;
- Organizational capital: 8%;
- Customer capital: 21%

6 Summary of the Experience

At the active small and medium-sized enterprises there is a very big distrust. They are in uncertainty and therefore they do not trust anybody. A lot of times they did not want to answer us, because they are afraid that somebody will use this information against them. And employees do not have an independence to give information about anything. They are afraid, they are uncertain, they think their success is only a luck or a current incident. They live overnight and they do not feel the importance of development, of study, of knowledge and they run after work and money. It would be good to know that these companies will have a steady basis for future, but Hungarian economy does not support this feeling. Nowadays these enterprises feel that they have to survive and to this they need money and financial capital. Therefore knowledge and study falls behind.

Most of these companies value manual labour more than intellectual work and higher degree. For them the most important thing is a professional knowledge, experiences and skills.

People have to know that in Hungary the biggest cost is wage costs, their contributions and other benefits at the companies. The behaviour of companies reflects this problem because they apply only a few times, but for them people are valuable. Sometimes they can be only manual workers not intellectual employees it depends on the activity of companies. It could be seen too that sometimes enterprises should employ people with a higher degree, but they cannot pay them. As the market is saturated, these small and medium-sized enterprises should fight with competitors more intensively, they have to invest into new technology and they cannot pay for key persons enough money. Sometimes they call in experts or other help, because it is cheaper for them than employing somebody continuously.
The tendency can be seen that these companies are in connection rather with specialised secondary schools than universities. They employ more skilled workers than people with a higher degree therefore they need to be in contact with special schools. They assure places to students to do their practices and they hope that these younger people will work later at their companies. It is very important nowadays because every young man wants to study at universities and only few can acquire skills. But if they have a connection with these secondary schools, they might get a good expert more easily.

It could be seen that companies know the importance of knowledge and study, but they do not do anything for it at their workplaces and they make the flow of knowledge more difficult.

They do not use the possibilities of universities that are nearby they think that they do not need this connection.

7 Conclusion

Summarizing shortly this experience the following conclusions can be said about small and medium-sized enterprises:

People know that knowledge and study are very important for companies, their role have become more and more determined. In spite of these facts they cannot keep abreast of financial things because the purpose of the companies is to reach the highest profit. Information has become very valuable, but flow channels stay in the background, because people distrust each other very much.

Small and medium-sized enterprises do not feel the importance of study and knowledge, the necessity to build organizational culture and atmosphere to operate these systems.

It can be seen that these facts are inconsistent with data in the first chart, namely a large number of knowledge and information intensity of function. They know that they have to change their behaviour and thinking, they know that demand is increasing continuously, but they are not on the suitable level that they can compete with bigger or multinational companies. It is not surprising because the small and medium-sized enterprises do not get any support – from the government - that would be needed. Nowadays there is only one source - the EU support - in Hungary. According to the share of funds of National Development Plan-2, the multinational companies working in Hungary can get more than the half of the useable amount. People and government can have concerns about the future of small and medium-sized enterprises and we cannot be surprised if they become distrustful and unstable.

In this situation it can be asked.
What can be done at universities so that students can be prepared - who will work at these small and medium-sized companies – that these enterprises can become really serious pillars of Hungarian economy and these companies should mean for us possibilities of development in future.

This research was very interesting and useful for universities, for companies and for economic experts, too and it would be good to continue the analysis to bring deeper relations into light.

References:


Measurement of Rate of Return in Education. Research Directions¹

Józef Dziechciarz
University of Economics, Wroclaw, Poland
jozef.dziechciarz@ue.wroc.pl

There is a need to measure the efficiency and effectiveness of higher education in its various aspects, including in the area of non-monetary benefits of higher education. Education relates to wider economic and social effects and human welfare depends partly on earnings but also on non-monetary outcomes that all trace back to education in various ways. There exist positive relationships between education and health, the health of family members, the schooling of one’s children, life choices made, fertility choices and infant mortality. Increasing the education level also has a positive effect on the environment and has a strong influence on crime reduction. Article is a review of the impact of intangible benefits of higher education, particularly non-monetary private and social rates of return on investment in education. The traditional, Humboldtian type of the University faces serious criticism. Main weaknesses of such concept includes outdated governance style with fragmented structure and management, insulated, extensive state dependency, overregulated legal status, heavily underfunded budget; uniformity and egalitarianism confronted with strong hierarchical human resource structure. It is accompanied with mono-disciplinary specialization; traditional learners approach; ineffective or lack of knowledge transfer; accompanied with little world-class excellence.

The definition of the Universities new role of in the society is based on the triple helix concept. It covers Education; with the priority activity in higher level education. The task is to provide trained people for the needs of contemporary society. The second helix is Research. The role of the university is the knowledge generation, especially on the frontier research. This gives or extends limits of the conceptual or technological basis for new products and services. It works, provided functional processes of knowledge transfer via agencies or people are available and are efficiently working. Third Mission of the university is Society. The traditional role of the university covers regional support inclusive business advice for politics. It is ever growing, grand challenge. The answer of the European commission to the need of the university modernization is the policy promoting three main reforms. First of them is under way for some time now. It consists of radical curricular reform symbolized with the Bologna Process. The second is the governance reform. It promotes transformation from the traditional, Humboldt type of the university towards new, entrepreneurial concept of the university. The governance reform is essential for new challenges formulated for university system. The implementation of the entrepreneurial concept of the university is impossible with current funding system. The funding reform is designed to enable change

¹ The study was conducted in the framework of the research project entitled Rate of return measurement methods in higher education (Metody pomiaru stopy zwrotu z inwestycji na edukację w szkołach wyższych). The project has been financed by the National Science Centre on the basis of decision no. DEC-2011/01/B/HS4/02328.
from input oriented towards output oriented budgeting. The latter needs adequate measurement system of the output in all three activity fields. Only research has more or less functioning assessment indicators. The education and third mission results indicators need to be designed.

Keywords: Rate of Return in Education; monetary benefits of learning, non monetary benefits of learning, accountability measures, tertiary education, triple helix, university modernisation; Bologna process; university governance

1 European union policy directions

Council Resolution of 23 November 2007 on modernizing universities for Europe’s competitiveness in a global knowledge economy\(^2\) ends the initial phase of defining the European Union policy in the field of tertiary education. In the Resolution, the most important policy statement declares that member states need to take the necessary measures to modernize higher education institutions by granting them autonomy and greater accountability\(^3\). The European Council indicates the main tools of achieving the ambitious goals listed in the document. European commission indicates the need of the university modernization by promoting three main reforms First of them is under way for some time now. It consists of radical curricular reform symbolized with the Bologna Process. The second is the Governance reform. It promotes transformation from the traditional, Humboldt type of the university towards new, Entrepreneurial concept of the university. The implementation of the entrepreneurial concept of the university is impossible with current funding system. The Funding reform is designed to enable change from input oriented towards output oriented budgeting. The latter needs adequate measurement system of the output in all three activity fields. Only research has more or less functioning assessment indicators. The education and third mission results indicators need to be designed.

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2 Official discussion was started with the document: Communication … [2006]. It was summarized in the Council Resolution of 23 November 2007 On modernizing … [2007].

3 The definition of the Universities new role of in the society is based on the triple helix concept. The first helix is Education; with the priority activity in higher level education. The task is to provide trained people for the needs of contemporary society. The second helix is Research. The role of the university is the knowledge generation, especially on the frontier research. This gives or extends limits of the conceptual or technological basis for new products and services. It works, provided functional processes of knowledge transfer via agencies or people are available and are efficiently working. Third Mission of the university is Society. The traditional role of the university covers regional support inclusive business advice for politics. For more details see: Dziechciarz [2012; 2011; 2010] and Dziechciarz et al. [2009].
2 Curricula reform

Curriculum reform consists of individual; national reforms of degree structures. Its key feature is the move from one-cycle to two- or three-cycle degree structures. New structure requires appropriate curricular change. Those changes concentrate on competence based learning, flexible learning paths, mobility and recognition. The described set of tasks and goals is known in the context of curricula reforms as the Bologna and Lisbon processes. The concept of the curricula is understood as (Curricular Reform … [2006]) as all the learning which is planned and guided by the higher education institution, whether it is carried on in groups or individually, inside or outside the institution. The adopted definition includes both the content; in most cases taking the form of a syllabus, and the organization of the content (Figure 1).

<table>
<thead>
<tr>
<th>Bologna – Lisbon process</th>
<th>Curricular reform in five areas of study</th>
<th>Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>— Structure</td>
<td>— Access</td>
</tr>
<tr>
<td></td>
<td>— Competence based learning</td>
<td>— Graduation</td>
</tr>
<tr>
<td></td>
<td>— Flexible learning paths</td>
<td>— Employability</td>
</tr>
<tr>
<td></td>
<td>— Recognition</td>
<td>— Mobility</td>
</tr>
<tr>
<td></td>
<td>— Mobility</td>
<td>— Quality of education</td>
</tr>
</tbody>
</table>

![Figure 1](Schematic model of the Curricular Reform)

The five dimensions of curricular reform listed in Figure 1 are closely interrelated and partly overlapping. They contain the set of sub-dimensions. The two- or three-cycle programm structure should be constructed in such a way, that first degrees can be completed after a minimum of three years and should enable that acquired qualifications are relevant to the (European) labour market; access to the second degree (Master) should be limited and selective; curricula should be reorganized to account for the adjusted structure of the national and European society (labour market).

Competence-based learning; curricula should be redefined in terms of competencies, possibly in line with national qualifications frameworks and the European qualification framework (introduction of knowledge, skills and attitudes components). Additionally, Europe-wide transparency of acquired skills and knowledge needs to be increased.

Flexible learning paths requires diversity of teaching modes is to be increased, with stress on flexibility of chosen courses. Introduction of the excellence tracks for those highly qualified and talented is needed and should be promoted. National and international mechanism guaranteeing possibilities for the validation of prior
learning, increasing permeability from vocational/professional education and for mature learners with prior professional experience should be developed.

To enhance recognition, diploma supplements has been introduced, the task was to increase readability of curricula, creating transparency in curriculum content. Modularization and ECTS are introduced as facilitators for recognition.

The mobility task consists in a system enhancing efforts to increase international student mobility (Erazmus). Mobility of teaching staff with the goal for internationalizing the teaching experience is among the strategic goals of the system.

The impact of the reform is measured by the set of indicators. The policy statement lists six issues (for each of the five study areas). Access; consists in measurement of the impact on entry rates; the impact on admission policies and criteria for access to the three cycles; widening of participation to include underrepresented groups. Openness of the programmes measures the rate of possibilities for students to enrol in the second cycle from other disciplinary backgrounds or from other institutional types. Graduation; measurement covers the impact of the reform on graduation rates; the impact on time span to a degree; extending flexibility of graduates; adaptability to the needs on the (inter)national labour market increased; the impact on time to employment. Employability is measured with the information whether first cycle degrees actually qualify graduates for immediate employment; to what extent the concept of transferable skills has been implemented and/or institutionalized. Mobility measurement should illustrate the impact of the reform on student mobility within Europe and across continents; the mobility of graduates and of teaching staff. Quality of education measurement illustrates the impact of the reform on development of scores and performance indicators regarding quality; to what extent there is adjustment in institutional and national quality assurance mechanisms. Cost-effectiveness should guarantee that the reforms in the study areas should lead to better results (given unchanged financial inputs or lower levels of financial inputs).

Curricula reform is most widely introduced in many countries and in numerous high education institutions is either on the way to its introduction or already introduced in a wide spectrum of issues.

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4 See Dziechciarz [2015a]; [2015b]; [2015c] and [2015d] for details.

5 For discussion see: (Dziechciarz-Duda; Przybysz [2011] and [2014]).
3 Governance reform

The Council of the European Union adopted resolution on modernizing universities for Europe’s competitiveness in a global economy. The resolution emphasizes how modernizing higher education and research is needed to increase its role in a knowledge-based society and its mirror, a knowledge-based economy. The resolution was the summit of long lasting discussion. As outlined in (DeBoer, File [2009]), three types of changes in national higher education systems have been recognized: changes in national governance frameworks; changes in institutional autonomy and changes in internal governance and management. Many governments were trying to find new, performance-based steering. Since the role of ministries of education, institutional leadership, the European Commission, industry and business, and national agencies/bodies has become more prominent, the number of stakeholders influencing higher education policies has increased. The demographic processes (decline of the number of potential students) accompanied by an increase of the size and number of higher education institutions lead to growing competition for the recruitment of (high performing) academic staff, for the recruitment of (talented) students, for public funding for teaching and research. This lead to new funding arrangements. As a rule, in general there is no visible reduction in the level of public funding. On the other hand, due to an increase in absolute numbers, the amount per student has declined, albeit the methods of allocation have changed and are now more performance-based. Additionally, one may observe an increase in private (family) contributions. Quality assurance has moved up on the agenda, which is the case both at national and institutional levels. Institutional autonomy and strengthening the strategic capacities of higher education institutions is the area where differences among countries are most visible and can be grouped in two lines: freedom to determine internal structures, and the degree of (internal and external) stakeholder involvement. Regarding the institutional autonomy, eight areas were identified to assess the levels of institutional autonomy: institutional mission/strategy development; internal governance structures; introduction of new study programmes; quality of teaching and learning; internal financial policies; conditions of employment of staff; access and admission policies; and development of public-private partnerships. In most member states, the governance reform is in an initial stage. The way from Humboldtian towards modern entrepreneurial university is still long. It needs legal, managerial and first of all mental change among all stakeholders. One of the most important conditions needed is funding reform.

6 The text of this and the next chapter is heavily based on the results of the project The Higher Education Governance Reforms across Europe [2006]. The second source is results of EURYDICE Project Higher Education… [2008]; Two Decades… [2006].
7 Investing efficiently … [2003]; The role of universities …[2003]; Mobilising … [2005]; The Modernization Agenda … [2006].
8 Dziechciarz J. [2012b, 2015a].
4 Funding reform

Funding reform is part of the HEI\(^9\) modernization along with curricula and governance reforms. Funding reform consists of several strategic goals: the need for more (diversified) funding in HE; updated strategic framework E&T: new benchmark public – private investment of at least 2% of GDP. Investment in HE is one of the best financial investments an individual can make. However, a wide differentiation by university or faculty may be observed. Returns on investment into education are higher in developing countries relative to advanced industrial countries. Returns to HE are rising in most dynamic economies, unfortunately these are non European OECD states. Private returns exceed social returns. This is a reflection of the public subsidization of HE, the tuition fees are an option followed by more and more countries. As a social compensation, a system of grants and loans is accompanied by the introduction (increase) of fees. It is obvious, that an improvement of the public funding mechanism is needed. Table 1 shows the classification according to cost sharing and student support systems. The most unusual is the group consisting of Croatia; Estonia; Poland; Russia, where some students are obliged to pay fees while others do not.

<table>
<thead>
<tr>
<th>Extent of cost sharing</th>
<th>universal support systems</th>
<th>family-based funding</th>
</tr>
</thead>
<tbody>
<tr>
<td>important and uniform across students</td>
<td>Australia; Chile; the Netherlands; New Zealand; UK</td>
<td>China; Japan; Korea</td>
</tr>
<tr>
<td>non-uniform across students</td>
<td>Croatia; Estonia; Poland; Russia</td>
<td></td>
</tr>
<tr>
<td>minor and uniform across students</td>
<td>Finland; Iceland; Norway; Sweden</td>
<td>Belgium; the Czech Republic; France; Greece; Mexico; Portugal; Spain; Switzerland</td>
</tr>
</tbody>
</table>

Table 1. The classification of cost sharing; student support systems. Basis for student support Source: based on MODERN Project results (2010).

Funding tools may be classified into following groups:

— *Formula based funding*. In many countries public funds are delivered to institutions as a lump sum based on a set of variables related to costs but also to basic outcomes. These experiences have shown a positive effect on institutions and on their results.

— *Performance based funding*. Performance funding is the generalized way for funding research but it is less usual for funding teaching activities. In some countries a portion of the funds granted to higher education institutions are

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\(^9\) HEI; E&T – higher education institution; education and teaching.
linked to the achievement of certain standards which were previously agreed between public authorities and institutions. The results of these experiences are also very positive.

— **Competitive and targeted funds.** In spite of the fact that research in Europe is heavily under-financed compared with the US, indicators of research outputs show that the gap is lower in results than in funds. This indicates that the efficiency of European basic research is relatively good.

— **Negotiation based on budget estimate.** Although at first glance the mechanism seems to be vulnerable to arbitrarily used criteria, the mechanism works well in most countries.

### 5 Rate of return. Concepts

Measurement of the monetary and nonmonetary benefits from education is not possible without agreement on conceptual and methodological issues. There is general agreement that graduates not only have more employability and receive higher earnings, but also acquire higher social status, greater efficiency in consumption, better health, greater access to technological change and a broad set of cultural benefits including better opportunities for leisure. Benefits from education are also gained by enterprises. General education reduces the need for training and retraining when new technologies are incorporated. The higher productivity of more educated people, especially those having the abilities and skills that transmit higher education, is spilled out to other workers having an important effect on the whole productivity of the enterprise. A considerable part of the externalities that higher education graduates produce is captured not only by society in general (which justifies the public funding of higher education), but specifically by enterprises and graduates. Classification of research directions in measurement of return in education lists following types: the private return, the social return and the labour productivity return. The direct (private) and indirect (social) non-monetary aspects of learning are called “non-monetary returns”. Non-market returns are the combination of Private non-market effects and Community non-market effects. Still measurement and methodology remain important problem to researchers. Some researchers represent approach to measure education in terms of years of schooling while other scientists’ measurement is based upon qualifications gained (Extensive discussion is given in Dziechciarz [2011]; Dziechciarz et al. [2015]; Owens [2004], p. 1).
The monetary benefits include the economic benefits, among them greater competitiveness in the labor market and higher earnings and the related more satisfying quality of life. The non-monetary (or personal) category of benefits is associated with the implementation of their own interests, personal development, consciousness determine their own future. Social benefits include the recognition, respect the environment and a sense of prestige. Related classifications are also proposed in other works (Dziechciarz [2011]; Psacharopoulos [2007]; McMahon [2006].

The most widely discussed is the concept of private returns, which is based on the costs and benefits of education realized by the individual student. It is measured by how much the individual (together with his family) actually pays to a higher education institution, relative to what returns are gained back after taxes. In most cases it is measured in terms of increased earnings, relative to a control group, as a rule, earnings of a secondary school graduate who did not pursue tertiary education studies. The most widespread approach towards assessment of the lifelong benefits from the investment into education has two main methods. They are referred to as the full-discounting or elaborate method, based on the NPV concept and the Mincerian earnings function method. Although there is a fear of unemployment and over-education yield in an observed, large growth in numbers of university graduates, there is strong evidence that higher education in Europe continues to be a profitable investment opportunity, both privately and socially. Non-monetary returns are an important part of outcomes of education’s costs.

Table 2.
Classifying the impact of human capital
Source: OECD 2000, p. 3.

<table>
<thead>
<tr>
<th>DIRECT/PRIVATE (directly captured by individual with higher levels of human capital)</th>
<th>INDIRECT/SOCIAL (aggregation of human capital across individuals, organizations and communities)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MONETARY (sometimes referred to as economic)</td>
<td>Enhanced economic productivity of individuals</td>
</tr>
<tr>
<td>NON-MONETARY</td>
<td>Improves health and aspects of individual well-being</td>
</tr>
</tbody>
</table>

Enhanced economic output reflecting the effect on organizations, firms and societies (including interactions between different agents and spill-over effects)

Social cohesion and well-being including the effect of spillovers

---

10 Net Present Value; Mincer [1974].
<table>
<thead>
<tr>
<th>Benefits</th>
<th>Private</th>
<th>Social</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Market</strong></td>
<td>- better employability</td>
<td>- higher productivity</td>
</tr>
<tr>
<td></td>
<td>- higher earnings</td>
<td>- higher net tax revenue</td>
</tr>
<tr>
<td></td>
<td>- less unemployment</td>
<td>- less reliance on government financial support</td>
</tr>
<tr>
<td></td>
<td>- labour market flexibility</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- greater mobility</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- better consumer efficiency</td>
<td>- reduced crime</td>
</tr>
<tr>
<td><strong>Non</strong></td>
<td>- better own and family health</td>
<td>- less spread of infectious diseases</td>
</tr>
<tr>
<td><strong>market</strong></td>
<td>- better children quality</td>
<td>- lower fertility</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- better social cohesion</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- voter participation</td>
</tr>
</tbody>
</table>

Table 3.
A classification of the benefits of education
Source: Psacharopoulos [2007], p. 29; Rates of Return...[2007], p. 27; Psacharopoulos, Mattson [1998].

As the leading researchers show the value of the estimates of returns to investment in higher education need to be improved and steadily monitored. This statement would be (most probably) reinforced in a situation where data availability would allow estimating wide rates of returns. This statement is especially important, since one may observe a decrease of public financing of higher education systems. Establishing (or increasing) tuition fees is a topic currently being debated in many countries. Higher education public funding should not be equal across the board, e.g. tuition-free for all students, regardless of their socio-economic background. There is obvious possibility of establishing a broad European programme, similar to the research framework programmes, for developing quality and competition among European institutions for developing teaching excellence. One should not avoid national, public discussion towards inspiring political will for more efficient and equitable university funding policies. The advance in bringing about the modernization of Europe’s universities, addressing their interlinked roles in education, research and innovation, as a key element of Europe’s drive to create a new, knowledge-based society and economy and improving its competitiveness is still in statu nascendi in the EU.

The concept of social returns is based on the costs and benefits of education, as these are realized by the state or society as a whole. The costs are measured all inclusive. They refer to what education really costs, regardless of the sources of covering them. Social rates of return should be based on productivity differentials, rather than earnings. The social returns from education are used to assess the efficiency of public spending on education, and as a guide on whether to expand or

---

contract a particular university faculty. The concept of fiscal returns is based on a narrow measure of costs and benefits – those relating to public expenditures. It may be used to assess how well the Treasury is doing when spending on education. They relate to the country’s public finances and are not estimated as widely as private or social rates. The return may be considered as an effect of investments (costs). The idea of cost (investment) in education is equally complex as the return.

<table>
<thead>
<tr>
<th>COSTS</th>
<th>INDIVIDUAL</th>
<th>SOCIETY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct costs</td>
<td>Public subsidy</td>
<td>Net of cost recovery and adjusted for possible deadweight losses of tax-financed public spending</td>
</tr>
<tr>
<td>Including school fees</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Forgone production</td>
<td></td>
<td>Spillover effects in worker productivity</td>
</tr>
<tr>
<td>Lost earnings or other production</td>
<td></td>
<td>As when a person’s education enhances the work productivity of his or her co-workers</td>
</tr>
</tbody>
</table>

Table 4
Generic education costs and benefits and their accrual to individuals and the rest of society

6 Concluding remarks

In many cases investment in higher education is justified almost exclusively in terms of expected nonmarket benefits rather than increased income for graduates. Obviously tertiary education offers much more possibilities to get better job and consequently achieve significant material benefits. But there are many non-monetary reasons why individuals wish to achieve tertiary education. So equally important are non-economic motivations, such as desire to self-realization of young people, a wish to broaden knowledge and realize passions and dreams, get an interesting job, social prestige and have satisfaction and pleasure of their future profession is extremely significant. Described potential nonmonetary effects of having tertiary education usually are not captured in traditional estimates of the private economic returns of education. Research studies document the main direction of the relationship and in many issues the strength of the evidence is not that obvious. Among the most substantial influences that can be mentioned are the relationships between parents’ level of education and health, schooling, and childbearing of their children. Widely discussed and well recognized is also the linkages between one’s own schooling and own health. Nevertheless level of education gives substantial benefits beyond those usually employed measures of labor market productivity (More details in: Dziechciarz–Duda; Król [2012] and [2013]).
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Hungarian Organizational Creativity

Anita Derecskei Kolnhofer

Óbuda University, Keleti Faculty of Business and Management, Budapest, Hungary
derecskei.anita@kgk.uni-obuda.hu

"In today's knowledge economy, creativity is more important than ever. But many companies unwittingly employ managerial practices that kill it." (Teresa Amabile)

Abstract: In the series of Hungarian economic science research studies, the examination of the scope of innovation has a podium place. However, in the EU’s 2013 Innovation Ranking, Hungary only got into the third quarter, in 21st position (Hollanders, EsSadki 2013). A vast number of studies set the possible and quantifiable series of reasons into their focus. This research study is also connected to innovation, but the author was mainly interested about the preceding and establishing step: creativity. Following the phase theory, can be assumed that creativity is a necessary (but not indispensable) precondition of innovation. If creativity (as the competence which is expected and necessary for innovation) is given, then why is that the Hungarians are only in the 21st position? The reasons have to be found in organizational characteristics. In this way the focus of this paper will be directed on the examination of organizational creativity and on its Hungarian characteristics.

Keyword: organizational creativity

1 Introduction

Organizational creativity study is a relatively new direction in the science of economic psychology. Its appearance can be put to the 1990s, but previously examinations had been already performed regarding the topic of organization and creativity. The first article is related to Woodman, Sawyer and Griffin (1993), where the very first definition can be found, there are the model and some
hypotheses, as well. Although the authors did not perform empirical studies at this point. The authors designated intra-individual, intra-group and organizational characteristics, which have an effect on creativity. The highest number of empirical studies can be related to Teresa Amabile, who however during her empirical studies mostly concentrated on individual characteristics, particularly on intrinsic motivation and its effects on creativity. Amabile's works (the most well-known: 1996) are the most quoted regarding the topic, even if the author herself does not use the concept of organizational creativity. During her research she examined the work processes, workplace relations, organizational characteristics and systematized the effects of these on creativity. This way among many others, she examined the effect of leadership style, time pressure or workplace mood. Ford (1996) proceeded in this direction, but extended the circle of characteristics affecting the creative event to institutional and market characteristics as well, and distinguished between creative and habitual workplace tasks, too. Drazin, Glynn and Kazanjian (1999) complemented all this with the perspective of time.

Organizational creativity is the extension of the general (used by economic experts) creativity concept (or of its specification) within organizational frameworks. That is, here the problem can be related to the work, and the solution can not only appear on the individual level, and it is significantly influenced by the effects arriving from the organizational environment. Organizational creativity is no more than a new and valuable idea which is the result of a joint effort, accomplished with regard the problems arising during the work, considering the influential factors and the summary of their effects. In the definition, the result of creativity (product) was also included, but here is needed to thinking about the idea and not the product innovated for the final market.

Later, only a lesser number of complex models were created, but it can be found many studies describing and examining the effect of a single environmental factor, which factors we incorporated into our own model as well.

In this paper the process of creativity and the environmental press effecting creativity will be incorporated, which were handled on the level of the individual, the individual and work characteristics, the group, the organization and the market. Later on the basis of these, the hypotheses of the research study are conceptualized.
Main research question originates from the work definition of organizational creativity itself, the objective is the investigation of factors and influences effecting organizational creativity.

Which organizational factors effect can be perceived regarding organizational creativity (regarding the employee's creativity)?

According to Amabile’s componential model which handled the factors separately, in the aforementioned model the factors were divided and translated into statistical hypothesis, but the main connections between the participants and those impacts can be read from the model.

It is measured which factors' effect is perceived by the respondents (and of what direction, amount could this effect be attributed to a single attribute) regarding organizational creativity. It is assumed three kinds of correlations at the effects practiced on organizational creativity of measured components (a) stimulating, positive effects (b) inhibitory, negative effects (c) U shaped correlation. It is divided the environmental effects into levels, it is separated the market level, and after that the group level is examined within the organizational level, emphasizing the leader and the resources, turning toward work specific characteristics and the individual's level. The process of creativity can be divided into further stages (Wallas, 1926). It is distinguished two stages: (1) the phase of brain storming, which includes the perception of the problem, the preparations, the latency and the enlightenment. The other one is the (2) „active” conative phase (not only cognitive). This was designated with the realization of the idea phase name, and it
is also implied the elaboration and the realization phase in it. In this paper it is focused on only the factors and it is not paid attention for the stages of creativity. However this steps are built into the main model.

2 Empirical Research

2.1 Methodology

The query of the questionnaire has been done after an extensive testing in an online format. The sample selection has been done by a quota; from 629 responses it could process 572. It can be extended the target group to all of Hungary, but it did not segment the sample by regions. The sample represents the present Hungarian labor market in most aspects, it was only under- or over-represented in a few aspects (for example: a division by age or educational attainment). Here however, there was only a very minor difference or the given variable was not significant for the purpose of the research so no correction weights were applied.

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Ratios</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal data of respondents:</td>
<td></td>
</tr>
<tr>
<td>Number of answers:</td>
<td>612 answers, valid: 572 answers</td>
</tr>
<tr>
<td>Gender rate:</td>
<td>Female: 281, Male: 291</td>
</tr>
<tr>
<td>Age group:</td>
<td>Minimum: 18 yrs Maximum: 62 yrs</td>
</tr>
<tr>
<td></td>
<td>Average: 28 yrs</td>
</tr>
<tr>
<td>Corporate data:</td>
<td></td>
</tr>
<tr>
<td>Most common corporate profile:</td>
<td>Profit sector (commercial and business sector)</td>
</tr>
<tr>
<td>Most common corporate ownership:</td>
<td>Hungarian</td>
</tr>
<tr>
<td>Most common corporate size:</td>
<td>Large enterprise (with employees above 250)</td>
</tr>
</tbody>
</table>

Table 1
Statistics of respondents (N=572)

The sample selection happened according to quota, with snowball method. Before the quota sampling the population (Hungarian labor market) was segmented into groups. Any interviewers may be told to sample 1 female and 1 males between the age of 20 and 60 with more than 2 years long work experience. The target group is Hungarian employees with at least 2 years of work experience. This sample
represents Hungarian workforce market according to several perspectives, so the achieved results can be projected. (Table 2.) Thanks to previous careful planning it could be taken the quantitative data in a representative sample.

<table>
<thead>
<tr>
<th>Ratios</th>
<th>Population</th>
<th>Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender rate:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>male</td>
<td>56.69%</td>
<td>50.90%</td>
</tr>
<tr>
<td>female</td>
<td>46.31%</td>
<td>49.10%</td>
</tr>
<tr>
<td>Age group:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15-34</td>
<td>32.74%</td>
<td>60.49%</td>
</tr>
<tr>
<td>35-55</td>
<td>53.57%</td>
<td>32.34%</td>
</tr>
<tr>
<td>56-75</td>
<td>13.71%</td>
<td>7.17%</td>
</tr>
<tr>
<td>Size of the corporate:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-4</td>
<td>0.00%</td>
<td>5.60%</td>
</tr>
<tr>
<td>5-49</td>
<td>37.30%</td>
<td>30.40%</td>
</tr>
<tr>
<td>50-250</td>
<td>23.40%</td>
<td>16.40%</td>
</tr>
<tr>
<td>above 250</td>
<td>39.30%</td>
<td>47.60%</td>
</tr>
</tbody>
</table>

Table 2
Proportion of our sample compare with the Hungarian statistics (N=572)

During the analyses, it was worked with SPSS 19 statistical program and MsOffice Excel. It has been analyzed the resulting data in two ways: (1). The descriptive statistical data indicate the working place of the subjects, thus illustrating the typical Hungarian working environment. (2). By analyzing the relationships between the variables it got an explanation for the logical connections of the underlying phenomenon. Since the data did not show a normal distribution during hypothesis testing non parametric tests were used (Kruskal – Wallis and Man - Whitney) and for the stochastic connections it was calculated Gamma indexes.

2.2 Results

The answers given to the research question can be summarized within the following. The question was: Which organizational factors' (Place) effects do the respondents perceive regarding the organizational creativity (regarding the employee's creativity)?
<table>
<thead>
<tr>
<th>Hypotheses</th>
<th>Research objective</th>
<th>Most significant scientific literature background</th>
<th>Was the hypothesis confirmed?</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Market level</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The knowledge of customers stimulates creativity better.</td>
<td>External market (knowledge of customers)</td>
<td>Ford (1996)</td>
<td>yes</td>
<td>Positive effect</td>
</tr>
<tr>
<td>The knowledge of competition stimulates creativity.</td>
<td>External market (knowledge of competition)</td>
<td>Ford (1996)</td>
<td>yes</td>
<td>Positive effect</td>
</tr>
<tr>
<td><strong>Organization level</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Those organizations which are less hierarchic and are more flat stimulate creativity to a higher amount.</td>
<td>Organizational form</td>
<td>Damanpour and Aravind (2012)</td>
<td>yes</td>
<td>In the case of a flat, less hierarchic shape a positive effect</td>
</tr>
<tr>
<td><strong>Group level</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strong competition within an organization limits creativity.</td>
<td>Competition</td>
<td>Amabile (1996)</td>
<td>no (due to a definition error)</td>
<td>No clear data</td>
</tr>
<tr>
<td>Strong regulation within the organization limits creativity.</td>
<td>Regulation</td>
<td>Amabile (1996)</td>
<td>yes</td>
<td>Negative effect</td>
</tr>
<tr>
<td>The shape and direction of motivational tools influence creativity.</td>
<td>Motivation</td>
<td>Amabile (1997)</td>
<td>yes</td>
<td>Depending on the shape and direction (positive effect in case of positive moral and material tools)</td>
</tr>
<tr>
<td>The size of direct work group influences creativity.</td>
<td>Group</td>
<td>Damanpour and Aravind (2012)</td>
<td>yes</td>
<td>U shape correlation (the effect of a smaller 5-10 person group is positive)</td>
</tr>
<tr>
<td>The increasing number of instructions limits</td>
<td>Number of Tasks</td>
<td>Amabile (1996)</td>
<td>yes</td>
<td>Negative effect</td>
</tr>
</tbody>
</table>

1 Here we only highlighted the names of the most important authors.

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creativity.

<table>
<thead>
<tr>
<th>Factor</th>
<th>Influence</th>
<th>Source</th>
<th>Result</th>
<th>Additional Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>The mood within the work group has an effect concerning the birth of creative ideas and their realization.</td>
<td>Mood</td>
<td>Amabile and Kramer (2011)</td>
<td>yes</td>
<td>Depending on the mood (the effect of friendly, confidential mood is positive)</td>
</tr>
<tr>
<td>The style of the direct leader has an influence on creativity.</td>
<td>Leadership style</td>
<td>Amabile et al. (2004)</td>
<td>yes</td>
<td>Depending on leadership style (positive in the case of democratic style)</td>
</tr>
<tr>
<td>The form of information sharing influences creativity.</td>
<td>Sharing of Information</td>
<td>Zhou (2008)</td>
<td>yes</td>
<td>Positive effect depending on the form in the case of discussions, meetings and primarily formal two way communication</td>
</tr>
<tr>
<td>Where they better work toward the introduction of IT innovations, there will be a stimulating effect on creativity.</td>
<td>IT, as a resource</td>
<td>Rimler (2005)</td>
<td>yes</td>
<td>Positive effect</td>
</tr>
<tr>
<td>The clear knowledge of responsibilities stimulates creativity.</td>
<td>Scope of duties</td>
<td>Oldham and Baer (2012)</td>
<td>yes</td>
<td>Positive effect</td>
</tr>
<tr>
<td>A clear scope of authorities helps creativity.</td>
<td>Authority</td>
<td>Oldham and Baer (2012)</td>
<td>yes</td>
<td>Positive effect</td>
</tr>
<tr>
<td>The location of workplace has an effect on creativity.</td>
<td>Workplace location</td>
<td>Kao (1999)</td>
<td>yes</td>
<td>Positive depending on location, in the case of a personal closed office or of work performed from home</td>
</tr>
</tbody>
</table>
### Table 3
The summary of hypothesis regarding to the literatures

<table>
<thead>
<tr>
<th>Phenomenon</th>
<th>Stimulus</th>
<th>Hypothesis</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>The conscious stimulation of creativity increases creativity.</td>
<td>Trainings</td>
<td>yes</td>
<td>Positive effect, the effect of brainstorming and PR tools are the strongest</td>
</tr>
<tr>
<td>Stress limits the creation and realization of creative ideas.</td>
<td>Stress</td>
<td>yes</td>
<td>U shape correlation</td>
</tr>
<tr>
<td>A stricter deadline limits creativity to a higher extent.</td>
<td>Time (stressor)</td>
<td>partially (only related to the first phase)</td>
<td>U shape correlation</td>
</tr>
<tr>
<td>The more customized the respondents feel the applied motivational tools, the more their creativity is stimulated.</td>
<td>Intrinsic motivation</td>
<td>yes</td>
<td>Positive effect</td>
</tr>
</tbody>
</table>

Most studies investigating organizational creativity focus on a single component or on its effect. A relatively low number of such studies were created which handles the whole model or investigates it empirically as well, beyond the modeling. The characteristics within the individual must be complemented by the nature of the work, group characteristics, with organizational and external market influences as well. The direction of these effects cannot be always clearly given (stimulating or inhibiting, linear) because for example in case of stressors we have to calculate a U shaped or inverted U shaped (changing depending on the perceived quantity of the stressor) effect.
### Characteristics/Effect

<table>
<thead>
<tr>
<th>Characteristic/Effect</th>
<th>Stimulates</th>
<th>Inhibits</th>
<th>U shaped correlation</th>
</tr>
</thead>
</table>
| Individual and work (Amabile's theory) | - unequivocal knowledge of responsibilities and authorities  
- personal workspace  
- customized motivation  
- the conscious stimulation of creativity | - competition within the group*  
- excessive regulation | - The amount of stress  
- deadlines* |
| Group (Woodman model) | - two-way communication  
- feeling of joint success  
- friendly, confidential mood  
- democratic leadership style  
- IT innovations  
- positive motivation | | - Group size |
| Organization (Woodman model) | - flat organizational size | - hierarchic organizational form* | |
| Market (Ford's theory) | - the knowledge of customers and competition | | |

* Non-significant statistical correlation (p = next to 0,05)

Table 4  
The summary of factors influencing organizational creativity

### 3 Conclusions

Hungarians are creative personally unfortunately only the result of their creativity can not be sold or built into innovation. However Hungarians are more creative than any other innovative nations (see Figure 2). Given the questions how could be the leaders and CEOs improve their employees order to raise the economic impact as well?
Altogether it can be gained a picture about what kind is the ideal environment stimulating ideal creativity and the creative colleagues working in it.

Characteristic of the organization:

- the organization is imbued with a transparent, flat, less hierarchic or friendly, confidential mood
- the size of work groups is average, they are characterized by non-isolated lonely employees and not too big groups
- they ensure private personal space (enclosed office) and there is a possibility for work performed at home
- they seek to implement IT innovations and to consciously stimulate creativity
- there are rules and deadlines, which can be complied with and followed
- competence-based (customized) and emphatically positive motivational tools are applied
• discussions are frequent and are characterized by a two-way communication
• The feeling of joint success and joint work within the group are present.

Characteristic of employees:
• the employees know the market (both the company’s customers and the competition)
• the colleagues are aware of their tasks and of their related responsibilities
• they share information between each other, this way the competition within the group is not typical,
• they are aware of the joint success,
• unequivocal, two way, open communication is characteristic and the employees receive a followable amount of instructions from their leaders who primarily follow a democratic leadership style
• They feel the amount of stress motivating, since they are still able to handle its level.

The much emphasized significance of innovation is indisputable; nevertheless it can handled as the step prior to the innovation, a lot depends on the environment, how it stimulates the individual and how it accepts the birth of new ideas. Of course, it is an important question and the problem is shown in many innovation research studies that mostly due to the lack of sources are why innovation is falling behind in Hungary. But according to the results the main problem is rooted in a much earlier phase, because organizational culture and leadership style frequently kills or rarefies the ideas and in lack of useful, good ideas the innovation process cannot even start. Regarding the innovation it can be understood not only the radical changes, but all those innovations which are useful and help the advancement from the perspective of the work. This way organizational creativity (whose result can be organizational innovation as well) similarly to organizational innovation may appear and have an effect in any territory of the organization.

Acknowledgement
The whole research is more detailed in the author’s PhD Dissertation: Organizational creativity, The components of organizational creativity in Hungary (2015). Thank you for the lector’s precious remarks, which raised the paper’s value. I agree with the lector’s opinion there are no statistical data in this paper, because I mentioned only the hypothesis tests (regarding to the SPSS non parametrical two tailed test with 0.05 significant level is significant if the result in the table shows p = 0.000). I think it is not so important to sign (.0000) after all
significant data. In a nutshell the data of measured sample (N=572) can be extended to Hungarian labour market (as population). Which means all of this influences are valid or true for the research’s target population.

The strengths of the impacts were measured mostly with Gamma indexes. The data followed and verified the literature, because the Gamma indexes were generally around 0.5 – 0.6 which mean a moderated connections. The strengths of all factors’ impact can not be separately measured because the multicolleration and cross impacts have to be filtered out but these steps are not detailed in this paper. Hopeful that will be the topics of the following papers.

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Should You Find out what Motivates Your Employees before They Run Away?

Duong Van Thinh
Óbuda University, Keleti Faculty of Business and Management, Budapest, Hungary
duongvan.tinh@kgk.uni-obuda.hu

Abstract: Employee motivation is vital to the future success of the organizations because if it is identified correctly, managers can step aside the high costs associated with turnover. While the competition is steady with other companies to attract and to retain workers to meet the demand of the consumers, the management must gain a better understanding of what motivates their workers in order to overtake the high costs associated with turnover; managers must attempt to understand what motivates their staffs. Therefore; employee motivation is an important topic for the organizations. This study desires to provide the practitioners in the aircraft industry and the comparisons of employee’s motivation and goals.

Keywords: Work motivation, Employee, Herzberg, Maslow, McGregor

1 Theoretical background

Employee motivation has been confirmed as one of a long term success factor in many companies; however, many companies still overlook this topic [3]. In satisfying the purpose of this study Herzberg’s Two-Factor Theory, Maslow's Theory of the Hierarchy of Needs and McGregor's X-Y Theory are used for identifying the employees’ motivation.

1.1 Herzberg’s Two-Factor Theory

The Two-Factor theory suggested that individuals have two different sets of needs and that the different component of the work situation satisfies or dissatisfies these needs [9]. The hygiene factors are set to concerns the basic survival needs of a person and it’s not directly related to the job itself, but concerns the conditions that surround performing that job.

These factors are organization policy such as reward system, salary and interpersonal relations. Herzberg believed that these factors can cause
dissatisfaction when not fulfilled. Though satisfied these factors do not motivate or cause satisfaction, they only prevent dissatisfaction. [2] [4] The second aspect of needs is growth needs, which refers to factors intrinsic within the work itself, such as recognition of a task accomplished, achievement, responsibility, improvement and work itself. These set are the motivating factors which suggests that humans try to reach their successful achievement that they are capable of becoming and when satisfied they work as motivators. Herzberg really thought that the opportunities for responsibility and advancement are the only way to increase satisfaction and to enhance work motivation [9]. In other hand, the lack of these factors does not cause dissatisfaction, it is simply an absence of satisfaction [2] [4]. However it can be said the Two-Factor Theory is not taking individual differences of needs and values into account when explaining work motivation [10].

1.2 Maslow's Theory of the Hierarchy of Needs

There is a great similarity between Maslow and Herzberg models as both stresses on different needs of the individuals. Maslow also conferred that a specific set of needs must be met in order to propitiate behaviour, and maintains it. But as long as Herzberg's theory is more specific in what physiological and concrete things must be presented to produce motivation. Maslow is more specific in terms of categorizing the areas of human need and includes less concrete areas such as emotions and other feelings. Maslow's theory categorizes human needs into five levels. The five levels of satisfaction of human needs follow a hierarchy and each stage of the five must be fully or largely completed before advancing to the next stage. As each of the needs becomes satisfied, the next stage grows into dominant [8].

1. Basic or Physiological needs: At these level individuals need those items that guarantee the survival and the preservation needs like food, shelter, rest and reproduction.

2. Safety and Security Needs: In this category, individuals find issues of health and well-being, aspects of personal physical safety and financial security, and an effort to obtain protection against the unpredicted issues.

3. Belongingness and Love Needs: In general, people at large are a social creature there for these needs include emotional relationships like Intimacy, friendship, all kinds of social interactions, the making and the maintenance of family ties and participation in organized groups such as clubs, trades unions and so on. At this level, the effects of deprivation, above all in modern times and in urban centers (depression, solitude and anxiety) are one important aspect.

4. The Esteem Needs: After “belonging” to a group, the next stage for a person is “standing out” from the group. This aspect of needs contains self-confidence, the need for social approval and recognition, respect, prestige and consideration by the group, and the feeling of independence and autonomy.
5. The need for self-actualization: the final level of human motivation. At this level person do what individuals wants, what one likes and what one knows how, exploiting all one's possibilities and constantly developing as a person.

Maslow suggested that employees’ physiological and security needs are paramount; therefore, when such needs became focused, performance will be improved extremely in that organization. [5] As a result, when employees realize that their organization cares about their developmental status, workers will propose their best to the group. Maslow’s theory defined five hierarchical needs which could be applied to the examined organization and its employees’ performance. According to Maslow’s theory, one does not feel the second need until the demands of the first have been satisfied or the third until the second has been satisfied and so on. Since in the world there are many different types of people. Therefore, employees have to be treated in different ways, for that reason McGregor's X-Y Theory gives us another theoretical background to examine employees’ motivation.

1.3 McGregor's X-Y Theory

According to theory X the average individual has an inherent dislike of work and will skip it if he or she can. For the reason of their dislike of work, most people must be controlled and threatened before they will work hard enough. Because of that theory, they prefer to be directed. [7]

The theory Y said that control and punishment are not the only methods to make people work; individual will direct himself or herself if he or she is committed to the goals of the organization. That’s why average human being learns, under proper conditions, not only to accept but to seek responsibility. [6]

2 Research

This study utilized those exit interviews that collected in the period of 2014-2015. The sample for this study was a convenience sample consisting of 29 ex-workers employed in a multinational Germany aircraft company. The examined company is based in Malta and it can be called as one of the world’s leading aviation groups in Europe the portfolio of companies is contain network airlines, low-cost carriers and aviation services. It can be said that they possess one of the greatest airplanes fleets in the world, and they are one of the market leaders in the airline industry. In 2014 there were about one hundred and six million passengers who flow with this airline around the world. Furthermore, this group consists of 32 companies with more than 25,500 employees. Their base is situated at Hamburg, Frankfurt, Munich and Puerto Rico. This company has 12 facilities around Europe and other
Based on the above literature search, the purpose of this study is to determine the causes of motivational problems related to the working condition in the examined company. The selected 29 individuals were examined within the context of satisfaction. This exit interviews also tried to determine which factors do the personnel consider as most important in its work environment and to what degree do those factors are satisfied. The survey has two parts consisting of a total of 16 questions. In the first part the staffs were asked about the reasons why they joined and left the company, and in the second part they were asked how satisfactory their working conditions were. Hence the satisfaction levels achieved by the employing firm in terms of these factors regarding the employees were determined.

In the measurement of the exit interview questions, the 5-point Likert Scale was used. The scale reference points were: Satisfaction Levels - “1” stands for “strongly disagree” and “5” stands for “Strongly Agree”. The k-means clustering method was used for classification of employees’ motivations.

### 2.1 Results

The following figure showed that the main factors effecting employees' decisions for leaving the organization in 2014/2015. The employee's satisfaction was classified by Hunt’s Goals and ambitions model.

Employees were able to appreciate from the scale of 1 to 5 the instruments that were given by the company and the least satisfied factor (3.276) was the conveniences. So it showed that the employees felt uncomfortable at their work place. Because their safety needs were not met, so they can't move to the next motivation level. Hence the employees cannot be self-fulfilling and motivated in their work when the Safety and Security Needs are not satisfied.
According to the k-means clustering process, there were three types of employee in this organization.

The first type - called as the X type employees who do not really want to work. So they must be controlled and provide a comfortable working place and structured task from the management. But the management was not able or just did not want to satisfy these requests.

The next cluster is the Y type of employees who are seek for responsibility and encouraged to develop expertise and making suggestions and improvements. But they have been given annual reviews as a result they felt Mistrusted and demotivated.

The last but not least group contains the social type of employees, those who demand a great reputation and promotion opportunities at their work place (these factors motivates them). But the management did not give them a chance to reach their goals.

Because of the mentioned issues they left the company in the summer of 2015 and during the exit interviews most of their answers for the questions that “What could have been done to encourage you not to leave?” was the followings “Better line management”, “more promotion opportunities” and “Better work conditions”
3 Conclusions

In this paper, I presented an overview of the theories and the evidence on motivation and satisfaction in the workplace. The results indicated that management needs to recognize the employee motivation if they seek to obtain success and excellence, it will affect negatively the employee’s performance to achieve organizational excellence and create good atmosphere, better working environment. As a result, even the most experienced and motivated employees will be forced to leave the company.

In summary it can be said that at the examined organization the employees were not satisfied regarding issues which are important for them. This showed that there are considerable motivational problems in the analysed company. The management felt no need to address motivational problems with their staffs despite the need to increase the working efficiency. The consequence of not following the rules is quite heavy because even the most experienced and motivated employees will be forced to leave.

References


A Consensus on Commonly used Financial Ratios

Gencia Adrian Daniel
Universitatea de Vest din Timisoara, Romania
adriandgencia@gmail.com

Abstract: The practice of using financial ratios in order to enhance the end result of financial analysis has gained much ground and attention in Romania, especially in the context of the country’s recent accounting reform. While the added benefit of financial ratio usage for the decision making accounting information user is indubitably valid, a certain degree of confusion is observed when dealing with the issue – in both fields of academia and practice. Our research indicates that this is not an isolated case for Romania, as a diverse range of literature from around the world employs different names and formulas for the same ratio. The purpose of this paper is to compile a conceptual list of 20 ratios that are most commonly used across academic literature, as a basis for future research on the topic of ratio analysis comparability between countries using different reporting systems. Furthermore, a limited benefit for the domestic professional and academic world would be brought in the form of a benchmark, where students and accounting information users could use the present notions as a starting point towards a higher degree of understanding the mechanics of ratio analysis.

Keywords: financial analysis, financial ratios, comparability, accounting information users, limitations

1 Introduction

Accounting information users have a various number of reasons for taking interest in a given company’s data output. Managers, for example, not only look into accounting information in order to determine flaws in the company’s day to day operations, but also view financial statements as a reflection of their personal success or failure in running the company. At the same time, investors examine accounting information in order to obtain reassurance towards the safety of their investment and to gain insight towards their investment’s capacity to generate future cash flows. Creditors, also benefit from examining accounting information, as it indicates the borrower’s capacity to repay outstanding debt and interest. To this end, accounting information has the potential of answering a large variety of
needs. Accounting information in itself, however, represents nothing but a bulk of data that, in the absence of proper interpretation techniques, brings little benefit to its user. Therefore, accounting information – especially financial information, is commonly subject to financial analysis. In a very broad sense, financial analysis represents the set of examination and interpretation techniques of financial statements (Taylor, p. 62). In addition to the widely used vertical and horizontal analysis of the financial statements, ratio analysis is a key financial analysis technique not only towards evaluating the performance and financial condition of an entity (Deran et al, p 946), but also a useful tool for internal control and planning (Khalad et al, p. 620).

While the recent evolution of financial ratios indicates a large potential in aiding the decision making process, excessive or improper use may be equally detrimental. Firstly, the present paper highlights the fact that, in addition to the inherent limitations of ratio analysis, the process of accounting convergence brings further disadvantages on the practice that previously were not applicable. Secondly, the absence of an official institution regulating financial ratios leads to a general lack of consensus when using financial ratios in practice. The large number of ratios in use, often times labeled or computed according to each professionals’ personal preference or academics’ various understanding on the matter, combined with the new restraints brought upon the method by the harmonization debate, influences the information users’ interpretation of results; which in turn may lead to bad economic choices. Finally, once the problem has been exposed, the paper offers a comprehensive list of commonly accepted financial ratios – in their various forms, in an attempt to educate accounting information users that are not proficient on detailed aspects of financial terms.

2 New restraints and lack of agreement upon using financial ratios

The concept of financial ratios dates back to the XIXth century United States, and its initial use is limited to determining bankruptcy. The evolution of corporate business at the time required, however, a regulated form of balance sheet and income statement. Together with this trend, especially commercial banks, demanded an improvement in the manner accounting data is interpreted. Therefore, by the 1890s the current ratio was developed, being the only ratio available for years to come (Mankin et al, p. 197). Together with further events that resulted in an increase in the need for higher accounting information quality, the number of financial ratios have increased and their wide spread use have gained popularity outside the circle of banking industry users. By the mid to late XXth century, users realized that the study of the relationship between linked elements of various financial statements can yield valuable information regarding
an entity’s financial condition and earning capacity (Andrijasevic, p. 118). Today, a large variety of financial ratios are employed by both professionals in conducting financial analysis, and professors in the academic environment; having as information source all of the four mandatory financial statements – i.e. balance sheet, income statement, statement of cash flow, and statement of retained earnings; revealing thus aspects related to a given company’s liquidity, solvency, activity, profitability and operations.

According to Baron’s Dictionary of Finance and Investment Terms, ratio analysis is a method used in aiding the decision making process, based on the relationship between figures presented in financial statements to the end of determining value and evaluating risk. This goal is mainly achieved by comparing current results with historical ratio results within a given company, as well as by comparing results to the performance of other similar companies across the industry (Ibarra, p. 92). The current context of globalization and international business practices, imposes a new set of short comings upon the method, in addition to the already known ones. Therefore, from a normative stand point, company to company comparability of results is relevant only when the company that is being subject to ratio analysis employs the same financial reporting standards as the company to whom it is being compared. Once this requirement is met, the topic of intra company comparability is further being limited by a number of accounting policy choices. For example, it is commonly agreed that IFRS allows a great deal of flexibility in the management’s accounting choices, choices which in turn will shape the reported figures that describe the financial performance and position of the company. While two companies using IFRS may record the same transactions, management’s judgments and estimates pertaining to matters such as property, plant and equipment, bad debt expenses, leases, inventory costing, or provisions may add subjectivity when comparing the results of a company to the other (Portz et al, p. 410 – 412).

Furthermore, the instance of comparing ratio results to historical and/or to budgeted figures, is a common and integrated practice in the professional trade of financial analysis, in addition to the above mentioned practice of comparing figures to benchmarks such as industry standards or competing companies. (Taylor, p. 65). Evaluating this second practice that defines the ratio analysis methodology in the context of financial reporting harmonization efforts, proves to yield unreliable results when a certain company chooses to shift from an existing national financial reporting system to IFRS. In this particular case certain limitations or permissions under the previous system, especially related to asset valuation and write-ups, may not be compatible with the new system, therefore certain transitionary adjustments will inevitably chance the form of future accounting information; making comparison with historical data a rather daunting task. While the real economic standing and value of the company remains unchanged, the aftermath of IFRS convergence will have a lasting effect on reported accounting information (Heino et al, p. 8).
While the above limiting arguments are somewhat recent inherent issues, there is a less tackled problem related to financial ratio analysis that finds its source in the used terminology and manner in which, both analysts and academics choose to approach the currently discussed method. Unlimited flexibility in applying financial ratios has led to a great deal of confusion, as various academic textbooks across the business field of study and investment institutions, lack consistency in ratio names and mathematical formulas (Mankin et al, p. 196). This argument can be easily tested by choosing an arbitrary publicly traded company, and by consulting a number of popular investment website. Thus, it can be observed that for a number of same ratios different reputable websites yield different values. Furthermore, from an upper education stand point, this issue is not only limited to the teaching area where students meet a different presentation of ratios depending on classes attended for their business major requirements, but also extends to the research field – where academics at an international level use financial ratios as defined by local legislation (where applicable) and national consensus.

3 The imposibility of proposing a singular status quo

Given the complexity of the issue at hand, fueled by the rapid changes induced by the newly emerging international reporting standards, there is no singular solution that can enhance the comprehensive aspect of ratio analysis in order to simplify the decision making process for non proficient accounting information users. The current climate in the accounting world has brought further limitations to ratio analysis. The effects of these limitations, however, can be minimized by higher levels of awareness on behalf of decision makers, especially when dealing with accounting data subject to IFRS convergence. The negative effects of the lack of consistency upon using formulas and definitions for financial ratios, on the other hand, is a more delicate problem as cross cultural barriers may limit the joint effort of academics towards using a common globalized language when teaching future accounting information users and decision makers the advantages and disadvantages of ratio analysis in the present context.

This is more so valid for the case of Romania, where the application of financial ratios is in an infat stage. From a legal stand point, the use of a rudimentary financial ratio analysis was explicitly required under ordinance 3055 of 2009, section 9: “Content of explanatory notes to yearly financial statements”. This requirement is no longer applicable under the subsequent ordinance number 1802 of 2014, which does not mention nor offer a model for financial ratios to be presented in the notes to the financial statements or under the executive report. While large international corporations in Romania continue to use financial ratios for internal use, we view this to be a major setback in the Romanian legislation, as accounting information users that deal with small and medium enterprises lack the
necessary tools toward interpreting financial information to its full extent. In other words, where the legislation fails to offer a common platform of ratio analysis for all Romanian accounting information users, the academic world cannot always agree on what the content of that platform should be. Often times different terms are used to label the same concepts, or identical terms describe concepts using incompliant mathematical algorithms. To this end, we propose the following table of the top most commonly used financial ratios, which together with the above explanations, attempts to offer a formal platform for improving the decision making process.

<table>
<thead>
<tr>
<th>No.</th>
<th>Ratio Name</th>
<th>Financial information aspect enhanced</th>
<th>Mathematical Formula</th>
<th>Consensus on usage as % found in used sample</th>
<th>Other names found</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Current Ratio</td>
<td>Ability to meet short term debt</td>
<td>( \frac{\text{current assets}}{\text{current liabilities}} )</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Quick Ratio</td>
<td>Ability to meet immediate short term debt</td>
<td>( \frac{\text{cash + short term investments + current receivables}}{\text{current liabilities}} )</td>
<td>100%</td>
<td>Acit Test Ratio</td>
</tr>
<tr>
<td>3.</td>
<td>Inventory Turnover Ratio</td>
<td>Inventory management efficiency</td>
<td>( \frac{\text{cost of goods sold}}{\text{net inventory}} )</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Days Sales in inventory</td>
<td>Liquidity of Inventory</td>
<td>( \frac{\text{ending inventory} - \text{cost of goods sold}}{\text{cost of goods sold}} ) \times 365</td>
<td>100%</td>
<td>Inventory Turn-over Ratio</td>
</tr>
<tr>
<td>5.</td>
<td>Return on Assets</td>
<td>Profitability of total assets</td>
<td>( \frac{\text{net income}}{\text{average total assets}} )</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>Accounts Receivable turnover ratio</td>
<td>Efficiency in collecting outstanding receivables</td>
<td>( \frac{\text{net sales}}{\text{average account receivable}} )</td>
<td>85.7%</td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>Days sales uncollected</td>
<td>Inventory liquidity</td>
<td>( \frac{\text{accounts receivable}}{\text{net sales}} ) \times 365</td>
<td>85.7%</td>
<td>Avarage collection period OR Days Sales</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>85.7% Outstanding</td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>Profit margin ratio</td>
<td>Income per unit of currency</td>
<td>( \frac{\text{net income}}{\text{net sales}} )</td>
<td>85.7% Return on Sales OR Return on Profit Mark</td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>Return on Equity</td>
<td>Investment profitability</td>
<td>( \frac{\text{net income} - \text{preferred dividends}}{\text{average stockholder's equity}} )</td>
<td>85.7% Return on earned capital</td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>Times Interest Earned</td>
<td>Capacity of meeting interest payment</td>
<td>( \frac{\text{EBIT}}{\text{interest earned}} )</td>
<td>71.4% Interest Coverage</td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td>Total Asset Turnover</td>
<td>Capacity of assets in assisting sales</td>
<td>( \frac{\text{net sales}}{\text{average total assets}} )</td>
<td>71.4% Asset Turnover Ratio</td>
<td></td>
</tr>
<tr>
<td>12.</td>
<td>Debt Ratio</td>
<td>Financing and credit leverage</td>
<td>( \frac{\text{total liabilities}}{\text{total assets}} )</td>
<td>54.1% Total debt to equity</td>
<td></td>
</tr>
<tr>
<td>13.</td>
<td>Debt to Equity Ratio</td>
<td>Debt to equity relationship</td>
<td>( \frac{\text{total liabilities}}{\text{total equity}} )</td>
<td>54.1% Total debt to equity</td>
<td></td>
</tr>
<tr>
<td>14.</td>
<td>Earnings per Share</td>
<td>Income for each unit of share</td>
<td>( \frac{\text{net income} - \text{preferred dividends}}{\text{weighted average common shares outstanding}} )</td>
<td>54.1% Basic profit/share</td>
<td></td>
</tr>
<tr>
<td>15.</td>
<td>PE Ratio</td>
<td>Relationship between market value and unit of share</td>
<td>( \frac{\text{market price per common share}}{\text{earnings per share}} )</td>
<td>54.1%</td>
<td></td>
</tr>
<tr>
<td>16.</td>
<td>Cash Ratio</td>
<td>Relationship between liquid assets and current liabilities</td>
<td>( \frac{\text{cash} + \text{marketable common shares}}{\text{current liabilities}} )</td>
<td>42.9%</td>
<td></td>
</tr>
<tr>
<td>Ratio name</td>
<td>Alternative formula</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>----------------</td>
<td>--------------------------------------------------------------------------------------</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| 17. Interest Burden | \[
\frac{EBIT - \text{interest expenses}}{EBIT}
\] 28.6% |
| 18. Dividend Yield | \[
\frac{\text{annual cash dividends paid per share}}{\text{market price per share}}
\] 28.6% Dividend Payout |
| 19. Equity Ratio | \[
\frac{\text{total equity}}{\text{total assets}}
\] 14.3% |
| 20. Cash Turnover Ratio | \[
\frac{\text{net sales}}{\text{net cash}}
\] 14.3% |

Table 1
Most commonly used financial ratios

In addition to the formulas above, we have found a number of ratios being calculated with a different mathematical rendering:

<table>
<thead>
<tr>
<th>Ratio name</th>
<th>Alternative formula</th>
</tr>
</thead>
</table>
| Quick ratio                                    | \[
\frac{\text{cash} + \text{outstanding shares} + \text{claims}}{\text{current liabilities}}
\] OR \[
\frac{\text{current assets} - \text{inventory}}{\text{current liabilities}}
\] (the later being cited in the Romanian legislation) |
| Return on Equity                               | \[
\frac{\text{net income} - \text{preferred dividends}}{\text{average stockholders equity}}
\] |
| Day sales uncollected (alt. days to collect receivables) | \[
\frac{365}{\text{accounts receivable turnover}}
\] |

Table 2
Alternative Mathematical Formulas
The above tables have been compiled using a rather small sample of 10 items, consisting of a diverse international background of academic textbooks and research papers, with source countries ranging from: the United States of America, the Philippines, Serbia, Croatia, Turkey, Macedonia and Romania. Other research, such as Mankin et al, employs a much larger sample, of textbooks only, revealing a total of 129 distinct ratios in use, and finding as many as four different quick ratio variations. Even so, the presented evidence further supports the above argument that a lack of consensus upon ratio name and computation method burdens the task of forming a just and fair opinion of a company’s financial well being. It can be observed that from a total of twenty ratios, only five have a 100% consensus, while the later ratios having a consensus percentage below 30%. While table 1 does not claim to be exhaustive, it clearly indicates that the more complex the ratio the least consensus can be found among the sample participants – this statement being especially valid for equity valuation ratios. Another note that completes table 1 pertains to the lack of cash flow ratios found in the used sample, only 10% of found ratios having source information in the statement of cash flows. This does not indicate the lack of usefulness of cash flow ratios, but rather points out the general preference towards balance sheet and income statement based ratios. Our recommendation to financial information users is not to ignore these ratios, as there is a strong correlation between operating, financing and investment cash inflows and outflows and overall financial standing.

Finally, we point out one last aspect pertaining to tables 1 and 2, by emphasizing the fact that they do not portray a hierarchical listing ranging from the most useful rating usage to the least. The composition of table 1 is made out of 60% balance sheet and income statement ratios, 30% equity ratios and only 10% cash flow ratios. This, however, only reflects the common ground across the sample. In this sense, the sole advantage of the ratios proposed in table 1 is that they have recognition (in accord to their own consensus percentage) across the different accounting practices in the countries that make up the sample population. Having a larger degree of consensus for a particular ratio, does not enhance the conceptual advantages or disadvantages of that particular ratio. It is further revealed that most individual sampled materials undertake complex issues of financial ratio analysis in practice, employing a round number of ratios, out of which only a handful are also used in foreign practice as per our table. In conducting a financial ratio analysis, the practitioner will use ratios homogeneously so that in the context of the type of business conducted by the subject company, as many questions relating to liquidity, solvency, activity, profitability and operations will be answered. Exclusively using the ratios from table 1 is certainly not recommended, as these ratios may leave a number of questions unanswered. Using these ratios, however, in corroborations with other less known and equally useful ratios, may enhance the comparability factor of ratio analysis results across national borders. In the long run, we propose a set of complete commonly accepted ratios with the same label and formula, regardless of corporate or national culture. This task, however, may
be rather challenging in the absence of an international institution that can compile such a list with statutory authority.

4 Conclusions

We conclude that financial ratios are a very powerful tool in aiding the decision making process, but it is not without its shortcomings. Its inherent limitations, amplified in the current context of international convergence, are further affected by the lack of consensus across the professional and academic environment upon terminology usage and computation method. The aim of this paper is to offer a limited platform of education for students and financial information users that are not aware of the complexity of the issue. Lastly, the present paper leaves room for further research in the field of IFRS convergence impact on the present practice of financial ratio analysis.

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An Android Application for Google Map Navigation System, Solving the Travelling Salesman Problem, Optimization through Genetic Algorithm

Laurik Helshani
European University of Tirana, Albania
helshani@gmail.com

Abstract: TSP - A salesman plans a trip through which he wants to visit his clients and come back to the starting point. During the trip, same client should not be visited more than once and the route should be shorter and less costly. The mathematical modeling of this problem has to do with the theory of graphs and combinatorics. Graph vertexes symbolize places to visit, and edges that connect the nodes are the paths (the distance of which is known from the beginning) that lead to those places. The complexity of the exact algorithm for solving this problem increases with the number of places to visit. For this reason genetic algorithm is offered as the optimal solution of TSP problem. The whole system is implemented as client-server system using RESTFul web services, Google-services and Android OS. Genetic Algorithm is used to determine the optimum route on Google map and solves the Travelling Salesman problem.

Keywords: Travelling Salesman Problem (TSP), Genetic Algorithm (GA), Optimization, Android, Google maps, RESTFul web services in Java

1 Introduction

Travelling salesman problem has inspired studies by mathematicians, computer scientists, physicists and a host of nonprofessional researchers. The TSP has seen applications in the areas of logistics, genetics, manufacturing, telecommunications, and neuroscience, to name just a few.

The traveling salesman problem consists of a salesman and a set of cities. The salesman has to visit each one of the cities starting from a certain one (e.g. the hometown) and returning to the same city. The challenge of the problem is that the traveling salesman wants to minimize the total length of the trip. [1]
The most direct solution for a TSP problem would be to calculate the number of different tours through places. Given a starting place, it has n-1 choices for the second place, (n-2) choices for the third place, etc. Multiplying these together one gets (n-1)! for one place and n! for n the places. [8]

If we would count the cost of each route, we could end up waiting for the computer to give us a result for ages. In real life, we need to have such routes solved in reasonable time – we are even able to relax on quality of found route, just to have a route, which converges to most optimal one. [9]

The exact algorithms search for an optimal solution. One of them is branch-and-bound algorithm and its execution time is O(n^3).

Heuristic solutions are approximation algorithms that reach an approximate solution (close to the optimal) in a time fraction of the exact algorithm. [8]

2 The mathematical formulation through graphs theory

Let G = (V, A) be a graph where V is a set of n vertices. A is a set of arcs or edges, and let C : (C_{ij}) be a distance (or cost) matrix associated with A. The TSP consists of determining a minimum distance circuit passing through each vertex once and only once. Such a circuit is known as a tour or Hamiltonian circuit (or cycle). In several applications, C can also be interpreted as a cost or travel time matrix. It will be useful to distinguish between the cases where C (or the problem) is symmetrical, i.e. when c_{ij} = c_{ji} for all i,j ∈ V, and the case where it is asymmetrical. Also, C is said to satisfy the triangle inequality if and only if C_{ij} + C_{jk} ≥ C_{ik} for all i,j,k ∈ V. This occurs in Euclidean problems, i.e. when V is a set of points in R^2 and C_{ij} is the straight-line distance between i and j. [2]

Definition: A complete graph KN is a graph with N vertices and an edge between every two vertices.

Definition: A weighted graph is a graph in which each edge is assigned a weight (representing the time, distance, or cost of traversing that edge).

Definition: A Hamilton circuit is a circuit that uses every vertex of a graph once.

Definition: The Traveling Salesman Problem (TSP) is the problem of finding a minimum-weight Hamilton circuit in KN.

The traveling salesman problem can be described as follows:

\[ TSP = \{(G, f, t): G = (V, E) \text{ a complete graph, } f \text{ is a function } V \times V \to \mathbb{Z}, \ t \in \mathbb{Z}, \ G \text{ is a graph that contains a traveling salesman tour with cost that does not exceed } t! \}. \] [1]
3 Google services

3.1 Google maps

Google maps provide an intuitive and highly responsive mapping interface with aerial imagery and detailed street data. In addition, map controls and overlays can be added to the map so that users can have full control over map navigation. Map panning can also be performed by dragging the map via the mouse or by using “arrow” keys on a keyboard. Google maps can be customized according to application specific needs.

Various web-based application and the results can be displayed on Google maps. For instance, the parsing of Google data using JSON/XML. [3]

3.2 GeoCoding

GeoCoder is a class for handling geocoding and reverse geocoding. Geocoding is a process of converting addresses into geographical coordinates (latitudes and longitudes). Reverse geocoding is the process of transforming (latitude, longitude) into addresses. [3]

3.3 Distance Matrix Service

Google's Distance Matrix service computes travel distance and journey duration between multiple origins and destinations using a given mode of travel.

To calculate the distance between two places for visiting, which is vital for the genetic algorithm to perform his work, using google service: Google Maps Distance Matrix. This service is not available to countries that are not members of the UN. In order for the application to be general, I used the Haversine formula to calculate this distance.
### 3.3.1 Haversine formula

\[ R = \text{earth's radius (mean radius} = 6,371 \text{ km)} \]

\[ \Delta \text{lat} = \text{lat}_2 - \text{lat}_1 \]

\[ \Delta \text{long} = \text{long}_2 - \text{long}_1 \]

\[ a = \sin^2(\Delta \text{lat}/2) + \cos(\text{lat}_1)\cos(\text{lat}_2)\sin^2(\Delta \text{long}/2) \]

\[ c = 2\times\arctan(\sqrt{a}, \sqrt{1-a}) \]

\[ d = R \times c \] \[4\]

Note that angles need to be in radians to pass to trigonometric functions.

Java-implementation of this formula:

```java
public static Double toRad(Double degree) {
    return degree * Math.PI / 180;
}

public double haversineDistance(double lat1, double lon1, double lat2, double lon2) {
    double earth_radius = 6371.00;
    double latDistance = toRad(lat1-lat2);
    double lonDistance = toRad(lon1-lon2);
    double lat1_r = toRad(lat1);
    double lat2_r = toRad(lat2);
    double a = Math.pow(Math.sin(latDistance/2), 2) +
               Math.pow(Math.sin(latDistance/2), 2) *
               Math.cos(lat1_r) * Math.cos(lat2_r);
    double c = 2.0*Math.atan2(Math.sqrt(a), Math.sqrt(1.0-a));
    return earth_radius * c;
}
```
4 Genetic Algorithm (GA) in general

Genetic algorithm (GA) is a kind of evolutionary technique that emulates biological theories that are useful in solving optimization problems. According to Darwin’s survival of the fittest evolutionary theory, only the most potential elements in a population are likely to survive and generate offspring. The operation of GA begins with a population of random strings as the design variable. Each string is evaluated to find the fitness function.

The three main GA operators - reproduction, crossover, and mutation are applied on the random population to create a new population. The population is evaluated and tested until the termination criterion is met, iteratively altered by the GA operators. Generation in GA represents the cycle of operation by the genetic operators and the evaluation of the fitness function. [5]

Figure 1
Flowchart of Genetic algorithm [5]
4.1 Applying of GA to the traveling salesman problem

First, create a group of many random tours in what is called a population. This algorithm uses a greedy initial population that gives preference to linking cities that are close to each other.

Second, pick 2 of the better (shorter) tours parents in the population and combine them to make 2 new child tours. Hopefully, these children tour will be better than either parent.

A small percentage of the time, the child tours are mutated. This is done to prevent all tours in the population from looking identical.

The new child tours are inserted into the population replacing two of the longer tours. The size of the population remains the same.

New children tours are repeatedly created until the desired goal is reached.

As the name implies, Genetic Algorithms mimic nature and evolution using the principles of Survival of the Fittest. [6]

4.1.1 Termination conditions of genetic algorithm

The following three kinds of termination conditions have been traditionally employed for genetic algorithm:

- An upper limit on the number of generations is reached
- An upper limit on the number of evaluations of the fitness function is reached, or
- The chance of achieving significant changes in the next generations excessively low [7]

4.2 Testing of GA and result interpretation

Test- tool programming is done in JAVA programming language and his work is displayed graphically using the 2D library.

The tool simulates graphically, what the algorithm is doing, generating random points in the XY-plane that symbolize places to visit, and draws straight lines between points that symbolize the roads that lead to these countries.
As seen from the above tables, there are three key variables, which affect directly to the performance of the algorithm work, to its termination and to the final result (optimization of the route of travelling salesman). These variables are: Number of places to visit (#places), population size and number of generations (#generations). The other three columns: The initial length of the route, The length of the route after optimization, Optimization expressed as a percentage are results of the tool.

With simulated data for testing, I have tested the impact of population size and the number of generations in the genetic algorithm convergence.

<table>
<thead>
<tr>
<th>#places</th>
<th>population size</th>
<th>#generations</th>
<th>The initial length of the route</th>
<th>The length of the route after optimization</th>
<th>Optimization in %</th>
</tr>
</thead>
<tbody>
<tr>
<td>30</td>
<td>1000</td>
<td>1000</td>
<td>6245.4</td>
<td>1724.4</td>
<td>362.178</td>
</tr>
<tr>
<td>50</td>
<td>1000</td>
<td>1000</td>
<td>10137.5</td>
<td>2277.5</td>
<td>445.115</td>
</tr>
<tr>
<td>70</td>
<td>1000</td>
<td>1000</td>
<td>15483.8</td>
<td>2822.9</td>
<td>548.506</td>
</tr>
<tr>
<td>100</td>
<td>1000</td>
<td>1000</td>
<td>20275.4</td>
<td>3609.6</td>
<td>561.707</td>
</tr>
<tr>
<td>120</td>
<td>1000</td>
<td>1000</td>
<td>22316.5</td>
<td>3996.6</td>
<td>558.387</td>
</tr>
<tr>
<td>150</td>
<td>1000</td>
<td>1000</td>
<td>28748.9</td>
<td>5243.7</td>
<td>548.256</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>#places</th>
<th>population size</th>
<th>#generations</th>
<th>The initial length of the route</th>
<th>The length of the route after optimization</th>
<th>Optimization in %</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>1000</td>
<td>5000</td>
<td>20359.4</td>
<td>3023.9</td>
<td>673.060</td>
</tr>
<tr>
<td>120</td>
<td>1000</td>
<td>6000</td>
<td>25794.4</td>
<td>3568.4</td>
<td>722.856</td>
</tr>
<tr>
<td>150</td>
<td>1000</td>
<td>10000</td>
<td>29885.9</td>
<td>3777.1</td>
<td>791.239</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>#places</th>
<th>population size</th>
<th>#generations</th>
<th>The initial length of the route</th>
<th>The length of the route after optimization</th>
<th>Optimization in %</th>
</tr>
</thead>
<tbody>
<tr>
<td>150</td>
<td>20</td>
<td>100000</td>
<td>31156.0</td>
<td>3984.4</td>
<td>781.949</td>
</tr>
<tr>
<td>150</td>
<td>100</td>
<td>100000</td>
<td>31190.3</td>
<td>3786.6</td>
<td>823.702</td>
</tr>
</tbody>
</table>
The population size determines the number of potential solutions of the optimization problem.

Test cases and results of genetic algorithm are presented in above tables.

With increasing population size also increases the computational effort (complexity).

Optimization reaches the culmination (~823.7%), if the number of generations is minimum ten times larger than the population number.

5 The implemented system

The whole system consists from android application as a client and a system as server.

5.1 Client side

The system is implemented to solve the Travelling Salesman problem to determine the optimum route on Google map using Google API and Genetic Algorithm in Android OS. The system starts from getting different Geo Locations (Latitude and Longitude) on the map triggered by the user in two ways:

a) The user clicks on the google map and marks the place he wants to visit

Java implementation of “MapLongClick”:

```java
@Override
public void onMapLongClick(LatLng point) {
    try {
        GoogleMap myMap;
        String key = "MyApiKey";
        String url_geocoding = "https://maps.googleapis.com/maps/api/geocode/json";
        StringBuilder builder = new StringBuilder();
        builder.append(url_geocoding).append( "latlng=").
            append(point.latitude).append( "lon=").append(point.longitude);
        builder.append("&sensor=true");
        builder.append("&key=").append(key);
        JSONObject objekti = read(builder.toString());
        JSONArray arr = objekti.getJSONArray("results");
    }
```
String address = arr.getJSONObject(0).getString("formatted_address");
JSONObject components = arr.getJSONObject(1);
JSONArray address_components = components.getJSONArray("address_components");
String place_name = address_components.getJSONObject(1).getString("long_name");
myMap.addMarker(new MarkerOptions().position(point).title(place_name).snippet("Address: " + address));
} catch (Exception e) {
    Log.e("Error", "Response string buffer error. " + e.getMessage());
}

b) The user knows the name or address of the place he wants to visit and search through autosuggestion. Then the list will be proposed to user, then user selects the desired place, and after that, the place will be marked on the map. This is possible by using a google web service called Google places.

![Image of map with marked places]

Figure 2
Autosuggestion and marked places on implemented Android application
Once the user has chosen places to visit and has select function "Optimize and map the road", the system derives all the necessary information from Google map and packet them into JSON. JSON data are sent by application to the server via HTTP-Post request.

![Map with optimized route](image)

Figure 3
Optimized route and drawn on google map through polylines

5.2 Server side

Travelling Salesman Problem has been analyzed and Genetic Algorithm has been implemented, in Java, as RESTful web service, successfully. REST involves the transfer of resources between clients and servers. This algorithm consists of the following classes:

- **Place** → models a google place. It contains all the characteristics of a google place: id, name, address, latitude and longitude
- **Tour** → stores a candidate tour and is a list of places (ListArray<Place>)
- **TourManager** → holds the places of a tour and is a list of places (ListArray<Place>)
- **Population** → Manages a population of candidate tours
- **Genetic Algorithm** → manages algorithms for evolving population
This server side system consumes and produces JSON formatted data and is running on tomcat server.

Java implementation of this RESTful web service:

```java
public JSONArray arrayListToJSON(ArrayList object) throws JSONException {
    JSONArray json = new JSONArray();
    Place place = new Place();
    for (int i = 0; i < object.size(); i++) {
        json.put(place.konvertoNeJSON((Vendi) object.get(i)));
    }
    return json;
}

@POST
@Consumes("application/json")
@Produces("application/json")
public String postJson(String content) {
    JSONObject result = new JSONObject();
    try {
        JSONObject json = new JSONObject(content);
        JSONArray jsonArray = json.getJSONArray("places");
        for (int i = 0; i < jsonArray.length(); i++) {
            TourManager.addPlace(new Place(jsonArray.getJSONObject(i).getString("id"),
                                           jsonArray.getJSONObject(i).getString("name"),
                                           jsonArray.getJSONObject(i).getString("address"),
                                           jsonArray.getJSONObject(i).getDouble("latitude"),
                                           jsonArray.getJSONObject(i).getDouble("longitude")));
        }
        Population pop = new Population (30, true);
        pop = GeneticAlgorithm.evolvePopulation(pop);
        for (int i = 0; i < 100; i++) {
            pop = GeneticAlgorithm.evolvePopulation(pop);
        }
    }
    return result.toString();
}
```

@POST
@Consumes("application/json")
@Produces("application/json")
public String postJson(String content) {
    JSONObject result = new JSONObject();
    try {
        JSONObject json = new JSONObject(content);
        JSONArray jsonArray = json.getJSONArray("places");
        for (int i = 0; i < jsonArray.length(); i++) {
            Place place = new Place(jsonArray.getJSONObject(i).getString("id"),
                                       jsonArray.getJSONObject(i).getString("name"),
                                       jsonArray.getJSONObject(i).getString("address"),
                                       jsonArray.getJSONObject(i).getDouble("latitude"),
                                       jsonArray.getJSONObject(i).getDouble("longitude")));
        }
        Population pop = new Population (30, true);
        pop = GeneticAlgorithm.evolvePopulation(pop);
        for (int i = 0; i < 100; i++) {
            pop = GeneticAlgorithm.evolvePopulation(pop);
        }
    }
    return result.toString();
}
```
6 Conclusions

a) If the number of places to visit is less than 10, it recommended to use the exact algorithm, otherwise genetic algorithm.

b) Genetic Algorithm is one of the best methods which is used to solve various NP-hard problem such as TSP.

c) Genetic Algorithm has a great influence on the optimization of round trip of TSP, based on results in above tables.

d) The purpose of this paper is to show how to use Google’s services in combination with genetic algorithm to solve TSP problem. This purpose makes working to discern from the papers of the earlier or existing

e) I presented an analysis of various aspects associated with the specification of termination conditions for genetic algorithm

f) Genetic algorithm reaches an approximate solution (close to the optimal),

g) Web - Google services cannot be used more than 2,500 times a day, as an ordinary user. This limitation does not apply to business customers, since they pay for services.

Acknowledgement

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The Higher Educational Motivation of Secondary School Students and its Effects on the Hungarian Labour Market

Peter Holicza
Óbuda University, Budapest, Hungary
holiczapeter@rh.uni-obuda.hu

Abstract: As the structural unemployment is a part of the Hungarian present, it is very important to look through and understand, identify the differences between the demand and supply on the national labour market. The study aims to present the employers’ needs through the literature analysis and questionnaire research to characterize the interest of high school students. Differences may occur for many reasons such as: insufficient knowledge or flow of information, employers’ incorrect expectations, HR, individual, academic problems, etc.

The study endeavours to seek and highlight the educational facts and resupply of students in the background of this situation.

Keywords: labour market, demand-supply, HR, higher education, VET, economy

1 Introduction

‘Knowledge is our powerful engine of production’ (Alfred Marshall, 1890)

Although the mission of higher educational institutes (HEI) is - besides producing new knowledge via original and applied researches - to educate (young) people and equip them with knowledge, information and skills in order to increase their employment opportunities, the number and relative ratio of those unemployed despite having higher than secondary education is constantly growing in Hungary [1]. Only 42% of employers think that employees are ready for employment upon graduation and only half of the young graduates believe that their post-secondary studies have improved their employment opportunities [2]. What is more, traditional HEI are usually not designed to react to the ever-changing market where skills depreciate quickly since they cannot constantly adjust their curricula at the pace the changing industry would require them to.
In order to be able to create a knowledge-intensive, innovation-based economy various things are needed, such as creation/development and deployment/commercialisation of new knowledge. In the past, the higher educational institutes have been the main driving forces of such processes via initiating and performing original and applied researches and transmitting their findings to their students, and through spin-offs to the economy and its agents. However, besides the creation and preservation of systematic knowledge through research activities, HEIs are supposed to be institutions fostering their students’ analytic, rational, systematic, critical, sceptical and innovative thinking, hence tools of developing competencies [3].

Since most experts agree that knowledge is to determine the future wealth and wellbeing of societies, education and especially higher than secondary education is very much promoted, encouraged and endorsed all over the world [4]. According to Teichler [5] only a large number of individuals with in-depth knowledge and profound understanding of the local and global economic and social systems (or other fields and sciences) would be able to make a substantial contribution. Along these ideas, the number of people with higher than secondary education (from now on labelled as higher education) is constantly increasing in developed countries. This phenomenon is prevalent in most Central-Eastern European countries, among others in Hungary, as well.

1.2 Overview of the European labour market needs

The changes and the needs in the global labour market differ to some extent from the European labour market. To upgrade the skills of entering workers and older workers is very important for short-range recovery and longer range productivity and growth. This is important for its capacity to adjust to change, for its jobs, justness, gender equality and social solidarity.

The economies across Europe turn to a low-carbon economy and a knowledge-economy. Especially the spread of ICT’s and nanotechnologies gives a high potential to the economies for a new job creation of sustainable jobs. Among OECD countries approximately 3-4% of the employees work in the ICT sector [6]. Global migration, ageing population, urbanization and development of social structures are amongst the catalysts promoting change in skills requirement and labour market. The evolution of new abilities, skills and competencies to exploit the capability for recovery is a challenge and precedence for the EU and national public authorities, employees, employers, companies, for education and training providers.

Concerning the population skills profile of their populace or the distribution of employment, the situations in the member states differ massively. The skills have to match to the labour market needs. [7]. As well as the global market, the European market needs more high-skilled workers. The steady advanced training
and further education is now obligatory for older workers as for new entering employees.

The steady shift from agriculture and manufacturing jobs to services continues still the recent downturn. In 2020 three quarters of the jobs will be in the service sector. Job creation in this sector, especially in business services will be substantial up to 2020.

The primary sector will lose jobs while the construction sector has a tendency to be consistent. The manufacturing sector will also suffer, but the engineering sector will register an increase. The best chances for good job creation are expected in the following sectors: Health care and social work, business services (IT, insurances), personal services, hotels, and distribution. Furthermore, because of the low-carbon economies, the ecological services and products will rise and may be doubled in 2020. The sectors of water, waste treatment, transport industry, agriculture, energy and construction will have an important influence on the employment patterns. The next decade will have a rising demand for high-skilled and applicable workforce and for skill- dependant jobs [8].

The study of Cedefop 2008 shows that between 2006 and 2020:
- high level education employment will rise from 25.1% to 31.3%
- job requiring with medium qualifications increase a slightly from 48.3% to 50.1%
- jobs with low level of education will decline to 18.5%.

There is an obvious tendency towards the extension of required skills for jobs in the service sector. For example, ICT professionals also need to have skills in marketing or management; service workers need also customer orientated skills and digital knowledge. This reflects the growing demand from companies and employers for comprehensive key competencies like analytical skills, self-management, problem-solving, communication skill, etc.

2 Situation on the Hungarian labour market

The figure below clearly shows the ranking of professions, working fields by average salaries according to the latest research on the Hungarian labour market. This study manifests students’ mind-set oriented at the pursuance of employment opportunities towards the upper end of the spectrum- those within the highest-paying sectors. Naturally, as a consequence lower ranked employment sectors are being faced with a serious depletion in the workforce.
As in the past three years, the IT sphere continues to be the highest paid field in Hungary. The category of shared service centres is just closely behind on the top. The list shows that the finance, telecommunications, energy and science areas are the most lucrative ones. The lower average salaries do not reach the average gross 600 EUR. The public sector and educational institutions, healthcare, postal services, local government bodies and the cultural institutions are on its edge, but the hospitality, tourism and social and seasonal jobs take the last places. Even though there is a high demand for skilful physical workers, they earn the lowest wages.

Worldwide, 36% of employers have difficulties to find appropriate workforce - according to the Manpower Group’s research from 2014 involving 42 counties. In Hungary, 45% of the employers highlighted recruiting problems. The hardest loaded jobs in Hungary in 2014 [10]:

![Diagram showing average salaries in EUR (2015)]
The Manpower Group interviewed 750 Hungarian HR executives regarding the reasons of the lack of specialists and skilled workforce. The outcome of the research is represented by the following figure.

As HR executives reported, in most cases the lack of hard skills (technical competencies) stands in the background of the talent shortage. Secondly, the lack of (experienced) candidates also prevents good employee-job matching. Approximately, one quarter of applicants have extremely high salary expectations or are missing the appropriate qualifications. The 17% lack the workplace competencies, soft skills, and 9% are not satisfied with the geographic conditions.

After the employers’ report about recruiting problems, it is interesting to see the motivating factors for employees.
According to one of the biggest Hungarian HR specialist company’s findings, Hungarian employees are mostly salary-driven, but the good working atmosphere is almost as important as the payment. The job security is highly respected and required; it allows us to conclude, that most of the employees have long-term plans regarding their job positions. Approximately half of them wish to work independently and the bonuses come at an equal stand with the increasing responsibility. The two lowest ranked factors are the opportunities of corporate events participation and to get public recognition as a reward, but still approximately every third person thinks about these positively and respectfully. Remarkable that the structure of findings outlined Maslow’s hierarchy of needs.

2.1 Overview of the Hungarian education system

The Ministry of Education which holds political responsibility for Hungary's entire education system primarily carries out policy-related tasks and produces legislation. The Ministry of Education shares the responsibilities for professional education with the ministries that are responsible for professional qualifications.

The language of instruction is Hungarian. Compulsory education in Hungary starts at the age of 5, and lasts until the end of the year in which pupils turn 16. The academic year runs from September until June.
Primary and junior secondary education each last for 4 years; the first stage is for children aged 6-10, and the second for children aged 10-14. Primary education is provided at elementary schools.

Secondary education is divided into general and vocational education, and is provided by schools for general secondary education or institutions for secondary vocational education. There are many schools that provide both vocational and general education. Admission to secondary education in Hungary requires an entrance examination.

An important reform of vocational education and training (VET) entered into force in 2013. The curriculum in vocational training schools was shortened from four to three years and the focus on practical training increased, both in vocational training schools and in (less practical) vocational secondary schools. On average, the share of practical training should reach about 70% in vocational training schools, from about 50% before the reform. Practical training will also start earlier, in the first year of vocational school (9th grade), instead of respectively 10th grade in vocational training schools and 12th-13th grade in vocational secondary schools. The reform also increases involvement of private companies in VET. It gives a bigger role to chambers of commerce to influence the content of training with the aim to better attune it to labour market needs. It also aims to expand the elements of dual training (apprenticeship systems), notably through additional EU financing. New professional and examination requirements aim to follow labour market needs more closely. To promote studies in potential skill shortage areas, vocational students in lists of “shortage occupations” (defined at the county level on the basis of job vacancies and surveys among companies) can be offered scholarship grants.
Higher education entrance examinations were abolished in 2005. The secondary school certificate now provides admission to higher education. Programmes in music and the arts can also set interviews or competency tests as additional entrance requirements. Since 2005, admission to higher education has been based on pupils’ final examination results. An ‘advanced level’ is required for foreign languages, and students with advanced level passes will be given preference for popular programmes.

The Hungarian Higher Education Act defines universities as higher education institutions that are able to organize education in more than one academic discipline, as well as multiple specific programmes within one academic discipline. Universities must also conduct research, offer accredited PhD programmes, and all of the teaching staff must have a doctorate.

University programmes last from 3 to 6 years, depending on the specialization.

After completing all compulsory subjects, writing and defending a final paper and sitting a final exam, students are awarded the university degree.

### 2.2 Possibilities of students with higher education

According to OECD, the educational attainment matters greatly in Hungary’s labour market: Tertiary education makes the difference between employment and unemployment and also between good and low payment. The OECD statistic ‘Education at a glance 2014’ shows a lot of interesting figures and facts. It shows that people with lower educational abilities have a higher risk to be unemployed. 28% of young people with below upper secondary education are unemployed, while only 5.7% of young people with tertiary education are without job [13]. The difference between these 2 groups is the third highest among the OECD countries.

The main challenge for the Hungarian government and its executives is to bridge the gap between secondary and tertiary acquirements.

### 3 Measure and method

The study is supported by primary and secondary data. Primary research part has a targeted a data-collection method; participants were recruited via internet: across high schools' Facebook groups, direct e-mails to students and through teachers who shared with their students. Data was collected anonymously from Hungarian students from secondary education level. The questionnaire included open-ended questions that should be analysed with a qualitative approach which were categorised to be able to produce quantifiable data. The questionnaire approximately took 5 minutes to complete. Besides demographic variables, the
questionnaire collected information about academic motivation, profession, career and life goal related issues.

Total number of respondents is 436 from Budapest metropolitan area.

4 Results and discussion

The present research among secondary school students (the next generation of applicants) is intended to estimate the future of the above-outlined situation on the Hungarian labour market.

The number of applicants to tertiary education has declined by around 30% over 2011-13 and the number of admitted students by more than 25%, in contrast with the stated aim to promote participation. This reflected to some extent demographic factors, but also much lower quotas of state finance positions in 2012 and uncertainty around the important reforms taking effect in 2013.

![Figure 5. Applications and admissions to tertiary education [14]](image)

Even though the governmental (financial) support and the number of admission places have declined in the higher education, the interest is still high and during the last years it tends to be increasing. According to the last application period’s statistics (in 2015), 105600 students applied to higher education institutions, and 72200 have been accepted, 2000 less than in the previous year. In terms of percentage, since the first year of the reforms (2013) 76, 21% of admissions have been accepted, in 2014 69, 93% and in 2015 it decreased to 68, 37%.
Unsuccessful applicants can choose between several vocational trainings offered almost in every study field and financially fully covered by the state. From 2015 even the second vocational training can be completed for free, it also shows the educational reorientation towards the more practical professions.

On the following figure we can see the actual popularity and application/admission numbers, ratios of each study fields in the higher education.

Among the Hungarian secondary school graduates, the economic area is still the most attractive, but only the ~56% of them have been accepted. Because of the relatively high salary expectations and continuous demand, the technical sciences are the second most popular with ~53, 3% admission rate. The rise in popularity of pedagogical programs might be explained with the increased salaries for teachers' during the recent years. Human and social sciences are under the 15000 applications-limit in the 4th and 5th place. The medical/health and IT sciences count almost equal interest, but within the IT field, higher number of applicants succeed.

![Distribution of candidates - according to their application to the higher education in 2015](image)

For agricultural and natural studies less than 10000 students applied all over the country. Legal studies became lower ranked compared to the previous years with its 10th place. In the present year it was quite difficult to get into art oriented higher education institutions with ~26, 3% admitted ratio, this is the lowest in 2015. The administrative, police and military field is very close to the art field, while the sport sciences and the art mediation took the last two places in the rank.

The distribution of the most popular vocational training programmes might lead us to the conclusion that most of the students who did not apply or have not been admitted to any higher education institution, selected the tourism and catering area for further education. As only the ~56% of economic students and ~53,3% of the technical students have been accepted at universities or collages, the remaining
group most probably stayed in the same area, but started on vocational level, as these fields count the most of the students in the VET system. The health care area also has a high rank on both study level, its students probably committed to the field.

Figure 7.
Distribution of active vocational students in 2015 [16]

The trade, marketing and administrative training programmes are also very popular, in fact these sectors register a peak demand among students when compared to the following. The architecture, art-culture-communication, agricultural and other services-foursome collects approximately 1500 students/field in second section of the rank. The third section’s programmes have less than 1000 students: vehicular-transportation, electrical, food industry, social service, timber industry and IT. Six programmes belong to the last section with less than 400 participants on each field: light industry, business management, education, environmental, chemical and printing industries.

The total number of active (applied for exams) students in the VET system in 2015 is 28838, while 33400 students had an unsuccessful application to the higher education. It means that 4562 students did not enrol to any vocational training, even if they had a gap year before they tried to apply again.

After the summarization of statistics on the students’ orientation in the present year and having the national HR research results and reports, we can identify that the half of the hardest loaded jobs could be covered by employees with vocational education. The highest demand on the list is for workmen with versatile practical knowledge, which can be gained only through vocational trainings. Higher
education does not offer any training for professional drivers or machine operators, or practical knowledge for future shop assistants, sales persons or catering staff. These professions can be practiced only after special training in the selected field. Of course these lower ranked jobs are not that attractive for students, who expect higher salaries than these positions could provide. On the other hand, higher education graduates would not accept such conditions as highly skilled entry level workforce, even if the labour market caters for such a demand.

According to the VET statistics in 2015, most of its graduates are the future employees of the tourism and catering area, which is ranked in the 10th place between the most wanted positions. The resupply cannot be effective enough in this business as its workers have the highest migration numbers from Hungary to western or northern countries for higher salaries and social benefits. In case of engineers, financial experts, team leaders or senior managers the explanation is given by the HR executives through the lack of experience and the most important skills. Further reason of labour mismatches is that many people occupy a position not directly related to their field of study. The lack of talent management programs should be taken into account also, most of the companies do not have any strategy or system to support recruitment processes effectively.

Even though from 10 hard loaded jobs, 5 require a vocationally and practically trained worker, approximately triple the amount of students have been accepted to the higher education than the whole number of active VET students in the beginning of the academic year 2015/16.

The issues of education concern the basic processes of social reproduction and closely related to the functioning of the labour market. That is why it is important to research and understand the intentions of high school students comprehensively, to be able to determine its long term influences.

The following figures show the post-secondary education motivation of the next generation of applicants.
Total number of responses is 436 from Budapest metropolitan area. The ratio of male and female are nearly equal (224 male and 212 female).

From the 66 students who do not wish to continue their studies in the higher education, the majority (45 people) would like to enrol to a vocational school and get an accredited profession. The data shows that 93% of female and 89% of male students are planning to continue their education.
From the total 436 students, 36 (~8%) plan to apply to foreign institutions. Important to notice that the number of Hungarian workforce in Austria, Germany and in the United Kingdom is extremely high and continuously growing. Research shows that remarkable percentage of high school students have plans towards these directions already. The most popular destination countries are the UK, Austria, Denmark and Germany to continue their studies. According to the national statistics, these countries register about 500 Hungarian full-time Bachelor students per year, and the number is continuously growing. Attractive factors include the possibility for tuition fee exemption in several countries, language proficiency, strong point in the CV, etc.

The vast majority of high school students (95%) learned English as a foreign language. The 53% of them have studied or can speak in German, 11% in French, 7% in Italian and 5% in Spanish. In Russian only 4% speaks, 5% replied other language (eg. Slovakian, Japanese, Arabic).

The next generation is still economic minded, the technical field keeps its second place. The IT field changes its position for the third place. The interest for pedagogic studies decreases among secondary school students in the capital; this is the sixth most popular, however on national level it assumes the third place. Medical sciences are also gaining popularity, increasing from sixth to fourth place.
If the national level will follow these changes, the distribution of future graduates could cover the demand of labour market more effectively.

Comparing the above described data, the table shows, that the primary demands are not covered by the supply. Economics students are not willing to change orientation, shortage professions. The technical and health fields have the most balanced demand-supply positions, but these sectors have different kind unsolved HR problems.

<table>
<thead>
<tr>
<th>Labour market needs in 2015</th>
<th>HEI apps. in 2015</th>
<th>Enrolled VET students in 2015</th>
<th>Expected HEI apps. in 2016/17 (Budapest area)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Workman</td>
<td>Economics</td>
<td>Tourism and Catering</td>
<td>Economics</td>
</tr>
<tr>
<td>2. Driver</td>
<td>Technical Sciences</td>
<td>Economics</td>
<td>Technical Sciences</td>
</tr>
<tr>
<td>3. Engineer</td>
<td>Pedagogy</td>
<td>Mechanics</td>
<td>IT</td>
</tr>
<tr>
<td>4. Financial expert</td>
<td>Human Sciences</td>
<td>Medical and Health</td>
<td>Medical</td>
</tr>
<tr>
<td>5. IT expert</td>
<td>Social Sciences</td>
<td>Trade, Marketing, Admin</td>
<td>Human Sciences</td>
</tr>
<tr>
<td>6. Team leader</td>
<td>Medical</td>
<td>Architecture</td>
<td>Pedagogy</td>
</tr>
<tr>
<td>7. Doctor</td>
<td>IT</td>
<td>Art, Culture, Communication</td>
<td>Social Sciences</td>
</tr>
<tr>
<td>8. Machine operator</td>
<td>Agricultural</td>
<td>Transportation, Vehicles</td>
<td>Natural Sciences</td>
</tr>
<tr>
<td>9. Shop assistant/sales/</td>
<td>Natural Sciences</td>
<td>Electrics</td>
<td>Psychology</td>
</tr>
<tr>
<td>10. Catering staff</td>
<td>Legal</td>
<td>Food Industry</td>
<td>&quot;other&quot;</td>
</tr>
</tbody>
</table>

Table 1.
Summary of labour market needs and educational resupply
Source: own data
5 Conclusion and recommendations

Connecting the given and described data, it is obvious that there won’t be any significant change in the educational support and supply during the following years.

Students don’t consider the domestic labour market conditions before they make their decisions. The most important gaps, the shortage of workforce and the education system’s resupply and support, are seem to be imbalanced until the next generation. Despite the fact that the most requested and sought after jobs require a vocational education, for example the primary source for training, this form of education is still disfavoured until now.

Economic Sciences are the most demanded degree courses in the students’ interest due to high salary expectations. But mostly it leads to administrative positions, absolutely different kind of jobs or unemployment.

Technical and medical studies are also quite popular. They have the potential of an adequate supply for domestic demand. Nonetheless, the migration of highly skilled employees (engineers, doctors, physiotherapists, nurses) to western countries, as well as the lack of talent management, recruiting programmes outweigh this development. The result is an employee shortage within these areas.

The most sought profession within the following years will be the IT security analyst and data specialist. The data collection instruments overflow the daily life. Decoding the locked information into data will grow into the largest capital of businesses- this is called the Big Data explosion. There are a couple of new professions which reduce the training places and also the amount of professors teaching the new technologies and processes.

On the one hand, not only the Hungarian, but even the EU and global situation, raises several topics of research, discuss and development as well as the importance of career guidance, talent management programmes and the responsibility of universities.

On the other hand, in spite of the labour market conditions, outstanding employees are still in short supply. Official reformations about the education system and human resources strategies could have a positive impact on the labour market:

- Vocational and secondary training has to be adapted to reskill mid-career employees and to offer job-specific skills to young people who will not attend the university.
- In developing economies as well as in advanced economies, governments have to find ways to develop not alone high-skilled workers.
Denouements include improving the value-added chain in developing economies and finding possibilities for workers without university education to take part in fast-growing fields in advanced economies.

- Businesses attend, on these skills-scarce sections, to find talent pools for the needed workers and skills. They need buildup strategies for recruiting, keeping and training these employees who will help them to get a competitive advantage.
- Advanced economies have the possibilities to create new jobs for low-skilled and middle-skills workers in the sectors of service, as well as in the fast-growing health-care, child-care and elder-care.
- Developing economies can bring a higher demand for low-educated workers by promoting the labour-intensive sector expansion. They can create it by raising the value chain.

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    sStatisztikak/friss_statisztikak.php (downloaded: 15.09.2015)
    (downloaded: 15.09.2015)
Life is Short. Have another Affair – Password Security

Keszthelyi András
Óbuda University, Keleti Faculty of Business and Management, Budapest, Hungary
Keszthelyi.Andras@kgk.uni-obuda.hu

This summer Ashley Madison the online dating site was hacked and many gigabytes of data was downloaded from the site and published, including user records. Amongst these data more than 11 million user passwords were revealed. In this paper I investigate the case from the sysadmin’s (or the management’s) point of view on the basis of publicly known circumstances: what is the best practice to properly handle user passwords.

Keywords: data security, password, data loss

JEL code: L-86 Information and Internet Services; Computer Software

1 Introduction

Living in the Age of Computer Networks when the internet is part of our everyday life, the amount of digitally stored data increases day by day and what is more: our dependency on these data also becomes stronger day by day – we speak about a new paradigm, we have virtual personalities and we act in a virtual world (too). In such a situation information security is more important than ever.

At the beginning identifying users was not a too important task of security – at those times nobody thought that the time would come when everybody will use computer networks as part of everyday life. The more the computer networks spread the more important user identification became. Nowadays it is of critical importance. There are different methods for identifying users and each of them has its advantages and disadvantages compared to the others. Among these methods the use of passwords is the oldest and simplest way.

What are the possible aims of intrusions into computer systems? They cannot be enumerated fully but they can be classified into two groups: they can be direct and indirect ones.
Direct purposes are to be mentioned first: money, revenge, political protests, classical spying, industrial espionage, or whatever you can even imagine. Attackers will use directly and in most cases immediately what they could steal from the targeted system.

After these direct aims there may be some indirect ones. Among these possible indirect ones now the stealing of real-life passwords are interesting for us. The bigger set of real passwords you have and analyse the more realistic knowledge you will have about password selecting habits (Keszthelyi, 2013). Analysing password selecting habits of real users of present one can improve a lot on password cracking methods, so future attacks will be more efficient.

In the past few years there were some significant intrusions into different computer systems that resulted in getting a (very) large number of user passwords published. Among them the data breach of the cheating site Ashley Madison is the last. In this paper I investigate the publicly known circumstances of the case to get the conclusion: what is the best practice of handling passwords at server side.

2 What happened?

Ashley Madison, The Ashley Madison Agency in full, was founded in 2002 in Canada. It is a commercial web site for online dating, especially for people who are married or in a relationship. The slogan of the site is “Life is short. Have an affair”. On the basis of traditional ethical values it is far from what we could call as normal. The site had (has?) nearly 40 million members from more than half a hundred countries and realized a yearly income of about 100 million US dollars. (CBS, 2015/A) The site charged a 19 US dollar fee for deleting a user account. Site said this “full delete” option was to include all the personal data of the user, such as photos, site usage and search history, sent and received messages etc. (Chideya, 2015)

In the middle of July 2015 some hackers who called themselves as “The Impact Team” could successfully get into the system of the site and downloaded the user database, including the real names of the users, their home addresses, their search history and bankcard transaction data. (Thomsen, 2015) The Impact Team announced the successful attack on 15 July and demanded the site to be shut down immediately and permanently unless the owners want the user records published. The site was not closed (and is working even today) and the tons of user data was published via BitTorrent. Soon it came to light that the permanent deletion of user profiles was a humbug, attackers could reveal data records that were considered as deleted. “Despite promising customers to delete their user data from the site for a $19 fee, the company actually retained the data on ALM’s servers, the hackers claimed. «Too bad for those men, they’re cheating dirtbags and deserve no such
discretion,» the hackers wrote. «Too bad for ALM, you promised secrecy but didn’t deliver.»” (Zetter, 2015)

Among the published user records there were thousands of official government and military email addresses, belonging to members of the US army and government offices (email addresses ending with .gov, .mil). (Gibbons-Neff, 2015) This attack can be compared to the celebrity photo hack in 2014.

3 Password cracking – background

There are some well-known methods to find out other people's passwords. These methods are so logical and so well-known that it is an interesting question: “Why people use so stupid passwords?” Because of user irresponsibility there are some easy ways to reveal users' passwords. If users are responsible and apply the most important and basic password selecting rules then attackers have to go on harder ways. Let's have a look on these methods.

The most irresponsible password selection methods are when users pick up “basic” passwords (or leave factory default ones unchanged) such as 123456, password, etc. For more examples try Google search expression “top 100 passwords”. Among Ashley Madison users the most frequent password was 123456, used by more than 120 thousand users (1,03%) out of the 11,7 million whose passwords have been successfully cracked. The top ten passwords are listed in Table 1. (Collins, 2015)

<table>
<thead>
<tr>
<th>password</th>
<th>number</th>
<th>proportion</th>
</tr>
</thead>
<tbody>
<tr>
<td>123456</td>
<td>120 511</td>
<td>1,03%</td>
</tr>
<tr>
<td>12345</td>
<td>48 452</td>
<td>0,41%</td>
</tr>
<tr>
<td>password</td>
<td>39 448</td>
<td>0,34%</td>
</tr>
<tr>
<td>DEFAULT</td>
<td>34 275</td>
<td>0,29%</td>
</tr>
<tr>
<td>123456789</td>
<td>26 620</td>
<td>0,23%</td>
</tr>
<tr>
<td>qwerty</td>
<td>20 778</td>
<td>0,18%</td>
</tr>
<tr>
<td>12345678</td>
<td>14 172</td>
<td>0,12%</td>
</tr>
<tr>
<td>abc123</td>
<td>10 869</td>
<td>0,09%</td>
</tr>
<tr>
<td>pussy</td>
<td>10 683</td>
<td>0,09%</td>
</tr>
<tr>
<td>1234567</td>
<td>9 468</td>
<td>0,08%</td>
</tr>
<tr>
<td>(sum)</td>
<td>335 276</td>
<td>2,87%</td>
</tr>
</tbody>
</table>

Table 1
The top ten passwords of Ashley Madison
It is also an irresponsible password selection method when there is a connection between the password and a) the person (date of birth, name of favourite actor/actress), b) the login name as strings (admin – admin, admin – admin!admin), c) the login name in the meaning (ashley – madison).

These kinds of passwords can easily be guessed in a few turns, even online and personally. Barack Obama's Twitter account was hacked this way in 2010. (Mesquita, 2010) If a password cannot be found by these ways the next step is the classic dictionary attack, when a program tries out all the words from a given list (dictionary). On the basis of the results of analysing the structure of millions of real passwords a so-called advanced dictionary attack may be performed. In this case not only the basic words from the list are probed but their variants similar to the most common structures as well (e.g. a two digit number appended at the end of the word). A brief analyses I made on rockyou.com passwords can be found in (Keszthelyi, 2013).

The last possibility of an attacker is the brute force method when a program tries out all the possible character combinations. In this case the password will be found for sure, the only question is: When? Three years ago, at the end of 2012 Jeremy Gosney presented his machine designed to crack passwords with brute force. It was running the HashCat password cracking program on 25 AMD Radeon GPUs. He could provide an unbelievable 348 billion tries/sec (NTLM password hashes), which means that a 14 character long WinXP password, for example, could be cracked just in six minutes. (Paul, 2012) (Soulskill, 2012)

Advanced dictionary and brute force attacks can normally (?) be performed offline, after the attacker has successfully stolen the shadow passwords from the target system. What are shadow passwords? To store the passwords of the users in plain-text form is a serious security flaw. If anyone, in any way, can get access to the plain-text password file then s/he could personalize each and any users of that system. Instead of plain-text passwords, normally, their hashes, the so-called shadow passwords are stored. Hash functions are one-way mathematical functions that calculate a fixed length string from the input. If the hash function consists of a large number of calculations the brute force method would need a very long time to be finished even if you have a very large calculation performance (petaflops or more).

4 Best practice

The security level passwords can provide us depends on both the user(s) and the system administrator and/or the management who makes the security rules. As we know from revealed password lists, too, the weakest link in the chain of security is the human factor, i.e. the irresponsible user. In such a circumstance the
management and/or the system administrator should be more careful because they
do have the necessary knowledge (or at least: they ought to have it).

The first step is to improve security in general, obviously. The security level of
every system is as high as that of its weakest link. In addition, if you are also
responsible for the privacy of your users, you must act that attackers should have
the least chances even if the shadow passwords are stolen. And shadow passwords
can be stolen, there are more than enough examples for that.

Now let's focus on password handling on server side. Considering the fact that a
lot of users pick up their passwords irresponsibly we conclude that we must check
the password selection of our users. Having a look on the above mentioned
methods to get others’ passwords the following rules ought to be applied.

New passwords should be checked against a regularly updated blacklist of the
most common passwords. For details do a Google search for the expression of
“top 100 passwords”, or the top 1000. Keeping in mind the existence of the
advanced dictionary attack, the new password chosen by the users must be
checked not only against the simple blacklist but against the commonly prefixed-
suffixed-concatenated words of the blacklist as well. For more details on common
password structures, see for example (Keszthelyi, 2013).

The next step is deciding the function that calculates the password hashes to be
stored. There are a lot of hash functions, with very big differences in computing
power they need. The more computing power a hash function needs the better it
stands against brute force. Supposing the above described machine developed by
Gosney in 2012 we get the results for some hash functions in Table 2. (Paul, 2012)
(Soulskill, 2012)

<table>
<thead>
<tr>
<th>algorithm</th>
<th>tries/sec</th>
</tr>
</thead>
<tbody>
<tr>
<td>NTLM</td>
<td>348 billion</td>
</tr>
<tr>
<td>MD5</td>
<td>180 billion</td>
</tr>
<tr>
<td>SHA1</td>
<td>63 billion</td>
</tr>
<tr>
<td>LM</td>
<td>20 billion</td>
</tr>
<tr>
<td>bcrypt (05)</td>
<td>71,000</td>
</tr>
<tr>
<td>sha512crypt</td>
<td>364,000</td>
</tr>
</tbody>
</table>

Table 2
Gosney's cracking speed

It is clear that if you use bcrypt instead of NTLM than a successful brute force
attack will last for about five million times longer. As Gosney demonstrated that
an NTLM-hashed WinXP password could be cracked in six minutes max, if the
hash function was bcrypt instead of NTLM it would last for about half a century.
This is a really big difference.

In addition to use a strong hash function passwords should be “salted”. “Salt” is
some random data the plain password is concatenated to before hashing. This
method results in different hashes even for the same passwords. As we can see from the Ashley Madison password statistics (Collins, 2015) there are a lot of people who pick up the same – too simple – password at Ashley Madison, too. If the password is not salted then the same hash will belong to the same passwords. It means that if an attacker can probe the most common passwords, for example trying 123456 will result in finding the password for more than 120 thousand accounts in one step. If the passwords are salted, at most one password can be found in one step.

A very important rule that passwords themselves must not be stored, not even in an encrypted form. What you have encrypted someone may decrypt. Adobe did it and 135 million user passwords came into light. (Ducklin, 2013) In case of Ashley Madison the reason why so many passwords (more than 11 million) could be revealed was that they were stored not only in bcrypt hashes but in md5 hashes as well. “A blogger who went after the the bcrypt hashes recovered only 4000 passwords in a week. In contrast, CynoSure Prime recovered the passwords for over 11 million of the MD5 hashes in about 10 days.” (Ducklin, 2015)

In addition to the technical requirements and possibilities you can (try to) teach your users how to properly chose and use passwords. It may be easier and more efficient if the users are your employees, naturally.

The possible ethical and business aspects also should be mentioned here. Users are (ought to be) interested in security in general, in the proper use of their passwords in particular. Yet they are usually not on top of things. So because the master of the system has (or should have) the professional knowledge and tools, they have more responsibility regarding the security (as well). A user may have a perfect password: it will not work if the master is not careful enough, or directly careless. As the master is interested in running the business in the future, too, it is he who must do the most for the proper operation.

5 Teaching and learning

In our so-called information age, when we depend on the increasing amount digitally stored data stronger and stronger security is a very important field both in business and in private life. As a teacher of IT I must tell that IT security is not the problem of the IT sector only but it is (should be) an important problem if the education system, too. As we must teach our children how to properly take part in the city traffic as early as possible, in the same way we ought to teach our children how to properly take part in the virtual traffic of the virtual world, too. The young generation should exercise themselves in the typical situations practically and when it is possible they must be taught also to the theoretical background. It cannot be done too early, because if you investigate the skills and knowledge of
the university students in computer sciences in Hungary and in Central Europe you will find an alarming situation. (Kiss, 2012/A) (Kiss, 2012/B) Educating, teaching and training is a good idea but may not be enough. The culture of security ought to be developed, for it means less possibility for risky behavior. (Lazányi, 2015)

The minimal requirement would be at least not to teach false things or anything worse than the best. “Using numbers, symbols and mix of upper and lower case letters in your password makes it harder for someone to guess your password. For example, an eight-character password with numbers, symbols and mixed-case letters is harder to guess because it has 30,000 times as many possible combinations than an eight-character password with only lower case letters.” (Google, 2015)

The situation is that that the length of the password is a significantly more important factor than the number of char types. Increasing the number of elements in the basic char set used in passwords will result in the polynomial growth of the possible char combinations and so the time needed for a successful brute force attack while increasing the length will result in an exponential growth. Let's calculate with a cracking speed of $10^{12}$ tries/sec. If the password may contain any of 80 different chars and the length is 8 chars, it would need less than half an hour to crack it. Let's increase the number of the chars in the basic char set from 80 to 100 (25% growth), the time requirement will grow only to less than three hours. Leaving the number of elements in the basic char set at 80 and increasing the length also by 25% to 10, the crack would need about four months!

Stanford University, which is listed among the top ten universities in all over the world suggests to its users a very simple password building procedure, the result of which is also very simple. (Stanford, 2015) They suggest to select four simple words and concatenate them into a passphrase. Their example is orange+eagle+key+shoe. Calculating with quite a big dictionary of eight thousands basic words we get that it would need 68 minutes to crack such a password. If the dictionary contained only 2 thousand words the time requirement would be only 16 seconds. Not too convincing.

But what we can wait for in a world where, for nearly 20 years, the launch code for the US nuclear missiles was eight zeros? (Vaas, 2013)
6 Conclusion

The conclusion of the data breach of Ashley Madison cheating site can be very short.

From the point of view of those who run the (a) service: above general security rules and improvements use a strong hash function and salt to calculate the password hash. Do not let users select weak passwords as well as too short ones. Never store passwords, not even in an encrypted form. Teach and train your users if it is possible. Take part, more generally, to develop the culture of security. Don't take for granted what others state about security in general, about passwords in particular: trust – but check!

From the point of view of users: knowing what a good password is and how to select such one is vital. Knowing that your privacy depends on not only your consciousness but on that of the service provider, too, men had better not register to such sites. Instead of that they had better treat their own family. Especially in light of the fact that most women records were fake at Ashley Madison...

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Outsourcing and its Relatives

Robert Marciniak, PhD
University of Miskolc, Hungary
marciniak.robert@uni-miskolc.hu

Abstract: Outsourcing became a relatively well-known term in the last three decades both in the academic and the business world. Contrarily or because of it there are so many different terms around the outsourcing model that many times it could confuse even the experts of the area. The aim of this research to collect all important outsourcing terms, organize them, create a framework or grouping them with different viewpoints. The framework could help to understand the similarities and differences about the different classes.

Keywords: Outsourcing, Global sourcing, Crowdsourcing, Outtasking, Contracting-out

1 Introduction

In order to decide which processes need to optimize it is worth to analyze the business processes in terms of the volume of transactions, their strategic importance and the cost of the process. There is no need to optimize those functions/services that the company can provide in-house cheaper and better in comparison with competitors. In case of the strategically less important processes it may be considered that certain parts of a service will be purchased from an external service provider. However, if the cost of service providing overtakes the market costs or the competitors’ cost level or maybe higher, then it needs to optimize the processes. (McIvor, 2009)

At strategic key processes the classical process optimization techniques could be useful, because of their merger with the core activity the organization consolidation will not benefit, and the outsourcing is not an option because of its strategic importance. The optimization by organizational consolidation could be a good solution for strategically less important processes, but it has to be decided, that the service functions should concentrate into a corporate center or a shared service center as an independent organizational unit. To make a good decision it is important to analyze the processes of strategic importance and the volume of transactions (the frequency of implementation and the necessary and allocated capacity to it). (Bodnár & Vida, 2006)
The decision should take not once, but every company must create a sourcing strategy which is about holding the services or activities inside or outside of the organization or maybe some sort of combining these two. It is called in the literature as multisourcing and hybrid models. (Cohen & Young, 2005)

The sourcing activities could be implemented in four ways in an organization (Cohen & Young, 2005):

- creating (and maintaining): this is the traditional organizational operation, in which the organization uses its own resources to carry out its activities, produces and provides the services. It included in-house (internal services) or insourcing solutions;
- buying: the organization provides services from external sources. These include a variety of outsourcing solutions;
- cooperation: where two or more departments (or organizations) create a solution from common resources. It includes joint venture, netsourcing or a consortium;
- competition: when the company integrates the market approach into the organizational operation (like quality, fee, cycle of provision). This often leads to the formation of spin-off companies or the development of internal service centers (shared service center model).

This study deals only with the second option, the buying when the company buys a basic service from outside partner.

2 Research aims and methodology

In the literature, there are a lot of different types of outsourcing and the business practice could vary them further. It could cause a confusion for researchers and corporate experts to understand the differences among them. The aim of this study to use a broad literature review to clarify the similarities and differences among the outsourcing types and build an outsourcing framework that summarize the characteristics and help to use the terms correctly.
3 Outsourcing

3.1 Outsourcing in general

The term of outsourcing (comes from the phrase of "outside resource using") means handing over a business or organizational functions (traditional outsourcing) or the whole process (business process outsourcing, BPO) to an external service company. This external service company will offer the required service the amount required at the market price. It also means outsourcing when the company terminates an organizational function and buy it from an appropriate service provider. The definition of Bőgel-Salomon’s definition is cited by Hinek:

“The outsourcing is essentially nothing more than the transfer of those activities to an outside contractor that were previously performed within the company.” (Hinek, 2009, p. 11)

The outsourcing is based on many management theories but the most important and influential two theories are the transaction cost economics (TCE) and the resource-based view (RBV). Within the TCE theory Coase (1937) and Williamson (1987) specified the conditions under which an organization should manage economic exchange internally or externally. The latter one is the outsourcing. Within the RBV theories Barney (1991) views the organization as a bundle of assets and resources that can create competitive advantage, assuming the resources are employed in distinctive ways. Superior performance achieved internally in an organization relative to competitors would explain why these activities are performed internally and not outsourced. Prahalad and Hamel’s (1994) core competence theory has emerged from the RBV. It refers to such activities that a company would be able to perform it as well, but compared to the external service provider with worse efficiency. If the company realizes it and tends to make decision, then many times to choose outsourcing model. (Gerbl. et al., 2009)

Based on complexity in design and execution the literature use the term of transactional outsourcing that means a fairly low level of work that entailed process and contact centers. (Gerbl. et al., 2009) The outsourcing is mostly chosen by organizations to concentrate on core activities (core competences) and thus reduce operational costs and possibly improve service quality as well. But it may be chosen due to introduce and manage certain organizational changes. This type is called in the literature as reorganizational outsourcing or transformational outsourcing. This is a risk and benefit-sharing cooperation, which enable the organization to significantly improve the operational processes. (Corbett, 2004) (Marciniak, 2013)
3.2 The outsourcing framework

In the grouping of outsourcing, there are more viewpoints that could help to classify the different terms. The first viewpoint is the scope of the outsourcing. It concerns those questions which business processes and how a large proportion of a business function will be outsourced. The two typical subtypes are the task-oriented and business-oriented outsourcing. The former is the classical, the latter is the business process outsourcing. The business process outsourcing could happen in three different ways as selective, transition and total outsourcing. Very similar to the selective outsourcing is the pilot or the organic outsourcing. One important subtype of the business process outsourcing is the knowledge process outsourcing.

A second viewpoint to the grouping could be the control over the process outsourced. Contracting out and full outsourcing means different levels of control over the processes.
The localization of the outsourcing provider also classifies the outsourcing terms. Besides the local (onshore) and foreign (nearshore, offshore) outsourcing it is very interesting the rural sourcing and the homesourcing.

The adaptation to the strategic viewpoint concerns about the duration of the contract and the role of the outsourcing in the organizational strategy.

The last viewpoint is the participator which means who deliver the functions to the recipient organization. Typically that it is an independent market player, an outsourcing service provider, but it could be a group of people (the crowd) as well. The latter is called as crowdsourcing.
The framework includes only the most important subtypes of outsourcing. In the following parts will be introduced every type of the framework in more detailed.

3.3 Subtypes of Outsourcing

3.3.1 Business Process Outsourcing

Process-oriented outsourcing involves the provider who takes responsibility for executing a business process such as customer contact, and delivering it to the client as a service, often referred to as business process outsourcing (BPO).

In the literature as a part of BPO the high value-added process outsourcing is called knowledge process outsourcing (KPO). Such higher value-added processes are in the literature, e.g. R&D, business and technology analysis and market research activities. But there are other similar outsourcing types like recruitment process outsourcing (RPO) as well.

The business process outsourcing could be grouped in three different subtypes:

- selective outsourcing involves outsourcing a limited ratio (20-80%) of activities associated with the business process. It has been chosen mostly in the two cases (Oshri, et al., 2009):
  o if the company outsources the entire activity concerned, could lose the in-house knowledge to be able to verify the supplier at an appropriate level;
  o if the company does some work in-house, then it is a daily, operational knowledge and information that it is necessary for the efficient operation of a reporting system;
- transitional outsourcing involves outsourcing the process to a supplier on a temporary basis;
- total outsourcing (more than 80%) involves outsourcing the entire process to a vendor.

In most of the cases, the selective outsourcing means as pilot outsourcing. In this case, only a sub-area of a certain activity is organized out by the first round, but allows the provider to ensure that, in the medium term be able to acquire the remaining parts of the task. The advantages of this approach is to focus on the relatively small area of the service and there can achieve the highest possible level of service quality. It ensures time for the receiving organization to examine the benefits of the outsourcing. This is actually the same as or very similar solutions as the so-called. Organic outsourcing means the case when the receiver buys only smaller task from the service at first time and if the cooperation is successful, it
will gradually involve more and more functions and process parts. This model is rather opt for smaller providers, which in many cases will not be able to take over the entire business process firstly, but do it later with the organic growth of its organization.

The outsourcing contracts of the non-profit and public sector is called as contracting-out. It means a contract when the function will outsource but without the transfer of control.

### 3.3.2 Classical outsourcing types

The classical outsourcing means an outsourcing only a specific function or service of the organization.

In the business practice one type of the classic outsourcing has a very vital role it is the information technology outsourcing (ITO or Information and Communication Technology Outsourcing, ICTO). The other known subtypes of classical outsourcing of finance and accounting outsourcing (FAO). But there are other subtypes of classical outsourcing activities like human resource outsourcing (HRO), procurement outsourcing (PO), etc.

### 3.3.3 Strategic outsourcing and Out-tasking

Strategic outsourcing is a sophisticated tool for achieving or exceeding long-term corporate objectives. It has four main characteristics:

- it involves a fundamental executive decision to reposition the business positively through a large-scale strategic change program;
- mitigation of the associated risks through the contractual leverage of specialist third-party experience, resources, assets and skills;
- commitment to the concerted management and motivation of such relationships at every organizational level, especially by the executive team;
- focus on ensuring of the key objectives that create the stakeholder value in a measurable and sustainable way.

In the literature the small-scoped, not a complete process involving, relatively short-term (up to one year long) contracts are called as out-tasking. In this case, the outsourcing organization retains the control of the strategic task.
3.3.4 Onshore, nearshore, offshore outsourcing

The outsourcing could geographically grouped according to the source location which means the place where the service is provided. Thus, the literature talks about onshore, nearshore, offshore outsourcing. In the case of onshore outsourcing the recipient is in the same geographical area, in nearshore outsourcing the areas is adjacent and in offshore outsourcing, there is a large geographic distances between the recipient and the provider. The onshore outsourcing is called as a local, the nearshore and offshore as a foreign outsourcing.

3.3.5 Rural sourcing

The relatively new rural sourcing concept refers to a kind of outsourcing in which model some tasks that can be performed as telework will be outsourced from urban areas with higher wages and skill shortages in rural areas. This is essentially a type of onshore outsourcing that may even be a solution for certain structural problems in the labor market. (Berta, 2011)

3.3.6 Homesourcing

In the case of homesourcing, the activity is organized home to a workforce that prefers or exclusively (e.g. because of disabled status) is working only from home, instead of a workplace. Typically, such work can be a call center or telephone sales work. It means that it is not necessarily flexible working hours only the place of work is different from the traditional office work. However, usually part-time employees used this model (e.g because of being on maternity leave). But the organization also may benefit from the homesourcing, since it is not necessary to ensure (or only minimal) working infrastructure, which saves the company a lot, but nowadays it can easily check the work with different IT tools. (Marciniak, 2014)

3.3.7 Crowdsourcing

Recently among certain companies (e.g. Getty Imagines, InnoCentive, YourEncore, NineSigma, etc.) spread the so called crowdsourcing model, which is also a version of outsourcing. The concept coined by Jeff Howe, who said:

"simply defined, crowdsourcing represents the act of a company or institution taking a function once performed by employees and outsourcing it to an undefined (and generally large) network of people in the form of an open call. This can take the form of peer-production (when the job is performed collaboratively), but is also often undertaken by sole individuals. The crucial prerequisite is the use of the open call format and the large network of potential laborers." (Howe, 2006, p. 15)
In this case, an external expert is hired who were recruited mostly on the Internet, and involved in a complex task to solve one part of it. The use of it ranges wide from the typing of handwritten forms through the implementation of telephone research, till data cleaning, database building, customer service or other tasks. (Sütő, 2012)

The employed workforce in crowdsourcing does not require corporate training, office work equipment, and other benefits over salary and even may have a better knowledge than the corporate workforce. The work is realized through Internet, telework, in flexible time and only for one part of the total task. It well uses to perform well-paralleled task with large volume, but require human intelligence. The work carried out in crowdsourcing could have cost advantage of up to 60-70% compared with the outsourcing model. The costs might be lower by additional 10-15% since the employees should be paid only during the execution of the task, not during a training or between two tasks.

In some areas, such as software development, crowdsourcing can be absolutely competitive with other outsourcing solutions. However, the crowdsourcing is not suitable for every task and all companies. The biggest fears about crowdsourcing is related to the safety of intellectual property. The specialized needs of the task, the more complex the project, the closer the team-work, the less available the benefits of crowdsourcing.

Besides the security issues there is uncertainty related to the workforce as well. What is the guarantee that the workforce can do the job accordingly to requirements, do not leave the job at half time, does not reject the task, will not be disappointed in the payment terms or will not restrain the rights of work performed. In order to exploit the benefits of crowdsourcing the company need to build a private team to serve the company. In this private team there should be those expert members whose professional backgrounds were checked, whose knowledge meets the needs of customers and who enter into a confidentiality agreement, whose proper pay and incentive package agreed. (Marciniak, 2014)

The term is still constantly evolving and changing as more and more fields will be emerging. Crowdsourcing of tiny pieces of meticulous work has since expanded to several additional applications. The crowdvoting entrusts the crowd with certain decisions through voting, the crowdtesting involves the crowd into testing, crowdfunding is an online funding platform of various projects in which the community can help. In recent years more and more popular are those solutions that use crowdsourcing to solve creative tasks (design, writing, illustration).

The crowdsourcing model highly builds on the initiatives and ideas of insiders that may be used through a common online platform and can be built into the corporate practice. So essentially the crowdsourcing creates the basis for open innovation.
The open innovation concept was coined by Henry Chesbrough in 2003 who thinks that this is the opposite than traditional (closed) innovation. According to him, the open innovation is a targeted use of knowledge inputs and outflows to accelerate internal innovation and expand the markets for external use of innovation.

4 Conclusions

The research confirmed that it is not easy to see through the different kinds of outsourcing solutions. They could be grouped by many different viewpoints and within the viewpoint there could be different terms in the literature and business practice which can cause confusion among the experts as well. The research introduces a comprehensive framework about the subtypes of outsourcing and try to clarify the differences among the terms.

References


Company-level Problems in the Introduction of CRM Systems at Hungarian SMES

Regina Zsuzsánna Reicher, Ph.D.
Óbuda University, Keleti Faculty of Business and Management, Budapest, Hungary
reicher.regina@kgk.uni-obuda.hu

Viktor Nagy, Ph.D
Óbuda University, Keleti Faculty of Business and Management, Budapest, Hungary
nagy.viktor@kgk.uni-obuda.hu

Abstract: The literature on introducing CRM systems is not very thorough and even the few that exist focus mainly on large enterprises. The failure rate of IT projects can reach 50% so it would be really important for SME actors to discover the reasons for failure and to develop methods that help with the success of the project. In my research I interviewed CRM developers for their experience to get to the bottom of the reasons for failures. The results show that the success of introduction depends on both parties, the tasks can be described well with a phase model.

Keywords: CRM system, SME, introduction of informatics system

1 The relevance of the topic

The situation of Hungarian micro- and SMEs has become very difficult as the result of the economic changes of the last years. The open European market, the economic crisis and the ever increasing competition demand fast reaction, which prove to be a serious challenge for these enterprises, which face a lack of capital and other resources. Szabó reveals in a research paper that the innovation activities of the Hungarian SMEs fall behind and need significant improvement compared to those in other countries. [Szabó – Herman 2014] Therefore, companies in the SME sector pay an increasing attention to serve their customers at a high level. In order to this aim, they often seek an IT solution.
Should a company decide for an IT supported client management, it should be aware of starting a long, costly, but most probably valuable investment? The introduction of the system has several phases, and each phase will present different challenges.

This situation is serious and the problem is real – this is proven by the fact that software has appeared on the market which aims specifically to develop and track internal structural changes as a result of a CRM introduction. However, will buying a new piece of software really help a company that struggles with the rationalization of internal procedures?

2 Introduction of CRM systems

The primary goal of my thesis is to develop a methodology model which is capable of providing support to SMEs in the entire procedure of the preparation, selection, introduction and operation of a CRM independently of the software chosen and if possible, of the industry in question.

Mester says that two important trends were involved in the development of CRM. One of them is the decreasing differences between products - this forces the market actors to distinguish themselves from their competitors by tailoring their products. The other one is the development of information technology which enabled the companies to collect and analyze the data about the clients with the help of various software products. [Mester 2007]

The CRM introduction means a long-term relationship with the developer/distributor company, as well as a constant financial burden for the enterprise. Not only due to the infrastructure maintenance costs and the cost of the yearly software license – new solutions appearing on the market are also forcing an enterprise eager to achieve or to maintain a competitive advantage to take IT development into consideration.

During my research I aim to concentrate exclusively on the Hungarian micro- and SME sector. The reason for this is the fact that large enterprises operate under different environmental conditions (capital strength, creditworthiness). I am not researching public service providers, telecom service providers or companies in the banking sector, which are typical CRM users.

One of the main possibilities of CRM systems is the preparation of customer analyses. By using the database, the system is able to create client groups on the basis of given parameters, to make data analyses and to calculate client value. [Bohné 2005]
The number of CRM suppliers is rather large, and the competition in this sector is strong. Willingness to respond to questions – given the expected length of the interview and the intent to protect insider information – was rather low.

Alshawi et al. made research concerning the factors which affect SME actors concerning the acceptance of CRM. The research has revealed that the data quality, the organisational changes and the technical questions basically determine the relationship to the system. [Alshawi et al 2011]

In the light of the importance and relevance of the topic, I set out the following aims.

A1. Analysis of the procedure and general issues of the introduction of a CRM IT system from the viewpoint of the supplier in the case of SME users;

A2. Comparison of the introduction practice of CRM suppliers, comparison and analysis of successful and unsuccessful cases of introduction and operation of CRM systems;

A3. Revealing the motivational differences between CRM system suppliers and buyers; this could aid the supplier in formulating its marketing strategy and the buyer in formulating its needs;

The results of the aimed research are expected to help in identifying and organizing the factors within and surrounding IT suppliers and CRM buyer SMEs that influence the introduction and operation of CRM IT systems. Based on this, a theoretical model and methodology could be developed that contributes to the careful planning of CRM introduction and their successful operation.

The implementation of CRM is a complex, long project task concerning multiple areas, in which the company staff and IT suppliers should cooperate. If the implementation of CRM is successful, it causes basic changes in the life of companies. Révész says that these changes mean increasing sales, growing satisfaction of consumers, specific decline of general and marketing costs, improvement and increasing efficiency of coordination among internal processes. [Révész 2004]

The representative research of Deák and Mester in Hungary warns that the Hungarian companies have not been mature enough for the implementation of CRM systems. Almost 45% of CEOs think that conscious customer management means registration. Two-third of companies do not examine the reasons for losing customers and 25% of companies do not follow the needs of customers - by their own admission. It is clear that the companies are not aware of their possibilities. [Deák – Mester 2005]
3 Introduction of CRM informatics systems in Hungary

As there is only a limited literature on the introduction and operation of CRM systems, and even that mainly focuses on large companies, I performed a primary exploratory qualitative assessment.

For the purpose of analyzing the Hungarian CRM suppliers, I organized my research around the following primary quantitative assessments:

1. The views of CRM suppliers on the motivations of CRM users to introduce CRM systems and the characteristics of the operation of the CRM. – Online questionnaire after a previous personal contact in all cases.

3.1 Results of the qualitative research, research sample characteristics

During my interviews, I contacted and talked to a representative professional of fifteen software developer companies. In all cases I talked to professionals who knew the market, had several years of experience and participated in several CRM introductions. Three of the chosen companies are targeting large or large medium enterprises with their products, developing with a large company environment in mind. Twelve interview subjects were representing software companies who prefer SMEs as clients, their products can be introduced with a smaller investment. Five of the fifteen companies have foreign parent companies (in the US, Germany, or Sweden), they are adopting the software to the domestic market and include their own developments.

As concerns the type of the software used, two interview subjects are distributing cloud-based systems, one distributes solely retail software, one offers retail software and individual development as well, while the other eleven are present on the market with standard solutions. Two companies also offer industry-specific solutions.

The interviewed companies where characterized by two types of data. One was the number of clients, ranging from 3 to 30. The other was the number of employees using the system. Here the answers ranged from tens to 2000; these are approximations as no interview subjects had exact data. The answers were influenced by the fact that several companies could only indicate those clients in their answers who agreed to the use of their name as reference. Additionally, another tendency could be observed: where the distributor has a foreign parent company, that company may offer remote access to its servers. This affects distributors active on the international market. For them it is hard to assess the number of domestic clients, as the parent company of the distributor may be
offering remote access to a Hungarian subsidiary of a foreign client. The Hungarian CRM distributor will not know about this, as the license agreement was signed in the country of the parent company and access to the CRM system is provided from there.

3.2 Circumstances of the qualitative research, expert characteristics

I contacted 57 distributors asking them to fill out my expert questionnaire. I received 31 expert answers. This means that 54% of the distributors (experts) have answered.

The expert questionnaire was sent to 57 CRM system providers who are involved in the introduction, development and support of CRM systems. I was paying attention to possibly contact a variety of experts as concerns the type of CRM systems introduced. Only three of them were of my previous interview subjects. Of the 31 experts, some were introducing installed software while others offered a cloud-based service. There was also a variety in the size of their clients, ranging from micro-enterprises to medium-sized or large companies. All software companies did continuous development, and some of them offered individual development as well.

The 31 experts had a total experience of 170 years. The most experienced works for 13 years as an expert and six of them has more than 10 years of experience; the average work experience is 5 and a half years. 11 experts worked on the introduction of 3 or more types of CRM systems, while 10 of them had experience yet with only one type.

4 Results

4.1 Processing the interviews

Based on the literature I collected the critical points of CRM introductions, the general pitfalls, and I formulated the questions around these.

Characterizing the companies introducing a CRM, the respondents could not indicate a typical industry. They said to have clients both in the manufacturing and the services sector. They mentioned several motivation factors. It is primarily the market stress, the serious competition for clients that motivates clients to introduce a CRM system as a need for marketing support arises. Another motivating factor
was state aid offered to help IT projects, as well as the cases where sales experts with experience at multinational companies appeared as new employees at SMEs.

There were great differences in product selection criteria in the case of various CRM purchasers. Often the client has no expertise in CRM systems and the connected IT solutions, furthermore they negotiate without bringing an advisor or expert along, and therefore their decisions on matters beyond the price will be subjective, superficial and often unfounded. The economic crisis had no positive results. Hungarian companies did not recognize the importance of customer retention in this situation. It is mainly companies with foreign parents who have an own introduction strategy. At these companies the introduction is performed following a central strategy developed basing on international experience. US, German and Swedish parent companies require a high level of support in this area as well from the representatives in every country. Two of the respondents mentioned an introduction failure rate higher than 50%. They are of the view that more than 50% of their clients are not using the system after its introduction, regardless of education, good support and proper preparation. Everyday tasks and user resistance often raise serious issues at the company introducing a CRM. Another serious issue is raised by previously unplanned tasks becoming part of the everyday routine. Concerning the duration of the introduction, answers moved on a broad scale, from the current week to one and a half years. Among the auxiliary services offered to the system, education and support were mentioned uniformly. Some mentioned advisory services at the development of the system plan, the assessment of existing hardware and the purchase of new hardware at a good price, periodical updates, patching and remote support.

Based on the experience of the IT suppliers it can be said that there are frequent cases where a CRM is introduced but not used; the reasons for this may be found in using a wrong procurement model. Usually the problem is caused by the non-optimal size of the procurement unit and its members not having the proper professional qualities. Choosing a supplier without an objective set of criteria is a very risky endeavor. The draft contract of the IT companies always foresees potential mistakes to be made by the purchaser; however, the purchaser often fails to contemplate its own potential and its limits.

4.2 Results of the qualitative research

After processing the secondary data and making the expert interviews, as well as reviewing the internal introduction methodology materials of three companies I fund that the process of the introduction can be divided into two large parts given the participants. This way we can talk about the tasks of the company introducing a CRM (points 1 to 4) and the tasks of the CRM supplier (points A to C). The tasks are further defined by their position in the three well-definable phases of the chronology of the introduction. Thus we can distinguish between tasks before,
during and after the introduction. The period before the introduction can however be further split into two large areas, divided by being before or after the system selection. I have formulated my methodology model along these categories.

As a first step I defined the phases that determine the tasks of the company introducing the CRM and the supplier. Following the chronological order, I decided the phases of the introducer side into 4 main segments (pre-selection phase, post-selection phase, introduction phase, post-introduction phase). Based on the same chronology I divided the phases of the supplier side into 3 main segments (post-selection phase, introduction phase, post-introduction phase).

One of the aims of my research was to analyze the views of the expert side on the reasons and demands behind a CRM introduction, including the order of importance and sectorial characteristics of these reasons and demands, as well as the view of the experts on the successfulness of CRM operations.

81% of the experts think that the introduction of a CRM is prompted by an increase in the number of clients at the purchaser. 60% have felt an increase in the number of interested companies as a result of the crisis. Nearly 65% reported a stagnating or slowly increasing number of introductions. This also shows that the purchaser side, even if slowly, but does start to estimate the business advantages of increasing the quality of client service and do show interest in obtaining IT support in this field.

Experts generally do not consider the software to be an industry-specific solution, but there are some fields where there are more purchasers or interested companies. 65% of the experts are of the view that companies in the services, retail and B2B sector and companies with customer service units show demand more frequently for a CRM introduction.

One third of the experts say that the industry they represent does not have an own introduction methodology. This means that they are unable to support the success of the introduction by any conscious, pre-planned way. The remaining 70% has an introduction methodology; however, it is their „own” methodology, meaning that it applies methods valid for the software offered, after the period of the selection. Based on the interviews it can be presumed that suppliers consider planning the introduction steps individually for each company to be a methodology, meaning that there are no pre-defined standard steps in the project.

Reporting on the success ratio of the introduction, more than 40% of the experts said that a half or more than half of the introductions are unsuccessful. Only 13% said that their experience shows full introduction success.

Via a cross-table analysis I examined the correlation between the existence of a methodology and the rate of success. 66 % of those who did not have an introduction methodology reported that they have less than 50% of unsuccessful introductions, while those who had an introduction methodology had less than
31%. A look at the suppliers below 50% success rate shows that more than half of them have no introduction methodology.

My variance analysis proved that those who reported that they have an introduction methodology said in significantly higher numbers that the motivations to introduce a CRM include the increase in the number of clients \((p=0.003)\) and the demand to trace internal procedures \((p=0.024)\). Based on the cross-table analysis one can say that in the result of both analyses the continuity correction and the probability ratio both showed significant results. The correlation strength showed values between 0.47 and 0.55 which presumes a correlation of medium strength. Those who have an introduction methodology are more inclined to think that market price is an influencing factor during the selection procedure \((73\%)\) compared to those who do not have a methodology. The reason for this may be that distributors with a methodology are most probably offering standard solutions, while distributors without a methodology are selling retail or cloud-based products. No experts indicated fast introduction as an important factor.

The above calculations show well that a large part of the suppliers does not have an introduction methodology. It is also visible that the lack of methodology lowers the chance of a successful introduction. Those who have an introduction methodology see the reasons for the introduction differently than those who do not have such a methodology. My interview subjects all said without exception that the introduction methodology of all CRM products they know is the intellectual product of the distributor, supplier or developer, and it does not contain any recommendations for the selection or pre-introduction period. The purchaser does not learn about the methodology directly, it only receives recommendations from the contact person for the steps that follow.

5 Conclusions, suggestions

Having mapped the IT introductions it can be said that CRM introductions are mostly characterized by the feeling of failure from the side of both the supplier and the purchaser. The number of introductions does not decrease despite these feelings of failure and experts hope for a slow increase as a result of the improvement of the conditions after the waning of the economic crisis. During my research I could not aim to have a representative sample as no data is available on the statistical population. Based on the estimation of the experts, one can estimate that the yearly number of CRM introductions is 10 to 20. This is, however, the number of systems actually needing an introduction. The spreading of cloud-based systems increases, even multiplies this number. However, these software solutions often do not provide proper CRM background service, only sales support, which is only a fraction of the tasks of a CRM.
In order to avoid introduction failure, both the supplier and the purchaser has important tasks to fulfill. The answers to the expert deep interviews revealed the general procedure of IT introductions and surfaced the general problems which appeared in expert opinions independently of the software introduced. Based on the expert answers, the stages of the introduction could be separated and their division points could be identified. These segments were characterized by the participants involved in them.

As a result of my research I developed a phase model which is able to compare the tasks of the two parties participating in the introduction. The model supports the purchaser side from the moment when the need for a CRM introduction arises in order to perform all background tasks serving the successful introduction, to perform all preparatory tasks. It leads the introducer side through the entire process of the introduction, reminding it of the most important tasks.

A company introducing a CRM is currently not supported by any practical guides. The majority of the software suppliers are unable to give proper methodology support even after the software choice was made. There are no pre-defined strategic steps; the company receives only software-dependent guidelines that are required for the use of the technology.

The methodology process model created based on the conversations with the suppliers indicates the individual tasks at a timeline, helping the communication, process planning and project task definition of suppliers and purchasers.

No reliable data is available either on the supplier or the purchaser market. Therefore the views of the two sides of each other are based only on experience. Even if the suppliers (understandably) have more experience, this experience cannot be generalized to cover the entire purchaser side. One of the aims of my studies was to reveal the real motivation factors behind the choice and introduction of a CRM system and to compare this to the picture developed by the supplier side.

References


Strengthening of the Swiss Franc through an Example of Housing Loans

Biljana Ružičić
Singidunum University, Belgrade, Serbia
biljana-ruzicic@hotmail.com

Abstract: This paper emphasizes on the current situation regarding the strengthening of the Swiss franc, closely related to the housing loans in the aforementioned currency. Throughout the paper it is possible to found answers to current, burning, issues: What is responsible for the currency pair growth rate (Swiss Franc-Euro), is there a solution for the citizens who are borrowers in CHF and is there a way out of this crisis and what are the consequences of the sudden strengthening of the Swiss franc?

Keywords: the Swiss franc, the euro, housing loans, strengthening of the Swiss franc

1 Subject, goals and methodology

The strengthening of the Swiss franc had negative effects to the economy of countries indebted in Swiss francs, especially in Serbia as well in the countries in the region. The National Bank of Serbia carried out four models to facilitate the repayment of the CHF loans but the response of the indebted citizens was weak because those measures did not have the same effect as in the surrounding countries. In the focus of the analysis are loans of the citizens. An emphasis is put on the housing loans in Swiss francs in Serbia.

The goal of this research shows that a stable foreign exchange market is necessary in every economy because the lack of stable foreign exchange market creates a rift between the domestic (state) economy and the world economy – a situation in opposite to the process of globalization. Additionally, there are answers to this burning questions: What is responsible for the currency pair growth rate (Swiss Franc-Euro), is there a solution for the citizens who are borrowers in CHF and is there a way out of this crisis and what are the consequences of the sudden strengthening of the Swiss franc?

The basic hypothesis of this paper is that the strengthening of the Swiss franc and the change of the foreign exchange rate in Serbia is not the only issue in the CHF-indexed loan repayment process. Additionally, the real incomes (salaries) are low...
and decreasing each year, which is, besides the rate of the Swiss franc, the biggest concern regarding the loan repayment.

Methods used during the development of this research: basic methods, analytical and statistical methods – analysis, abstraction, deduction, induction, specialization and synthesis.

2 Growth in the value of the Swiss franc

The Swiss franc (CHF) was never withdrawn from the usage since its introduction as the mean of payment in all of the Swiss cantons over 160 years ago. The Swiss franc is one of the most stable currencies in the international monetary relations and for a long time it maintained the ratio EUR1 ~ CHF1.5. It is considered that Switzerland has the best meanings of managing the current, two year long, world economic and banking sector crisis. Financial turmoil in the Eurozone (especially the Greek financial crisis) had caused a devaluation of the euro as well as the increase of the GBP/CHF ratio from the previous 1:2.25 to the current 1:1.58, not to mention the Swiss franc – US dollar ratio. Meanwhile, after a referendum held in 2009, the Swiss National Bank decided to tie the value of the Swiss currency to the one of the euro which caused a dramatic decrease of the value of the Swiss franc, formerly one of the most stable currencies, in regard to the US dollar and the euro. Over three years of stability of the EUR/CHF exchange rate ended and caused a certain “disharmony among the currencies”, as the Swiss National Bank decided to quit any attempts of constraining the value of its currency. The Swiss National Bank used to allow the strengthening of the franc against the euro above the 1:1.20 ratios in order to stabilize it at the approximate 1:1.03 ratio. The table bellow clearly shows the drastic change of the EUR/CHF exchange rate with an increase in the value of the Swiss franc of almost 28%.

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1 Only once euro strengthened to 1.6
2 GBP is ISO code for the pound sterling, official currency of the United Kingdom
3 The Swiss franc is out of control, uk.businessinsider.com, January 15, 2015
Increased demand for the Swiss franc in past couple of months is the main reason for abandonment of the defense of its exchange rate by the Swiss National Bank. This aforesaid was caused by the weakening of the euro in comparison to the rest of the most traded world currencies. The franc was pegged to the euro, its value also began to decrease. Considering the fact that the Swiss economy is stable and that avoided the current crisis that should have resulted in the increase of the value of the franc, the entire situation was illogical. Many investors, funds and financial speculators began buying the Swiss currency, creating a huge pressure on the Swiss National Bank. Traditionally, during the crisis, the majority of the people turns to the US dollar, Swiss franc and the gold but the major issue in this situation is that the investors now tend to avoid the use of the gold – resulting in the decrease in its value and significant increase of the usage of the US dollar and the Swiss franc. One of the facts that probably might have been “the last drop” in this situation comes from Russia. The Russian ruble experienced an extreme decline caused by a production rate drop of the world’s largest country. The situation caused the weakening of the euro for more than 14.6% and, on the other hand, only 1.026% of the Swiss franc. This prompted a large number of Russian businessmen and companies to transfer their money away from Russia to “safer locations” and one of those safe heavens were numerous banks located in Switzerland thus increasing the demand for the franc and putting an additional pressure on the Swiss National Bank. In the year 2011, Switzerland drastically decreased the value of its currency in order to stop or at least slow the high demand. The franc was envisioned as a strong and stable currency with an increased inflow in the case of the downfall of the euro. The next table shows the EUR/CHF exchange rate before the outbreak of the world economic crisis.

Table 1
EUR/CHF exchange rate

<table>
<thead>
<tr>
<th>Date</th>
<th>EUR/CHF Rate</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan 1, 2013</td>
<td>0.8654</td>
<td>-0.3355</td>
</tr>
<tr>
<td>May 1, 2013</td>
<td></td>
<td>(-37.94%)</td>
</tr>
<tr>
<td>Sep 1, 2013</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jan 1, 2014</td>
<td></td>
<td></td>
</tr>
<tr>
<td>May 1, 2014</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sep 1, 2014</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

It is necessary to highlight that the Swiss franc enjoys stability since 1853 thanks to the nearly zero inflation and the law that stresses that at least 40% of the currency needs to be “covered” in gold. That coverage, however, ended after a plebiscite held in the year 2000. Nevertheless, the Swiss National Bank still maintains large gold reserves of approximately 1.3 tons, equaling about 20% of monetary mass.

3 The reasons of the strengthening of the Swiss franc

The Swiss National Bank different from the other central banks in the fact that it is not “owned” by the Swiss federal government but instead exists as a joint-stock company with the shareholders being, amongst the others, the Swiss administrative divisions (cantons) themselves as well as the other state organizations and individuals. One of the theories that could explain the Swiss National Bank’s decision to allow the strengthening of the franc is largely underestimated and that is the role of the cantonal governments in the process of lobbying for the payment of dividends. First, the Swiss National Bank pays the dividends to its shareholders for 6% of net profit as well as the “flat rate” to the cantonal governments. That

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5 Source: European Central Bank, Quandl, CFA Institute.
7 The Swiss National Bank Is Different From Most Central Banks In One Critical Way, Cullen Roche, January 19, 2015
arrangement ensures allocation of up to one billion francs per year among the 26 cantons in proportion to their population, which was considered the most secure and reliable source of income. According to the Swiss National Bank, the dividends were paid once a year for more than a hundred years. The arrangement came to an abrupt end in 2013, caused by the collapse of the price of gold that had a negative impact on the gold reserves of the Swiss National Bank.

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The Swiss National Bank (SNB) is breaking a long-standing tradition. For the first time since its establishment more than one hundred years ago, it cannot pay to shareholders any dividends. The Confederation and the cantons are also left empty-handed. First since the introduction of the current distribution arrangement, held in 1998. This is primarily due to the fact that in the 2013 financial year, the SNB had to accept a large valuation loss on its gold holdings, which could not be offset by other earnings. The SNB also increased its equity capital by creating additional provisions, since the regulator places substantial weight on the SNB maintaining a healthy balance sheet. The annual result of CHF -12 billion also completely exhausted the distribution reserve, and consequently, no earnings remain to be paid out as dividends to shareholders or as distributions to the Confederation and cantons. Therefore, the conditions laid down in the National Bank Act (NBA) for the payment of a dividend or distribution are not fulfilled.

Picture 1
A year without dividends and profit distribution – what are the reasons?8

The 30% decline in gold price during the 2014 resulted in loss of more than nine billion francs, which meant that the SNB, according to the Act 31 of the Federal Act on the Swiss National Bank, lost the ability to pay the dividends. That caused a major shock to the cantonal financial sectors. Explaining why the SNB decided to cancel the payment of dividends in 2013, Jean Studer, head of the SNB Council, pointed out that the consistent payment of dividends clearly showed that there were “special factors over the last two decades that created the large payments”. He also reminded the cantonal governments that the “SNB regularly pointed out that the distribution is not guaranteed”. In turn, cantonal governments objected to the National Bank demanding that it must secure more financial resources for 2014 in order for them to counteract the losses from other sources of income. In the beginning of the year, the SNB informed the cantonal governments that it expects a net gain of 38 billion francs in 2014, which would re-enable the payment of dividends. The report stated “re-establishment of the distribution of resources to the cantons in the amount of 1 billion francs per year” 9. However, less than a week after the report, the National Bank quit the policy of pegged exchange rate causing sudden strengthening of the franc and financial losses due to the harmonization with the market. Free strengthening of the CHF relative to the euro meant that the value of the reserves in the euros, which bank “bought” in order to maintain the exchange rate, decreased in the francs. The question is why the SNB reacted in a way that caused it a “secure loss”. One of the possible reasons could simply be bad timing. Thomas Jordan, the Chairman of the Governing Board of the Swiss National Bank at the time, stated that the franc is “largely overrated” on its pegged value. It is quite

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possible that he believed that the CHF could slightly lose its value in relation to the euro after the end of the aforementioned limitation.

4 The decree of the Swiss National Bank and its impact on the European countries

The SNB’s decision to abandon the defense of the exchange rate had a huge effect and consequences in various European countries. For example, if a CHF-indexed mortgage or a housing loan is being paid in euros, it results in much higher “form” of loan. Now, there are about 21,000 clients or users of the CHF loans in Serbia, largely mortgage and housing ones. The biggest issue is that these borrowers have absolutely no way out of this situation. Transferring these loans to loans in euros at the current exchange rate is not a solution because in 2008, 70,000 francs were equal to 43,500 Euros and in 2014 - 60,000 Euros. To summarize, after 78 months, the base of the loan had increased for almost 20,000 Euros. It should be noted that the strengthening of the CHF is not the only issue in this situation. The already low real incomes (salaries) are decreasing each year, which means that the creditworthiness of Serbian population is steadily dropping. If an average salary equaled those in Slovenia or Poland (1,000-1,200 euros), the loan repayment process would be a lot easier. This is, in addition to a high rate of the CHF, the biggest problem in the process of loan repayment. The entire situation had a large impact in the surrounding countries as well, considering the fact that in a significant portion of credit portfolios in some countries are denominated in the Swiss francs. The last fluctuations of the CHF exchange rates are responsible for the increase of the “value” of the loans. The table below gives an insight of the situation in various European countries. The countries with the largest number of CHF-borrowers are Hungary, Poland, Austria, Croatia and Serbia.

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10 The Polish zloty value decreased in relation to the euro by 1.1 and the Hungarian forint by 0.6
4.1 Measures for facilitation of the repayment of CHF-loans in Serbia and the surrounding countries

National Bank of Serbia, the core institution responsible for the stability of the financial system and financial services consumer protection issued a Decision on measures for preserving stability of the financial system in the context of foreign currency-indexed loans\(^\text{12}\). The Decision consists of two parts. The first part refers to every singular loan agreement that the bank signed with the consumer prior to implementation of the Financial Services Consumer Protection Law (“RS Official Gazette”, No 36/2011) regardless of the foreign currency in which the loan is indexed. The second part refers exclusively to the housing loans indexed in the Swiss franc. The National Bank of Serbia obliged to offer the loan users one of the four models to facilitate the repayment of the CHF loans:

1) A CHF-indexed loan is converted into a EUR-indexed loan at the exchange rate which is 5% lower than the middle EUR/CHF exchange rate calculated based on the official middle RSD/EUR exchange rate and the official middle RSD/CHF exchange rate, valid on the day an annex to the agreement is concluded, while the rate of interest that a bank applies to EUR-indexed loans is charged thereon, along with the optional extension of the loan repayment term, in accordance with the client’s request, by maximum five years.

2) A CHF-indexed loan is converted into a EUR-indexed loan at the EUR/CHF exchange rate calculated based on the official middle RSD/EUR exchange rate and the official middle RSD/CHF exchange rate, valid on the day of concluding an annex to the agreement, while the interest rate applied by a

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\(^{11}\) Source: EUR/CHF Foreign Exchange of the Swiss National Bank

\(^{12}\) [http://www.nbs.rs](http://www.nbs.rs)
bank to EUR-indexed loans at the annual level is reduced by 13 percentage point, but not necessarily below 3%, along with the optional extension of the loan repayment term, in accordance with the client’s request, by maximum five years.

3) The interest rate at the annual level is reduced by 1% point, but not necessarily below 3% along with the optional extension of the loan repayment term, in accordance with the client’s request, by maximum five years.

4) The amount of a CHF-indexed monthly installment is reduced by 20% of the contracted amount for the duration of 36 months from the date of conclusion of an annex to the agreement. Upon the expiry of that term, the client resumes repayment of the contracted installment amount. The total amount by which monthly installments are reduced is repaid in 12 equal monthly installments after the expiry of the original maturity date.

The National Bank of Serbia had often called for citizens to convert their CHF-indexed loans into EUR-indexed loans. The citizens, however, rarely responded to those calls and these measures did not have the effects of the ones in the surrounding countries. A number of reasons can explain this attitude. First, if a borrower decided to accept any of the aforementioned models, the benefits would be almost insignificant. The monthly interest rate would be lower for 2,000-3,000 RSD, yes, but considering the fact that the interest rate has nearly tripled since the beginning, that amount would have no real effect. Secondly, by allowing the conversion, the consumer gives the bank a legal right to increase the base of the loan, thus losing the possibility of judicial annulment or a change of the already harmful contract. In 2008, 70,000 francs equaled 43,000 euros and today the borrower owes the bank approximately 60,000 francs or 58,000 euros, 15,000 more than the original amount. In this case, there are additional expenses of the public notary and the real estate cadastre, all of which are considerable (up to several hundreds of euros) to the nearly bankrupted borrower. One more consequence of the conversion method is that the interest rate is calculated from the beginning of the already increased loan base, which means that the loan is going to cost far more than the original amount. Similar methods were considered by the other countries in the region but had no effect in general.

4.2 Measures for facilitation of the repayment of CHF loans in Hungary

Hungary, where a significant number of loans were indexed in the Swiss francs, has resolved the issue regarding the repayment of these loans. The Government, led by Prime Minister Viktor Orbán, enabled the consumers of the CHF-indexed loans a conversion to the Hungarian forint-indexed loans at the lower, more favorable exchange rate. The conversion process, however, cost the Hungarian National Bank approximately nine billion Euros - the amount it had to transfer to the commercial banks. According to the Hungarian National Bank, the entire process managed to
“save” the borrowers nearly 700 billion forints, which is about 2% of Hungary’s GDP. In November 2014, about 12 billion USD were converted into forints, which are now the base of the mortgage loans tied to the Swiss franc.

<table>
<thead>
<tr>
<th>COUNTRY</th>
<th>GROWTH RATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Latvia</td>
<td>-5.6</td>
</tr>
<tr>
<td>Croatia</td>
<td>-11.4</td>
</tr>
<tr>
<td>Hungary</td>
<td>-5.5</td>
</tr>
<tr>
<td>Romania</td>
<td>-3.1</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>-2.1</td>
</tr>
<tr>
<td>Czech republic</td>
<td>-2.0</td>
</tr>
<tr>
<td>Lithuania</td>
<td>1.9</td>
</tr>
<tr>
<td>Serbia</td>
<td>-0.4</td>
</tr>
<tr>
<td>Bosnia and Herzegovina</td>
<td>-1.2</td>
</tr>
<tr>
<td>Montenegro</td>
<td>0.7</td>
</tr>
<tr>
<td>Estonia</td>
<td>1.9</td>
</tr>
<tr>
<td>Slovakia</td>
<td>5.4</td>
</tr>
<tr>
<td>Republic of Macedonia</td>
<td>6.9</td>
</tr>
<tr>
<td>Albania</td>
<td>13.9</td>
</tr>
<tr>
<td>Poland</td>
<td>13.9</td>
</tr>
</tbody>
</table>

Table 5
Real GDP growth in Serbia and other countries in 2011

It should be noted that the Hungary’s method of “low-cost conversion” was also adopted and implemented by Montenegro.

4.3 Measures for facilitation of the repayment of CHF loans in Croatia

Croatia probably has the biggest issue when it comes to the process of repayment of the CHF-indexed loans. For example, Poland has about 2% of unpaid loans while that percentage in Croatia reached about 17%. It is estimated that there are around 60.000 CHF-indexed loans in Croatia, mostly housing or mortgage loans. According to the Croatian National Bank, total amount of the CHF loans it late September of 2014 was 23.7 billion Croatian kunas, 92% of them being housing loans. The solution came through a change in Croatia’s Consumer Crediting Act

Source: IMF, Ministry of the Finances of Republic of Serbia
that pegged CHF/HRK rate at 1:6.39 in the period of one year, charging the financial institutions. According to various Croatian economists, this “system” could eventually create the environment in which it would be possible to convert CHF-indexed loans into HRK-indexed loans, in accordance of the Croatian National Bank.

5 The consequences of the strengthening of the Swiss franc in Serbia

Fluctuation and permanent changes of the exchange rate (in this case the CHF) can cause issues in the process of loan repayment, thus increasing the number of non-performing loans (NPL)\textsuperscript{14}, and in the case of Serbia – stagnation and decline in personal earnings and rise of the unemployment rate as well. Considering the fact that a large percentage of NPLs is considered a risk for the state financial system, many Central and Eastern European countries are urging that elimination of this issue needs to be an absolute priority. The increase of the number of NPLs began simultaneously with the world economic crisis in 2008 when macroeconomic condition began worsening – reduce in economic activity, increase of the unemployment and the decline in the value of national currencies. This resulted in increase of the NPLs in these countries for 8% between 2008 and 2014. Growing number of NPLs led to a restriction of loan offers in general and reduced credit activity led to reduced economic activity. In consideration, many countries are in process of formation of various solutions and strategies for NPLs on a highest. Some of those countries had already formed inter-institutional organizations for solving the issue that are NPL’s, while the rest are in process of formation.

\textsuperscript{14} Non-performing loan (NPL) – a loan is nonperforming when payments of interest and principal are past due by 90 days or more, or at least 90 days of interest payments have been capitalized, refinanced or delayed by agreement, or payments are less than 90 days overdue.
The previous chart shows that Albania has the largest share of NPLs in the region with a tendency of further growth. The credit activity significantly increased since 2003, which led to an increase of the number of domestic loans relative to the country’s GDP from 7% to 40%. Simultaneously, the “euroization” of loans increased about 50%. Albania has implemented a loan write-off strategy in order to cope with NPLs that resulted in decrease from 24.1% in June 2014 to 22.8% in the December 2014. Serbia is experiencing a continuous growth of Non Performing Loans that now make 16.1% of the total loan mass. In May 2014, the NPL indicator showed for the first time an increase over 10% and that value further grew to 10.9% at the end of April of the same year. The end of April 2014 saw a gross NPL indicator of 9.0%. Housing loan quality deterioration is primarily caused by unemployment, stagnation of the incomes and devaluation of national currency. The basic criteria for an individual borrower that needs to be satisfied is adequacy of a Debt to income ratio (DTI) which is a relation between credit commitment and monthly income. The DTI in Serbia varies from a bank to bank and ranges around 40-60%. Some commercial banks that allow 60% DTI, without any restriction or regarding the general monthly expenses of its client, can create a situation where a mere loan signage of a lower-income individual produces severe financial difficulties and loan payment issues. For an example, if a borrower chooses aforementioned DTI, he or she completely “stretches” its monthly incomes, which makes it insufficient for regular monthly expenses. Most of the people then choose

16 Duško Ranisavljević, Miroslav Hadžić: Problematični krediti stanovništva u Srbiji, Univerzitet Singidunum, Belgrade 2015, pp. 456-457
“survival” over monthly loan payments. Unemployment also has a significant effect on the increase of NPLs. According to the official data, unemployment between persons aged 15-64 in Serbia is 19.9%. Stagnation and decrease of incomes also cause this issue. Official reports shows that average income in Serbia has dropped 1.3% in nominal and 3% in real terms between 2014 and 2015. Increasing number of NPLs is causing ever growing pressure on Serbia’s banking sector\textsuperscript{17}, it limits credit activity, disables growth rates and in general and halts economic development, regardless the fact that Serbian banking sector is solvent and highly capitalized. In order to cope with this issue, the Government of Serbia adopted a Strategy for solving the Non-performing loans.\textsuperscript{18} The Strategy’s goal is to:

1. Evaluate NPL solving capacities of the banks
2. Create conditions for the development of NPL market
3. Promote and encourage extrajudicial settlements

6 New measures of the European Central Bank

On March 9, 2015 the European Central Bank (ECB) began its massive money-printing program, euphemistically called quantitative easing (QE).\textsuperscript{19} Planed volume of monetary emission is about 1.100 billion euros, which is equal to about 33 Serbian annual GDP’s. Total monetary emission should be realized throughout monthly tranches for 60 billion Euros each. This operation is conducted by the national Central Banks, through purchasing of government securities on a secondary market, with an exception of the National Bank of Greece. The distribution of the monetary emission should be in accordance of the economy of each country involved. The ECB is expecting to stimulate the anemic Eurozone economy by stopping the deflation processes and by increasing the inflation rate from current minus 0.3% to about 2% positive. The ECB hopes that the implementation of this program is going to decrease interest rates not only on government securities but also on regular commercial loans, thus stimulating the demand, consumption and investments. Moderate inflation rate growth should ease up the control of national debts while the projected decrease in value of the euro could entice competitive abilities in general, especially of the Mediterranean countries. The implementation of this program is strongly supported by a number of European economic elites who believe that the ECB should have introduced this policy earlier, considering that the Eurozone’s monetary emission/GDP ratio is well

\textsuperscript{17} Many developing countries, including Serbia, experienced credit growth before the outbreak of the crisis. Serbia experienced this credit expansion in 2005 and 2006, largely thanks to the arrival of foreign banks on its market.
\textsuperscript{18} \url{http://www.rsjp.gov.rs/strateg/64/nas%20Predlog%20Strategije%20za%20NPL.pdf}, August 16, 2015
\textsuperscript{19} Officially: The public sector purchase program.
behind that of the United States, Japan and the United Kingdom. Those economists have put a further pressure on the ECB implying that its conservative and cautious policy played a big part in the outbreak of Eurozone debt crisis. Money printing, however, cannot solve the biggest problem of highly indebted countries – their non-competitiveness. The introduction of the Euro made the borrowing expenses (interest rates) of less developed economies significantly low, moving those countries closer to the European most developed states. Up until 2007, low interest rates have stimulated the growth of consumption, import and domestic prices as well as affordable financing of deficits of the current transactions. This lack of market discipline additionally affected the drop of competitiveness and eventually produced a deficit of the balance of current payments. If carried out, this method should create 35% price drop in Greece, about 30% in Portugal and Spain and around 10% in Italy. That price drop will “repair” the competitiveness of these countries and, in long terms, re-balance the process of current payments. The easiest and fastest way to establish this balance is to depreciate foreign exchange rate but that method is not possible in the Eurozone. On the other hand, a significant drop of the value of the euro since May 2014 is partially beneficial and is slightly improving the whole competitiveness on the Eurozone but is not eliminating the price disparity in its borders. Since the depreciation of currency is not possible, the only solution remaining in order to establish economic balance and restore competitiveness is to create a deflation – the internal price-drop. This method is extremely “painful” and difficult because general price lowering is next to impossible to implement. Moreover, the entire drama that is shaking Greek economy is considered a result of numerous concessions to Greece in the past. That consideration is undoubtedly causing the ever-present hard-line attitude towards the Greek Government. In favor of this policy goes the example of the Republic of Ireland which government quickly implemented the price-correction policy and is now on the fast way out of the crisis. The Irish recovery with the help of the deflation method is explained through the fact that crisis struck Ireland much earlier than other countries and that the Irish economy began consolidating and adapting to the new conditions before the establishment of various help-mechanisms in the Eurozone. Simply put, in the beginning of the Irish crisis in 2006, there were no methods or solutions for this problem and Irish economy’s only choice was to adapt as fast as possible in order to avoid complete downfall.

7 Conclusions

The effects of the various interventions by the Central Bank and monetary policy are closely related to one another, resulting in a number of undesired consequences. A single Central Bank, even a small one like the Swiss National Bank, can influence foreign economies. There are 21,000 beneficiaries of the CHF-indexed housing loans in Serbia. Only 1,700 (8%) decided to follow the facilitation methods of the National Bank of Serbia. The National Bank expected that the majority of borrowers will transfer their CHF-indexed loans using its methods but the response was rather low. According to the official data of the NBS, over 80% of loan consumers decided to continue the repayment in Swiss francs. In addition, only 255 loans converted to EUR-indexed loans. The first results show that 54% of consumers mostly chose the Third (54%) and the Fourth (31%) model. The 10% saw the First model as a solution and only 5% opted for the Second model. The results will be available after the expiration of the prolonged offer in September 2015. The development of the NPL market through an evaluation of possible difficulties (taxes, regulations, accounting and data availability) should be preferred. Various tax reliefs regarding the NPLs already exist but it is necessary to remove any obstacles in order of full implementation.

The process of quantitative easing plans monthly “injections” of 60 billion euros (1.14 trillion euros totally) to the financial system from March 2015 to September 2016. It also includes the possibility of prolongation of the program in case there are no desired effects. The program also includes a method of formation of money supply and “solvency injections” to the economy system through an extended bond-purchasing program of both public and private sector. Purchase of bonds will be done in accordance with the capital-participation of some ECB member banks while 20% of purchases are to be centralized with risk sharing between the ECB and the national central banks. The basic goal of the program is to induce the investments and consumption. This money-printing decision of the European Central Bank could in fact be the last chance of preserving the Eurozone but it requires the change of the basic regulations of the Integration process or a more responsible behavior of some EU members who need to accept the consequences of their policies.

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[14] Official name of the program: The Swiss franc is out of control, uk.businessinsider.com, January 15, 2015


State of Law and Human Rights in the Republic of Albania

Ervin Salianji
European University of Tirana, Albania
ervinsalianji@gmail.com

Eneida Fatkoja
fatkojac@gmail.com

Abstract: Upon the fall of communist dictatorial regime in Albania, there were created the possibilities for the theoretical-practical discussion on the state of law and human rights. At one side the state of law provides to the individuals to live in a democratic environment where law prevails, and at the other side stand the human rights which are rights that protect the individual and enable them to live protected by the state arbitrage, or any other authority. In this paper, we will treat the general framework presented by the state of law in Albania stopping in some important moments such as Decisions of Constitutional Court of the Republic of Albania. Also we will treat some problematic moments that appeared at the field of human rights, which is a warranty of the State of Law.

The formal improval of the legislation or organization of institutions is not enough to realize the protection of human rights and fundamental freedoms, but more is needed in this direction.

Key words: state of law, law, international acts, constitution, human rights, Constitutional Court, individual.

1 State of Law

State of law as a concept firstly appeared at the period of political liberalization, through turning the monarchies from absolute into constitutional which brought the concept of state based in rights. The limitation of the monarch power was the main idea where the liberalization was based to and his will would be replaced by the will of the law obligatory to every one. In a doctrinal definition, the state of
law is that state where the right is not anly a mean but a limitation of the state activity which is conditioned and defined only by law¹.

An important historical moment is after Second World War, where the State of Law did some very determined steps towards its triumph, on the challenges it had been affronting for a very long time.²: “the first half of the century (XX) was witness of the distribution of dictatorial and totalitarian systems. The state of Law was criticized here and there and was contempted for its democratic form, accused for corruption.³”

The state of Law is based on the fundamental principle of law respect. The Austrian Jurist Hans Kelsen redefined this concept with german origin (Rechtststaat) in the beginning of the XX century, as a “State where the juridical norms were hierarichal in the way that its power is limited”. In this model, every norm takes its validity in accordance with the above norms.

The state of law may be summarized according to the formula “No one stands above the law”. Generally this regime groups several juridical norms that protect the citizens from the arbitrary forms of power (executive). In order that a State of law exists must that the obligations rising from the State are official, general, obligatory and with sanctions. In other words, laws must be 1) made public, 2) no one can be saved from them 3) they must be really applied and 4) the violation of laws must bring sanctions.

The state of law requires a written and firm Constitution, which the Albanian legislator performed through the Constitution of the Republic of Albania approved in 1998. The lordship of the state of law is guaranteed from the constitutionality legality and its control. The principle of the state of law is mentioned expressively if the Constitution of the Republic of Albania of 1998. In its preambula, among others it is mentioned that:

“We, the People of Albania, proud and conscious for our history, with responsibility for the future, with trust in God...., determined to build the state of law, social and democratic, in order to warranty the fundamental human rights and freedoms, with the spirit of tolerance and religious relationship, with the commitment to protect the human dignity and personality, as well as for the prosperity of the whole nation, for peace, wellbeing, culture and social solidarity....., set this Constitution....

Then, in the article 3 it is provided that:

“The independence..., human dignity, its rights and freedoms, social justice, constitutional order, .... Are the basis of this state, the duty of which is to protect and respect them....”

While in the article 4 it is added that:

“The law constitutes the basis and limitations of the State activity. The constitution is the highest law in the Republic of Albania....” Following, it is natural that there are lots of other provisions of the Constitution, with directly or indirectly, are connected to the principle of the state of law. Based and in their application there are several other legal and sublegal acts approved with international expertise and consultancy, mainly of the Europe Council, with which it is aimed to fill the general normative framework to guarantee special elements of this principle in everyday life. In its wholeness, we can say that the Constitution and legislation create a full and sustainable basis for the recognition and application of the principle of the state of law in the Albanian reality.

Without any doubt the biggest difficulties or several problems are created in the application of the special elements of the principle of the state of law in the everyday life. For this reason, it is right to be highlighted that the application in practice of the elements or standards of the principles of the state of law, is one of the main challenges which Albanian state and society faces. 4

The warranty among the constitutional norms and other legal acts as well as the application of this principle in the everyday life are necessary conditions for the function and development of a free society, for the peace and social security, growth of wellbeing for all the people’s classes, the best respecting of human fundamental rights and freedoms. By the state of law we understand:

Political and legal power which is limited and controlled, the aim of which is the legal security of the citizen, their equity before the law and protection of human rights by independent courts. Its elements are: legitimacy of power; division of powers; constitutionality and legacy; judicial control for all the acts; independent courts; legal security; priority and warranty of all citizens’ rights and freedoms.

1.1 Legitimacy of power

The political power must be exercised in accordance with the clearly defined rules. The political forces select upon consensus the rules of exercising the power such as election system and acts in its application.

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1.1.1 Division of Powers

The division of powers is considered as the spine of the state of law as only the respecting of the principle of democracy (lordship) of majority is not enough to warranty freedom. This principle prohibits the abuse with power and assures the respecting of rights.

The division of powers is the second principle of the state of law in a modern and free constitution. This principle has an organizative feature and aims to warranty that all the powers are limited and are submitted to control.\(^5\)

In a free and democratic system, there are minimally three independent powers, which interfere, balance and reciprocally control each other, based in the constitutional and legal norms. The central idea is that by developing free elections and by applying the principle of democratic legitimacy, the whole state power is organized in such way to be set and exercised by different mechanisms\(^6\).

There a legislative power which is normally exercised by the Parliament, the main duty of which is the approval of laws based and in application of the Constitution, the approval of the Government and its political program as well as the control of executive power activity in general. There is an executive power the mission of which is the law implementation in the everyday life and the definition of application of general state politics. In certain cases and conditions, Government must approve normative acts with the power of law as well as it can cause the distribution of the Parliament and other. Finally there is a judicial power, the main duty of which is justice in accordance with the constitution, without being impacted directly in this activity by the legislative power and executive power.

The constitution of the Republic of Albania is clearly based in the principle of division and balance of powers, where in the article 7 of the Constitution it is expressively said:

*The governance system in the Republic of Albania is based in the division and balance through the legislative, executive and judicial powers.*

1.1.2 Decision of the Constitutional Court

Upon the constitution of 1998, the problems of respecting the principle of division and powers balance take place directly or indirectly in several of its provisions. On the other hand the jurisprudence of the Constitutional Court has in the following period a bigger commitment and dynamism for the respecting of such an important principle.

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\(^6\) Omari Luan, State of Right, Academy of Sciences of Albania, Publishing House LILO, Tiranë, 2002 page 99
The decision no. 75/2002\(^7\), has as its object the interpretation of the articles 128, 140 and 149/2 of the constitution, in regard especially with the matter of the dismissal by the Convention of the General Prosecution of the Republic. Among others, in this decision it is stressed that through the control of the constitution of the decision of the Convention, the Constitutional Court reviews not only the procedure of the dismissal but also the essence of the case....later it was highlighted that:

The accepted democratic standards, who found their place in the Constitution as well as several decisions of the Constitution Court, defined and consolidated several elements of the regular legal process, the absence of which devaluate the procedures and the decisions made by every body. Te argumentation of the violations, the respecting during the review of the principle of division of powers...... respecting of the right to be heard and protected....., are some of the basic elements that warranty the constitutional right of anyone for a regular process, as a fundamental right, the violation of which the Jurisprudence of the Constitutional Court identified in every case, as violation of the Constitution.

1.2 Principle of Constitutionality and Legimacy

1.2.1 Constitutionality

Constitutionality implies the wholness of political-legal regulation of state, which warranties the democratic exercise of power and citizens freedoms. It assures the compatibility of legal order with the highest legal power.

✓ It is treated in three direction:

a. **positivist**: compatibility with the constitution of all legal acts (active hierarchy);

b. **political**: the application of constitutional limitations in exercising the political power;

c. **political-legal**: the existence of fundamental constitutional rules based on which it is institutionalized the political system, warranties freedom and rights of the citizens.

The constitutionalism appeared as a liberal request in the form of the political request, for the institutionalism of the company with written document. We refer to the form as a fundamental element, the written form. But constitutionality does not imply onlty its formal element but also also the application of the idea of the people sovranity and limitation of absolutism. Therefore the second element, the

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interpretation is attributed to people. We must have the existence of institutions which must be represented by the people.

It presents in a different picture the rapport between the individual and state. In a formal point of view, even in a philosophical diapazon lays to the protection and warranty of human rights in front of political power. This power is a derivate of the majority in democracy. In some way the constitutionalism provides that the constitutional norm is not violated, a constitutional right to limit the government. The individual’s rights did not come easy in the environment of human society.

In the formal meaning the principle of constitutionality is not for countries with soft constitutions. But normally even why the strong constitution warranty the constitutionality, it does not assure this principle. On the other hand it presents one of the conditions to be sedented.

In its material meaning constitutionality appeared very earlier as a concept in comparison to its formal meaning. Therefore even why the strong and written constitution did not exist in the United States of America, the war for constitutionalism war born.

Every act of power not only must enjoy legality, but it also must be in accordance and must not be in contrary to the constitution. The highest legal order is the constitution order. The constitutionality of laws and sublegal acts must be protected from abuses which are approached from the legislative bodies, courts, and political bodies.

1.2.2  Legality principle

The right constitutes the basis and limitations of the state activity and all the acts must be in accordance with the law. Formally it indicates the compatibility of all acts lower with the law, support of all the state administrative actions in law and protection of rights and freedoms based on the law. The public administration must act only to the extent it is provided and with the means provided by law.

Upon legality it is understood the request to respect without any condition the Constitution, laws and sublegal acts, by the state bodies, social organizations and citizens of the Republic of Albania. The acts with the highest power and obligation of issuing sublegal acts based and in application of the law. The bodies of the public administration develop their activity in accordance with the Constitution of the Republic of Albania, international agreements, laws inside the borders of the competences conferred in concoromity of the aim they were conferred. The application of the legality principle is a condition for the

existence of the legal state. Legality indicates the governance based on the law. It has a political and legal feature and requires the building of relations through power and the citizens based on the low, support in laws of all the activities and procedures not only of the organizaive bodies but of all state bodies, warranty of human rights. The legality principle is constituted by two aspects:

1. The priority of law above all the other acts of state power. This means that the administrative acts will be considered invalid if they are in contrary of the law. Thus negative legality requires the respecting of orders and constitutional, legal and sublegal prohibitions.

2. The request of law fro exercising of any administrative power. According to the article 4 of te constitution “law is the basis and limitation of the state activity”. This implies that the whole state activity is regulated upon the law. The respecting of legality during the issuing of legal acts is very important for two reasons:

1.2.3 The right to be addressed to the Court

Article 42 of the Constitution: 1. The freedom, property, and rights recognized in the Constitution and by law may not be infringed without due process. 2. Everyone, to protect his constitutional and legal rights, freedoms, and interests, or in the case of an accusation raised against him, has the right to a fair and public trial, within a reasonable time, by an independent and impartial court specified by law.

Article 43 of the Constitution: Everyone has the right to appeal a judicial decision to a higher court, except when the Constitution provides otherwise.

The state of law does not accept any mix of judicial competences with the administrative ones. The right to be addressed to the court requires:

- The existence/ creation of the independent courts by law (the extraordinary courts are prohibited)
- The correct definition of material and territorial jurisdiction
- The Conferring of obligatory decisions for the parties.
- The competence to annul illegal administrative acts
- This right cannot be remove upon other administrative acts.
1.3 Judicial control of acts

The judicial control of acts is a legal mean for the realization and protection of legal rights of the individuals and other entities of law and an instrument to control the administrative activity.

- The applicant:
  1. Requires the annulment or change of an administrative act;
  2. Is contrary to the refusal of the approval of an administrative act in the defined term.

The lawmaker must provide the procedure and maintenance of administrative acts.

- The state of law must warrant the judicial control of
  1. Administrative acts
  2. Judicial decision of lower instances

The institute of judicial review is a constitutional warranty for the citizen for the protection of their rights through a fair public trial and form an independent court\(^\text{12}\). This right is sanctioned in the article 42 point 2 of the Constitution of the Republic of Albania. Until 2012 the administrative cases were not specified in the jurisdiction of the courts created for this purpose and nominated as administrative courts. This was made possible only after the approval of the law “on the judgement of the administrative disagreements and organization of administrative justice”. This law defined obligatory rules for the subjects of administrative trial, state bodies, legal persons and citizens for the judgement of administrative disagreements, execution of administrative judicial decisions, as well as for the organization of administrative courts.

The administrative court is competent for the review of disagreements:
- related to an administrative action, despite its form and type;
- labor relations regulated by the Labor Code, where a public body is the employer;
- with a normative sublegal act of the central bodies or by bodies of the local governance.

The administrative court does not review the disagreements, related to the normative sublegal acts that according to the constitution, are in the competence of the Constitutional Court, or the review of which according to the legislation in power is in the competence of another court, or according to which the employer

is an equal public body. In case of the raise of these lawsuits the court mainly makes the decision to issue the case outside it jurisdiction or to announce its non competence and to submit the acts at a competent body.

There are several kinds of administrative disagreements:

- Objective Administrative disagreements and subjective administrative disagreements. As subjective are the disagreements when as the object of review are the administrative acts (individual) while as objective disagreements are those that can be opened against the general acts (normative)

- Disagreements on legality of the act and disagreements of full jurisdiction. In the disagreement on legality of the act the court evaluates if upon the appealed administrative act the law was violated in the material or formal meaning, while in the disagreements of full jurisdiction the court decides the contesting relationship.

In the disagreements of full jurisdiction the judicial decisions are more than the disagreements on the legality of administrative acts. This happens due to the fact that in these disagreements the court is not limited in the annulment of the administrative act, but decides on administrative cases. As a rule, this is the function of administrative court.

1.4 Legal Security

Legal security as a constitutional concept includes the clarity and sustanability of normative system. This principle includes among other the faith at the legal system, without being commited in the warranty of non changing a favorable situation. This principle is sanctioned at the preambula of the Constitution of the Republic of Albania\textsuperscript{13}… the state of law, wich is guaranteed in the preambula of the Constitution, is one of the most important fundamental principles on state and democratic society. Therefore its violation constitutes a basis to declare this law as anti-constitutional.

The legal security means the faith of the citizens in the state and the law non changing the already fixed relations. The faith has to do with the conviction of the citizen that they must not worry about the negative consequences of legal acts, which can violate the private and professional life. The legal regulation deal with the rights of the citizens. As rule no interest can be denied and legal acceptance at the citizens from the changes in legislation and the state should only aim to bring posive impacts only. This principle includes among others the faith at the judicial

\textsuperscript{13} Decision 34/2005 of Constitutional Court of Albania, Publishing House Dita 2000, Tirani, 2005
system, without undertaking the warranty of any expectation for non changing a favorable legal situation.

The principle of legal security is also a very important element of the state of law. Correctness, clarity and sustainability are considered as its main formal standards. On the other hand, as the main standards in the material meaning are considered the non violation of the gained rights and legal expectation that the acts in power guarantee. On this basis, the citizens define the freedom space or the manner that they act in society and state.14

1.4.1 Legal security in the judicial practice in the Republic of Albania

As said above, in the case of our country, the constitutional basis for noticing this important principle is made referring to the commitment to respect the state of law, expressively mentioned in the preambula of the Constitution of the Republic of Albania.

The Constitutional Court of the Republic of Albania treated the decision making and the principle of legal security. The relatively short time made the building of a sustainable practice in this direction impossible. In many cases it was managed that this constitutional principle was exploited and to set important standards dealing with its recognition and application in practice.

In one of its decision the Constitutional Court expressed that:

This situation, is it would be repeated, would violate the fundamental principle of parliamentary democracy. On the other hand, as it is ascertained even in jurisprudence if the lawmaker does not react to the legislative vacuum, the constitutional system does not offer an effective means, and this situation would lead in a crisis of the representative democracy law. The court evaluates also that upon the above prohibition the lawmaker aimed to avoid the legislative vacuums in protection of a very important principle, the one of legal security. The condition that the remained part of the law in case of a referendum of annulment is enough, serve to the sustainability of the legal system.15

1.5 Defense of Human rights

The law must not be understood as the will of one or more persons, but as something based on the general reason, not simply like voluntas but more as ratio.16

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14 Zaganjori Xhezair, Democracy and Rule of Law, Publishing House Luarasi, Tirana, 2002
The state of law form the material point of view guarantees:

- **Freedom** of every individual protecting them with the constitution and without violating the rights of others
- **Equality** of all citizens in front of the law. Prohibition of different treatment for same persons.
- **Procedural warranties** penal or civil (the right of defence, non judgement more than once for the same offence, the right to be heard, non punishment without law etc)

2 Human Rights in the Republic of Albania and some current problems

Human rights at the 20th century had a very big turn upon the Universal Declaration of Human Rights of the United Nations in 1948. Referring to history the first document that sanctioned the human rights was Magna Carta Libertatum which was signed on 15th June 1215 in England. “Magna Carta” was the first document imposed to a king of England form a group of his dependents limiting his power through law. The first full document of human rights is considered the Declaration of Human and Citizen Right in 1789 which defines several individual and mutual human rights. All the people are born and live as free and equal before law, a phrase connected directly to the French Revolution. Only with the foundation of the United Nations in 1945 Human Rights get a dynamic by putting them into a legal level, and announcing their universal feature and the moral obligation of all the member of UNO to protect and respect them.

2.1 A short review on the legislation of human rights in Albania

Protection and respecting of human rights was one of the fundamental conditions to assure the state of law and democracy in Albania. The constitution which is the highest law in the country has the principles of protection of human rights and fundamental freedoms, where in its preambula it is stressed that:

"the Albanian people ... set to build the state of law, democratic and social, in order to warranty the human rights, human fundamental freedoms, with the spirit of religious tolerance, committed to protect the human dignity and personality, prosperity of all the nation with the conviction that justice, peace and harmony between nations are the highest human values".
2.2 Some problems of human rights

The fundamental problem regarding human rights is still the widespread corruption in all the governance branches and in the judicial system. Other problems related to the human rights include domestic violence, violence from the police and maltreatments of every kind during the investigation, conditions of the prisons, a non-efficient judicial system under the political pressure and abuse with children. I still a problem the children of streets and the displaced ones, especially the ones of Rome community. The abuse with rime and Egyptian-Balkan communities are serious problems. The discrimination on the basis of sexual orientation and gender identity are problematic as well. Cases of persons trafficking are still reported.

2.2.1 Prevention of torture and other dishuman treatments

Starting from 1993 the Republic of Albania is part of the Convention against torture and other cruel, dishuman treatment. The constitution highlights that no one can be submitted to torture and other dishuman treatments. According to the law “on changes in the Penal Code of the Republic of Albania (2007), article 86 of the Penal Code as amended, providing the definition of torture, in accordance with the article 1 of the Convention against Torture. Torture is defined as the performance of the acts that cause pain or strong suffering, physical or mental, caused willfully from a person against another in order to a) get information for a third person b) to punish him for an action he or a third person has committed c) to frighten or exercise pressure against him or a third person d) for any reason of discrimination e) or any other dishuman action.

Although it is banned from the Constitution and Law, the police and prison guards exercised violence within the suspected and arrested persons. The ombudsman is mandated by the law in order that through the National Mechanism on Preventing the Torture monitors and reports regarding the prisons and custodial detention centers. During the year the ombudsman received from the arrested persons 386 complaints for physical abuse and torture, illegal arrest, illegal caught, illegal penalties, violation of privacy, humiliation and lack in providing the right information. The ombudsman reported for lack of proper health care in many prisons and custody detention centers as well as improper living conditions.

The Albanian Community of Helsinki reported that police in several cases exceeded the use of force and that the conditions where police kept the arrestees persons were so inadequate that constitute inhuman treatment. The major part of the complaints included unjustified detention from the police, arrestments beyond legal terms, non presentation of the persons with their rights in case of detention and unacceptable conditions in detention center. ACH declared that police often reported that the arrested who claimed for abuse came with previous injuries/wounds.
The conditions in prisons and detention centers where very different from one center to another. The old facilities had insufficient water supply, cleaning, airing, and light and health care. The old facility were not hygienic and a lot of basic conditions were absent. Also, the maltreatment from the guards and the threats between the prisoners, threatened the life of the arrested. The ombudsman and the ACH reported that these persons had no sufficient possibility of medical controls or other services. The police stations and detention environments are under the control of the Ministry of Interior. The conditions in these facilities are totally unacceptable. In some cases, there is no heating during winter. Some had absences of basic hygiene conditions such as showers and sinks and little or no airing or natural light, there were no beds or benches and the areas were very small. The authorities investigated some of the reliable claims for inhuman treatment and documented the results of their investigations. Corruption is a serious problem at the detention centers.

The ombudsman after an inspection performed in prisons rised the disturbance regarding the situation of overpopulation and addressed several recommendations to the Ministry of Justice and to the stations. According to the ombudsman, 1340 people sleep on the floor or on shifts, and many without any blanket. The Ombudsman evaluates that the Privation of the Freedom through the arrestment must be considered not as a primary option, but as the most severe measure which is granted only in accordance with the articles 228 and 229 of the Penal Procedure Code. The control was performed in all the institutions of legal privation of freedom. Above the official capacity of 4537 persons, the overpopulation is at the extent of 1340 persons, who sleep on the floor, with no blanket or on shifts. The data on overpopulation of prisons and detention centers in Albania during 2014, except the problem of structural denigration of the buildings and bed service for the persons who are prived from freedom, raise the disturbance of national and international institutions regarding the respecting of the human rights in a democratic country.

From the inspections performed in 21 police units who areas of detention, a considerable number have resulted to be overpopulated, over the official capacity. There were ascertained cases of person with security measure that continued to stat at these areas outside the legal framework. Th major part of the persons at the security rooms were detained for offences provided at this time at the Penal Code (mainly abuse with electric energy). As a consequence, a very important factor for the overpopulation results to be the severe penal policy, which is not the only mean to empower the public order, and less the state of law. The European trends stand for alternative punishments.

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 Arrest Procedures and treatment in detention. The Constitution requires the judge to issue an arrest notification based on sufficient evidence. According to the law, police must notify the prosecution immediately. The prosecution may free the person or send a request addressed to the court within 48 hours to detain the person longer. The court must decide within 48 hours to put the person in detention, require warranties, prevent movements, or to require that the defendant is regularly presented at the police. The prosecution required and the court ordered the arrest in several penal cases duly.

The constitution requires the authorities to introduce to the detained persons with the accusation and the rights they have, but this right was not applied in all the cases. There is no efficient system for management of the financial aspect of warranty. Often, the court requires that the suspected are presented at the police or prosecution every week. Many suspected were ordered to stay in home arrest, often upon their request, as if their were punished later this time was calculated as service time.

3 Conclusions

The state of law is a basic and important principle for the existence of the democratic state. There are no different approaches by the democratic states due to special elements it contains. Referring to the situation in Albania with last 25 years, as one of the former totalitary countries, we can claim that a very big development has been made in installing the state of law fast.

A very important role in this regard was played by the Constitutional Court which is committed in the doctrinal interpretation of the Constitution expanding and consolidating the state of law in Albania. Te last years it has a main role in developing the concept on legal security as an important element of the state of law.

Eventhough our country has had big achievements in protecting the human rights, problems in this regard are still present. The Albanian government is stuck in big problems of the field and often this was reflected in violations of the Constitution or other legal acts.
References


Does the Use of Facebook Influence the Exchange of Information on Social Networking

Tom Sander
University of Latvia, Latvia
tomsander@hotmail.de

Prof. Biruta Sloka
University of Latvia, Latvia

Abstract: The use of Facebook for the employment seeking process is under consideration of many organizations as a new channel to exchange information. Facebook is the largest used private social network site (SNS) in Germany. This paper concentrates on young people between 20 and 30 years. The focus of the paper is the perspective of the individuals and to explain the thoughts and interest of this group regarding employment seeking processes. The research has been done with an online survey and 118 relevant participants. The result provides the indication that the use and membership at Facebook do not influence the behaviour and mechanism of SNS.

1 Introduction

SNS are very important for young people and influence their social daily life. The employment seeking process and to identify potential candidates is very important for companies (Behtoui 2015). SNSs create a new opportunity to present companies and advertise employment opportunities. Young people are mainly using Facebook (Cheung et al. 2011) and the paper uses membership variables of Facebook to find out if the membership of Facebook has an influence on the employment seeking process with SNSs.

The social capital theory explains the behaviour of individuals in social networks and provides an explanation for the mechanism in social networks. The mechanism in social networks is explained with the relationships between individuals (Lin 2001). These ties create opportunities to exchange resources and information. The exchange is influenced by trust, obligations and experience of the relationship (Adler & Kwon 2002)(Sander & Teh 2014b). The maintenance of
the ties can be an investment of time to get in touch, provided resources and
information or support for example.
SNSs are social networks in the internet. The SNSs influence the theory to
explain social networks (Ellison et al. 2007). SNSs are more anonymous and
misuse is easier because control about information or sanctions for misuse is
more difficult. The size of SNSs increase and a personal meeting is not needed to
create a network which leads to missing information e.g. information about the
appearance or elegance of the other network member. Facebook is the largest
private network and the largest population is between 20 and 30 years old
(Budden & Budden 2011) (Pfeil et al. 2009). Individuals use SNSs to exchange
information and resources. This research paper investigate the use of Facebook to
collect information about potential employer.

2 Method

The research has been done with an online survey to evaluate the use of SNSs for
a student project at University of Ludwigshafen. The statistical process has been
the calculation of mean, median, std. deviation and correlation with SPSS. The
age is mainly normal distributed for this population. The mean is 24.5 and median
is 24. Female participants are 50.8% and male are 49.2%. Relevant participant for
the paper has been 118.

2.1 Use of SNS

The experience with SNS is important to evaluate the use and to know the
mechanism at SNSs. Facebook is the main SNS for the participants and the paper
is mainly related to Facebook members (Bohn et al. 2014).
<table>
<thead>
<tr>
<th></th>
<th>Use of SNS in minutes per day</th>
<th>Number of ties</th>
<th>Duration of membership</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>114</td>
<td>114</td>
<td>113</td>
</tr>
<tr>
<td>Mean</td>
<td>57.74</td>
<td>396.05</td>
<td>5.35</td>
</tr>
<tr>
<td>Median</td>
<td>30</td>
<td>350</td>
<td>5</td>
</tr>
<tr>
<td>Std. Deviation</td>
<td>72.097</td>
<td>284.965</td>
<td>1.949</td>
</tr>
<tr>
<td>Minimum</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Maximum</td>
<td>480</td>
<td>2000</td>
<td>13</td>
</tr>
</tbody>
</table>

Table 1

Mean, Median, Std. Deviation, Minimum and Maximum regarding membership of Facebook, \( n = 113 - 114 \)

Source: Tom Sander conducted survey

Only 2.54% of the participants do not use Facebook which is normal in this age cluster (Statistisches Bundesamt 2014) in Germany.

The table above explains the use of SNS of the population. The use of SNSs is explained with the use of minutes per day, number of ties and duration of membership. That provides an indication about the use of SNSs and investment in SNSs. The mechanism of SNSs is influenced by the history which can be described with the duration of the membership (Bloch & Mckay 2014). That creates obligations which is an important factor for social capital theory (Sander & Teh 2014a). The results of mean and median have a large gap and can be explained with large maximum and all minimums is zero. The following diagrams are more detailed and provide a deeper insight in the use of Facebook.
The time to use SNS is an indicator for an investment in SNS. People invest time because they use the SNS to collect or provide information. People who use more time have a higher value with the internet, the return of their investment time is more beneficial as they have with other sources (Bloch & Mckay 2014). The number of ties of the individual are opportunities to get information, to find people who support ideas and is a prestige for the individual. People with many ties have valuable resources for other people and that can be the reason to be connected with each other (Kadushin 2004). The chance to create strong or weak ties is increased and is a further advantage. The size of the network is important.
for the individual to have a benefit and to reduce the risk to be excluded from valuable connections to information and resources.

The duration of membership is the years which the individuals participate in the network. The time to be a member is an indication for trust (Sander 2013) (Brady 2015). The individuals would not stay a long time with a network if they would not have trust in the network. The long term membership creates a history with experience and obligations are created to other network members (Adler & Kwon 2002). The experience can be created with mechanism at SNSs and behaviour by other members for example. That influences the behaviour and use of SNS.

The use of SNS explained with the duration of membership, use in minutes per day and number of contacts brings us to the following hypothesis.

**H1** Members of SNS who use more often, over a long period, with many social contacts in SNS more often use SNS to collect information than people who use less SNS for a shorter period with only a few contacts.

The variables explain the involvement of people in SNSs and the paper explore the reason if the collection of information about employer and potential employer related issues is a reasons to use SNSs. That can explain the behaviour of individuals of SNSs.

The following hypothesis is the influence of SNSs information to find a decision based on information of SNSs. The hypothesis is
H2 Member of SNS who use more often, over a long period, with many social contacts in SNS more often use SNS information to make a decision than people who use less SNS for a shorter period with only a few contacts.

3 Analysis

The analysis presents the results below. This part is divided in four sections. Any section is related to a question of the survey and explains the use of private SNS, provide reasons for the behaviour at SNSs and use of SNSs. The collected data gives support to confirm or reject the hypothesis.

3.1 Requirements for information from employers to be valuable

The question which is evaluating the needed requirements to trust and use information concerning employers is “How should the presentation of an employer in SNS be?”. The data is analysed below.

The information which is provided in SNS regarding the employer has to fulfil attributes. These attributes which have been observed are trustful, real, believable and transparent. The interest of the user of SNSs is to collect reliable information and the information has to fulfil the requirements of the user. The survey provides the result that all evaluated attributes are important because the median is one or two and the means are all below 2,01. This is a strong indication that the information has to be trustful, real, believable and transparent to fulfil the expectations of a SNS user and explains the use of information at SNSs.

<table>
<thead>
<tr>
<th></th>
<th>Trustful</th>
<th>Real</th>
<th>Believable</th>
<th>Transparent</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>118</td>
<td>118</td>
<td>118</td>
<td>118</td>
</tr>
<tr>
<td>Mean</td>
<td>1.85</td>
<td>2.01</td>
<td>1.92</td>
<td>1.68</td>
</tr>
<tr>
<td>Median</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Std. Deviation</td>
<td>1.059</td>
<td>1.209</td>
<td>1.171</td>
<td>1.108</td>
</tr>
</tbody>
</table>

Table 2
Mean, Median, Std. Deviation regarding requirements at information on SNSs, n = 118
Source: Tom Sander conducted survey

The diagram below explain the importance and tendency of the answer of the participants. The most important attribute for information is the transparency. This attribute has the highest agreement with 59.3% followed by believable with
46.6%. The next agreement about the importance of attributes for information is the trustfulness with 43.2%. On the last stage is the attribute real with 43.2%. The majority of answers are on the first three stages. The attributes are mainly related with trust and can be used to describe trust (Bakker et al. 2006). Trust is important to explain the exchange of information in social networks.

Figure 3
“How should be the presentation of employer in SNS?”, Results in %, n = 118
Source: Tom Sander conducted survey

The correlation between the variables to use SNS and age with the indication trustful, transparent, real and believable is presented in the table below.
A statistically relevant correlation coefficient does not exist. The correlation coefficients are weak and only one result is significant at the 0.05 level. That is the correlation coefficient of -0.221 significant at the 0.05 level between transparent and duration of membership. That means only transparent has a statistical significant weak correlation between the duration of membership at Facebook. All correlation coefficients of duration of membership are zero or negative. This means the experience which gained with the history of membership and life experience has a negative correlation between the variables.

### 3.2 Individuals expectation of the kind of information at SNS under consideration of the employment seeking process

The next question of the survey evaluates the kind of information that would be expected by the participants from potential employer at SNSs. “Contact information” and “Job opportunities” has the median 1. The median is two for “Development opportunities for employees and for all other variables is the median three. That gives the indication that the most important expected information are contact details and job opportunities.
The diagram below supports the tendency which has been analysed in the table above. Contact information and job opportunities are on the same level with 61.9% at stage one and on the second scale is the result 22.9% for contact information and Job opportunities has 20.3% at second scale. This supports the result that these two information are the most important. The gap between the two leading expected information and the third place is 28%. On the third place is “Development opportunities for employees with 33.9% at scale one and on scale two responds 28%. The other results do not have a clear tendency to be important or unimportant for the participants.

Table 4
Mean, Median, Std. Deviation regarding expected information on SNSs under consideration of the employment seeking process, n = 118
Source: Tom Sander conducted survey

<table>
<thead>
<tr>
<th></th>
<th>n</th>
<th>Mean</th>
<th>Median</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contact information</td>
<td>118</td>
<td>1.75</td>
<td>1</td>
<td>1.294</td>
</tr>
<tr>
<td>Business information e.g. profit, turnover ...</td>
<td>118</td>
<td>2.59</td>
<td>3</td>
<td>1.269</td>
</tr>
<tr>
<td>Information about employees e.g. age distribution</td>
<td>118</td>
<td>3.1</td>
<td>3</td>
<td>1.222</td>
</tr>
<tr>
<td>Job opportunities, job advertisement</td>
<td>118</td>
<td>1.74</td>
<td>1</td>
<td>1.236</td>
</tr>
<tr>
<td>Development opportunities for employees e.g. education programs</td>
<td>118</td>
<td>2.36</td>
<td>2</td>
<td>1.356</td>
</tr>
<tr>
<td>Information about company culture e.g. leadership style</td>
<td>118</td>
<td>2.76</td>
<td>3</td>
<td>1.245</td>
</tr>
<tr>
<td>Information about compensation and benefits</td>
<td>118</td>
<td>3.21</td>
<td>3</td>
<td>1.513</td>
</tr>
</tbody>
</table>
Figure 4

“What kind of information would you expect at SNS from potential employer?”, Results in %, n = 118

Source: Tom Sander conducted survey

The correlations are weak and the results are not at significant level. There is not any significant relevant correlation between the use of Facebook and the expected information. The results cannot explain that the investment in Facebook e.g. time, number of ties or duration of membership has any correlation with the expectation which kind of information is important.
Table 5
Correlation coefficient between use of Facebook and expected information at SNSs under observation of employment seeking process, n = 118,
Source: Tom Sander conducted survey

3.3 Reason to use or not to use SNS to collect information of potential employer

After evaluation of expected information the next analysis is about the value to exchange information and to explain the reason to use SNS to collect information. The participants do not use SNSs to collect information about employer but the
use of SNSs to collect information is under consideration to identify information about potential employer. Facebook members are aware that they can use SNSs to collect additional valuable information but they do not use Facebook for the employment seeking process. The median is five for “I never reflect this opportunity to use SNSs for employment seeking reasons” on a scale from one for important to six for unimportant. That the SNS is not actively used can be explained by individuals using SNSs only for private reasons on scale two. Another reason not to use SNSs is that profiles at SNSs should not be under consideration or get the attention from potential employers (Sander, Teh & Sloka 2015) (Zide et al. 2014). The opportunity to collect more information or to get in touch with employees of potential employers have a median four. The chance to get an insight about real daily work conditions has the median five. This is an additional indication that the information exchange at SNS under consideration of the employment seeking process are not very often used and the information quality is on a low level. That individuals do not trust SNS has the median three and can be an indication that only few individuals use SNS to exchange information.

<table>
<thead>
<tr>
<th>I can collect more information at SNS</th>
<th>I can get in touch with employees of potential employers easily</th>
<th>I get an insight about real daily work conditions</th>
<th>I use SNS only for private reasons</th>
<th>I do not trust information at SNS</th>
<th>I am not interested that potential employer considerate my private profile</th>
<th>I never reflect this opportunity to use SNS for employment seeking reasons</th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
<td>118</td>
<td>118</td>
<td>118</td>
<td>118</td>
<td>118</td>
<td>118</td>
</tr>
<tr>
<td>Mean</td>
<td>3.81</td>
<td>4.2</td>
<td>4.58</td>
<td>2.26</td>
<td>3.36</td>
<td>1.96</td>
</tr>
<tr>
<td>Median</td>
<td>4</td>
<td>4</td>
<td>5</td>
<td>2</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Std. Deviation</td>
<td>1.613</td>
<td>1.567</td>
<td>1.493</td>
<td>1.549</td>
<td>1.272</td>
<td>1.398</td>
</tr>
</tbody>
</table>

Table 6
Mean, Median, Std. Deviation regarding reasons to collect information on SNSs, under consideration of the employment seeking process, n = 118
Source: Tom Sander conducted survey

The results are not so clear as the tendency of the answers before. The two highest rated answers are “I am not interested that potential employer considerate my private profile” with 79.9% on first and second stage and “I use SNS only for private reasons” with 68.6% on first and second stage. That SNSs are under consideration for the employment seeking process provides the answer “I never reflect this opportunity to use SNS for employment seeking reasons” with 41.5% of the participants disagree with this statement. The positive weak tendency for the result “I do not trust information at SNS” with 60.1% summarized at stage one, two and three is an explanation that people agree that they do not trust
information at SNSs. The participants tendency to disagree with the statements “I can collect more information at SNS” has the result 55.8% on the last three stages and “I can get in touch with employees of potential employers easily” has the result 64.4% on the last three stages. That means that participants are aware of the opportunity to exchange information about employment issues but they do not use this opportunity only a few.

![Figure 5](image)

“Do you use SNS to collect information about potential employer?”, Results in %, n = 118

Source: Tom Sander conducted survey

The correlation coefficients between use of SNS and variables regarding use of SNS to collect information is too weak to use the result to explain the mechanism at SNS under consideration of the collection of information about potential employers influenced by the use of SNS. The only result with a correlation coefficient is -0.188 significant at the 0.05 level between time to use SNS and “I can collect more Information at SNS”. The result is too weak for explanations but can give the indication that the time at SNS has an influence on the collection of information at SNS under consideration of the employment seeking process. The surprising result is that the correlation coefficient is negative.
Table 7

<table>
<thead>
<tr>
<th>Use of SNS in minutes per day</th>
<th>Number of ties</th>
<th>Duration of membership</th>
</tr>
</thead>
<tbody>
<tr>
<td>I can collect more information at SNS</td>
<td>Correlation Coefficient</td>
<td>-0.188*</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>0.045</td>
<td>0.163</td>
</tr>
<tr>
<td>n</td>
<td>114</td>
<td>114</td>
</tr>
<tr>
<td>I can get in touch with employees of potential employers easily</td>
<td>Correlation Coefficient</td>
<td>-0.151</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>0.108</td>
<td>0.275</td>
</tr>
<tr>
<td>n</td>
<td>114</td>
<td>114</td>
</tr>
<tr>
<td>I get an insight about real daily work conditions</td>
<td>Correlation Coefficient</td>
<td>-0.059</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>0.533</td>
<td>0.852</td>
</tr>
<tr>
<td>n</td>
<td>114</td>
<td>114</td>
</tr>
<tr>
<td>I use SNS only for private reasons</td>
<td>Correlation Coefficient</td>
<td>0.085</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>0.367</td>
<td>0.274</td>
</tr>
<tr>
<td>n</td>
<td>114</td>
<td>114</td>
</tr>
<tr>
<td>I do not trust information at SNS</td>
<td>Correlation Coefficient</td>
<td>-0.064</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>0.151</td>
<td>0.333</td>
</tr>
<tr>
<td>n</td>
<td>114</td>
<td>114</td>
</tr>
<tr>
<td>I am not interested that potential employer considerate my private profile</td>
<td>Correlation Coefficient</td>
<td>-0.018</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>0.851</td>
<td>0.702</td>
</tr>
<tr>
<td>n</td>
<td>114</td>
<td>114</td>
</tr>
<tr>
<td>I never reflect this opportunity to use SNS for employment seeking reasons</td>
<td>Correlation Coefficient</td>
<td>0.038</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>0.691</td>
<td>0.634</td>
</tr>
<tr>
<td>n</td>
<td>114</td>
<td>114</td>
</tr>
</tbody>
</table>

Correlation coefficient between use of Facebook and use of SNS to collect information under consideration of the employment seeking process, n = 118, *. Correlation is significant at the 0.05 level (2-tailed).
Source: Tom Sander conducted survey

3.4 Influence of the company presentation in social media to choose a potential employer

The last part is related to the hypothesis if people use SNSs to find a decision to choose an employer. The assumption has been that the collection of information
influence the decision process. The result has a median of five and mean of 4.53 on a six point scale with one for ever and six for never. The diagram below present the distribution of the answers.

Figure 6
“Did the appearance of companies in social media influence your choice for an employer positive?”
Results in %, n = 118
Source: Tom Sander conducted survey

The result is clear. The majority with 41.4% never used SNSs to find a decision regarding potential employer and on stage four, five and six are 69% compared with 31% for the first three stages.

The following table presents the results of the correlation between the use of SNSs and age with the influence on the choice for an employer. The results are three negative weak correlations and only the correlation coefficient between the number of ties and the influence of the decision is -0.188 significant at the 0.05 level. All other results in the table are not significant on a statistical relevant level.

<table>
<thead>
<tr>
<th>Did the appearance of companies in social media influence your choice for an employer positive?</th>
<th>Use of SNS in minutes per day</th>
<th>Number of ties</th>
<th>Duration of membership</th>
</tr>
</thead>
<tbody>
<tr>
<td>Correlation Coefficient</td>
<td>-0.128</td>
<td>-0.188*</td>
<td>-0.128</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>0.18</td>
<td>0.047</td>
<td>0.18</td>
</tr>
<tr>
<td>n</td>
<td>112</td>
<td>112</td>
<td>111</td>
</tr>
</tbody>
</table>

Table 8
Correlation coefficient between use of Facebook and influence of SNS to decide about potential employer, n = 118, *. Correlation is significant at the 0.05 level (2-tailed).
Source: Tom Sander conducted survey

199
The surprising result is that the correlation coefficients are all negative. This means that the investment in SNS, the experience and history with SNS and number of social contacts has a negative result which is an indication that the heavy users less often use SNSs to find the decision than users with only little experience, social contacts and use per day.

4 Result

The test of the hypothesis with the results to reject or confirm the hypothesis is possible with the data. The hypothesis cannot be supported by the results and the analysis provides the information that the use of SNS is not deeply related to the collection of information at Facebook about employer and that the decision about the choice of employer is not influenced by the use of Facebook (Sander, Teh & Majláth 2015). That means the hypotheses are rejected.

The explanation for this result is that people are using the private SNS mainly for private reasons and the aim of a private SNS is to share and exchange information and resources about private issues. They protect their private life which is explainable with the high agreement that they would like to hide their profile from their potential employer. That means they are not using SNSs for employment seeking processes but the participants thought about the opportunity to use SNS for the employment seeking process. Individuals are not aware about the possible advantages to use SNSs for the employment seeking process e.g. to get a deeper insight or to collect more information is mainly anticipated as a few value by the participants. That explains the results that the expectations of individuals are to identify information about potential employer. Expectation is mainly concentrated on job opportunities and contact details. All other opportunities are rated below with a gap of 28% at the first stage of the scale.

This results explain the use of SNS to find information about potential employer and guide to the result that individuals are not influenced by Facebook to identify a decision to choose an employer. That reject the second hypothesis. That means the use of SNS for the employment seeking process is not under consideration for the information collection actively data but the use has been under consideration and individuals are aware that they can use Facebook to collect information about potential employer.

Organizations which recruit employees have to be aware that Facebook is not used from many members of SNSs to collect information about employer and the decision about the choice of employer is not influenced by Facebook.

Future research has to take under consideration evaluation of other kind of social networks. Further of interest are other generations to generalize the result and to
identify differences between different generations. The results have been done for individuals in Germany and cannot be used for other countries or cultures.

References


The Impact of Risk Management Factors in the Sustainability of the Pension System in Kosovo

Nexhmedin Shaqiri
European University of Tirana, Albania
nexhmedin1@yahoo.com

Abstract: The aim of this study is to analyze the environmental dimensions that have a direct impact on the sustainability of the pension system.

During the study will be analyzed in particular: Overview of the state of financial assets available to the pension fund of Kosovo (assets under management), administration of individual accounts of contributory pension, investment assets of the pension fund, investment policy, risk investment, risk management, capitalisations, the quality of pension portfolios, pension payments, etc.

The objective of the study is historical reflection of the development of the Pension Fund, its performance measurement, risk reflection of its sustainability and development strategies.

Research question will be: How much impact the management of risk factors in the sustainability of the pension system in Kosovo? In order to reply to this question, we will continue to use the knowledge of the theories on the risk management of global pension funds, the use of global investment practices of the assets of pension funds in financial capital markets. This study will highlight the efficiency displayed in the management of risk factors in the sustainability of the pension system in Kosovo. Through critical evaluation that will be made to the management of risk factors Kosovo Pension Fund, will be made possible findings, which will serve to make the necessary recommendations for supplementation, improvements or modifications to the problem of study. The results of the analysis that will result, will draw conclusions which conclude that the state of the Kosovo Pension Fund and shall indicate the need for the advancement of risk management factors in Kosovo pension system.

Keywords: Pension contributions, pension fund assets, risk management, risk factors, pension portfolios, pensions.
1 Environmental dimensions

Environmental dimensions for the operation of pension funds, dealing with;

a) political aspect
b) the economic aspect
c) sociologically
d) technical and technological aspect

a) Politically aspect related to the completion of the legal framework and compliance or enforcement

laws that regulate financial environment, in particular the functioning of the environment for pension funds. In Kosovo are derived some general laws and normative acts, based on which function such as pension funds; Law no. 04 / L-101 on Kosovo Pension Funds and relevant laws of the financial system, regulating the structure of the organization and functioning of the pension system in Kosovo (system three pillar pension funds by adjusting the modeling of pension funds, modes of operation thereof, etc.).

b) Within the aspect Economic and completing the legal framework of the financial system also includes a significant number of relevant Regulations which has issued Central Bank of the Republic of Kosovo. These acts regulate the functioning mechanisms; surveillance pension system in Kosovo, the management of contributions, investment benefit pension annuities and pension retaliation. Also this corps of completing the legal framework of the added rules that are issued by the Kosovo Tax Administration, which regulates; taxes, tax management, depreciation, technical reconciliation of payments of contributions, etc.

c) Sociologjik aspect- Kosovo is a country with a fragile stability, which are characterized by; inadequate implementation of laws, underdeveloped democracy, the lack of legal certainty. The pension system in Kosovo can be hurt by; Employee negligence, errors during operations professional negligence, but also through fraud or theft attempts. Therefore, in this regard by the competent authorities required pension funds to develop governance and management policies, careful and responsible, so that the pension system is controlled and monitored better. Fortunately, so far, attempts have been made in this regard to affirmative pension funds in Kosovo, in order to continually been raised capacity of human capital through training and other means of education and raising the professional skills for the job.

d) Technological technical aspect -in Kosovo pension system is directly linked to information technology and communications, so it can always be challenged by technological and technical risk. The pension system can often face different problems during the processing of data, especially when there is a need to adapt the advanced technology to the technical and technological conditions of the data processing system. These problems may occur as defects, or as system malfunctions.
2 Assets under management

Kosovo pension system is composed of three pillars: First pillar\(^1\) - and contains the basic pension scheme or pension age, Pillar second\(^2\) - consisting of the Pension Fund Mandatory Savings Trust Kosovo Pension and Third pillar\(^3\) - develops supplementary pensions stimulated by tax relief and consists of a voluntary pension fund or the Slovenian-Kosovo Fund.

Below are details on the number of beneficiaries of the first pillar of the pension system in Kosovo. The table shows that for recompense pension needs the first pillar in 2014 participate in the Kosovo Budget by 1.3%.

<table>
<thead>
<tr>
<th>Years</th>
<th>Number of users</th>
<th>Monthly amount</th>
<th>Annual spending budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>93.087</td>
<td>28 €</td>
<td>17.874.763,00</td>
</tr>
<tr>
<td>2003</td>
<td>108.279</td>
<td>35 €</td>
<td>44.459.960,00</td>
</tr>
<tr>
<td>2004</td>
<td>116.932</td>
<td>40 €</td>
<td>54.912.599,00</td>
</tr>
<tr>
<td>2005</td>
<td>124.893</td>
<td>40 €</td>
<td>59.313.333,00</td>
</tr>
<tr>
<td>2006</td>
<td>127.356</td>
<td>40 €</td>
<td>63.766.380,00</td>
</tr>
<tr>
<td>2007</td>
<td>131.874</td>
<td>40 €</td>
<td>63.133.100,00</td>
</tr>
<tr>
<td>2008</td>
<td>138.847</td>
<td>40 €</td>
<td>65.641.485,00</td>
</tr>
<tr>
<td>2009</td>
<td>130.347</td>
<td>45 €</td>
<td>73.603.960,00</td>
</tr>
<tr>
<td>2010</td>
<td>109.585</td>
<td>45 €</td>
<td>63.640.920,00</td>
</tr>
<tr>
<td>2011</td>
<td>107.145</td>
<td>45 €</td>
<td>61.196.210,00</td>
</tr>
<tr>
<td>2012</td>
<td>113.043</td>
<td>50 €</td>
<td>69.208.570,00</td>
</tr>
<tr>
<td>2013</td>
<td>117.042</td>
<td>60 €</td>
<td>87.340.090,00</td>
</tr>
<tr>
<td>2014</td>
<td>125.883</td>
<td>75 €</td>
<td>108.199.460,00</td>
</tr>
</tbody>
</table>

\(^1\) Ministry of Labour and Social Welfare - Department of Pension  
\(^3\) [http://www.fondipensional.com/english/index_eng.html](http://www.fondipensional.com/english/index_eng.html)  
\(^4\) Clarification: Basic pension scheme has started from July 2002. Pension beneficiaries were all resident citizens of Kosovo, who have provided evidence that were born and have lived at least two months in Kosovo, so has the number of beneficiaries change from month to month (as at the entrance of the beneficiaries, as well as the removal from the list, in particular, there have been many delays in deregistration of the beneficiaries of the deceased and abusers unfair),
In the second column reflects assets under management of the Pension Fund Trust Kosovo Pension Savings Trust (KPST) until September 2015, which were in the amount of €1,177,735,807.55. These funds have recorded an increase of 91 million euros for the nine month period of 2015, because the rate of return from investing the sum of 38 million euros, while the amount of new contributions was in the amount of approximately 67 million Euro.

But during the same period they were disbursed 11 million for pensions of total assets under management of KPST Pension Fund, and 3 million for fees (investment and operational) and for refunds.

Seen from a historical perspective of the development of the Pension Fund Pension Savings Trust Kosovo reulton that the Fund’s average Grow 5.5% per year, while loads of retaliation Pension Fund for pension and other costs was approximately 1.3%.

<table>
<thead>
<tr>
<th>Date</th>
<th>Assets (net) under management</th>
<th>Profit / loss in percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>07.09.2015</td>
<td>€1,157,394,114</td>
<td>14.27 %</td>
</tr>
<tr>
<td>31.12.2014</td>
<td>€1,087,760,598</td>
<td>16.07 %</td>
</tr>
<tr>
<td>31.12.2013</td>
<td>€913,182,738</td>
<td>12.59 %</td>
</tr>
<tr>
<td>31.12.2012</td>
<td>€739,753,940</td>
<td>6.77 %</td>
</tr>
<tr>
<td>31.12.2011</td>
<td>€595,384,324</td>
<td>1.27 %</td>
</tr>
<tr>
<td>31.12.2010</td>
<td>€495,273,000</td>
<td>1.49 %</td>
</tr>
<tr>
<td>31.12.2009</td>
<td>€380,704,774</td>
<td>-4.63 %</td>
</tr>
<tr>
<td>31.12.2008</td>
<td>€255,742,981</td>
<td>-25.32 %</td>
</tr>
<tr>
<td>31.12.2007</td>
<td>€279,579,860</td>
<td>10.26 %</td>
</tr>
<tr>
<td>31.12.2006</td>
<td>€215,103,575</td>
<td>12.24 %</td>
</tr>
<tr>
<td>31.12.2005</td>
<td>€145,808,692</td>
<td>8.59 %</td>
</tr>
<tr>
<td>31.12.2004</td>
<td>€84,803,347</td>
<td>3.39 %</td>
</tr>
<tr>
<td>31.12.2003</td>
<td>€37,832,687</td>
<td>0.54</td>
</tr>
</tbody>
</table>

Table 2

Assets under management since its establishment up to September 2015.

Also a particular problem have been the beneficiaries pension, which centers are not registered by the time limits established pension, so they are temporarily suspended from the list of beneficiaries (who after notification in pension institutions they are included again in the lists of beneficiaries). Thus the disciplining of beneficiaries to calling the Pension Institutions and cleaning the lists of beneficiaries of the scheme is continuing basis following.

The table is reflecting the monthly and annual budget spent in the period 2002-2014, by year.
Since the establishment of the Pension Fund Pension Savings Trust of Kosovo (2002-2015) were registered contributors 497,000 individual pension account. While the number of active contributors' pension accounts in 2015 was of 277,000 accounts. During the year 2015 (to September 2015) the number of new participants in KPSF were 7,876 contributors.

Assets under management of the third pillar which is managed by the Slovenian-Kosovo Fund participate in the entirety of the pension funds assets by 0.6%. We are supplementary pension fund recorded a small number of voluntary contributors.

3 Investment of Pension Fund Assets

With the investment operations of the pension system in Kosovo deal; Pension Fund KPST and Slovenian-Kosovo Pension Fund. Determination of Pension Funds investment depends on investment policies that apply to the governing boards of pension funds. So Governing Board is responsible, and makes investments based orientation of investment and Regulations Manual of the Central Bank of Kosovo and the Law on pensions. As every investment you made in business, as well as investments of pension funds assets in themselves carry a degree of risk. To reduce the scale of the Governing Board reizkut prudential policies which contain concepts of conservative and aggressive investment.

Investments KPST Pension Fund in the first half of 2015, are very positively influenced by improved economic indicators in the US, Asia and Europe. Lowering the price of oil has given a strong impetus to companies to reduce costs and increase financial capacity, fueling economic growth. On the other hand, the Greek debt crisis has negatively affected financial markets at the end of this semester, resulting in the contraction of return on investments for the period. During this period, the investment performance of the Pension Fund KPST has not been affected to the extent that the need for intervention in attracting investment or their reallocation. Only the last three years the value of pension assets investment increased to 191 million euros gross or net 178 million euros.  

3.1 Investment Policies

Investment policies compiled by the Governing Board based on investment principles, which are built on the basis of these criteria:

1) Provision of pension assets

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6 All individual accounts and liabilities to contributors are denominated in euros.
7 OECD “Guidelines on Pension Fund Asset Management
2) Diversification of investments
3) Maximizing the returns on the safety of pension assets
4) Maintaining sufficient liquidity.

In order to increase the level of care for investment funds, the Governing Board appoints the Investment Committee which has the competence; assesses the suitability of investment, the need for diversification, asset managers suitability of the selected pension funds, the definition of investment principles, etc.

The Commission also examines investment; policy investment in power and proposals for changing it evaluates the current allocation of Mjetevem invested, monitors the current investment, makes reviewing the performance of investments, it assesses the risks which may arise from funds selected reports Governing Board formally associated with direct and indirect investment funds and to trading on regulated markets.

Investment of Pension Fund assets made in asset classes, including stocks, bonds, cash and absolute return instruments. Investment funds are based on the balanced policy, between the interests of contributors who are expected to retire in the near future and those who stay away from retirement.

Investment during special attention is paid to keeping operational costs as low level, without compromising the quality of services to contributors.

The need for balance in the allocation of funds in stocks and bonds represent the rate of returns result.

### 3.2 Investment risk

Risk capital investment\(^9\) represents uncertainty in the realization of objectives, which is manifested through fluctuations that may cause loss or gain. Investments usually monitored by a degree of uncertainty. Uncertainty presents the situation which can not provide the expected result in advance. Thus, the investor is unsure of the outcome to be taken or can not predict, but can expect possible outcomes that can occur.

Investing in the financial capital market undertakes the risk, hoping to achieve substantial rates of return. Investment risk can be measured and assessed how it can be managed risk factors. The investment risks associated repeatedly investment performance. Risk can be reduced and can be avoided, especially when measured assessment of the investment. So every investment carries some degree of investment risk.

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\(^9\) Fund Kosovo Pension Savings Trust (KPST), Investment Manual, Review Last Updated: August 26, 2015

To manage the investment risk as best as possible is important to identify; types of risks and risk factors.

Investment in the long term, equities can generate higher returns than bonds, cash or absolute return instruments. Therefore, policymakers pension funds take into account the potential risks resulting from the policies of the weighted shares, which will have to diversify its best.

Pension funds invest its resources in the international financial capital markets, which means that financial investments are exposed to various risks, which may affect the value of assets of the Pension Fund. Pension funds are so concerned that their financial assets invested by asset managers in; equities, financial derivatives, bonds, to generate income and to reduce overall costs or the risk of Pension Fund.

Market fluctuations affect the underlying investments and may result in disproportional movement of benefits from investments.

When pension funds invest in emerging markets, they carry additional risks due to less developed practices of the market and subject to greater fluctuations in prices and benefits.

Levels of investment fees also have an impact on the value of investment income. Therefore, it is possible to reduce their fees kapitalimet from investments which are expected to generate sufficient income to cover these fees.12

4 Risk factors

Risk factors influence directly the stability and sustainability of the pension funds, which may be free menxheshem and manageable. If we look kategite the risks mentioned above, we see that the number of major categories of risk are menaxheshem from pension funds, especially risks that come due; professional government (fair and measured), to respect the principles of investment of pension funds, the efficient management of the investment of funds, assessments of financial condition, the level of professionalism, etc.. While the categories of risks that are due to the development of economic processes (the economic system, the financial system, the economic crisis, culture and laws of the countries where it operates the capital market financial, etc.) Can not be managed easily, but It can be provided to process streams of the market potential for example; Movements in global financial markets this year (2015) have contributed to the stagnation of the real growth rate of the pension funds in Kosovo, mainly because of economic policies on economic development in the EU and the US were very complicated.

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11 Harry M. Markovitch, Portfolio Selection, Efficient Diversification of Investments (New York; John Wiley and Sons, Inc., 1999)
12 BNY MELLON Global Real Return Fund (EUR), Key Investor Information
Greek crisis also emerged which was manifested more dilemmas about its continuation in the EU area. In the area of the US dollar market, global stock market was in surplus, but the general climate in the area of the dollar and the euro area was discouraging for investors, especially financial capital market of Euro-Zone was shaken enough, because it was questioned the future of the common currency Euro, due to the potential risk of a Greek exit from the Eurozone. While on the other hand the global bond market, marked increase in interest rates.

Selection and allocation of investments done to manage the assets of pension funds in order to benefit as high and avoid the maximum risks.

During the preparation of investment policy by policymakers for the investment of pension fund assets, usually taken into account the following categories of risks, which could jeopardize investments, as follows:

**Inflation risk** represents the risk that emanates from the rise in prices of products or services, and as such the reduction in purchasing power and the real rate of return on investments.

**The risk that the issuer kreditor** - risk of debt securities held by the Sub-fund, not pay their dues or be lower category of their credit rating, resulting in the decline of Net Asset Value.\(^{13}\)

**Berza risk** – risk of investment value may be lowered or raised and can hurt the amount of money invested.\(^{14}\)

**Risk of country / risk politically** - Fund assets may be subject to uncertainties, such as; changes

1. Government policies of a country; 2. Taxation; 3. Restrictions on foreign investment; 4. currency decisions; 5. Laws and regulations which together with natural disasters and political unrest could weaken the stock markets of the country. The risk of impairment events paparashikueshmendikojne in the funds invested. The risk from natural events, political events, etc., unpredictably affect the impairment of financial investments, the financial capital markets.

**Risk of tracking the Index** - the Fund is not expected to follow or repeat accurately optimize the performance of the Index over time. However, the Fund is expected to produce investment results that, before expenses, generally correspond to the price and yield performance of the Index.

**Risks associated with management of diskreional** - management company has implemented investment strategies described above to create a well-diversified fund. Therefore, it can not be excluded that the Management Company not choose the most profitable tools.\(^{15}\)

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\(^{13}\) AXA World Funds, Key Investor Information

\(^{14}\) Institutional Euro-hedged Shares of Vanguard Global Stock Index Fund, Key Investor Information

\(^{15}\) TOBAM anti benchmark world equity fund, Key Investor Information
Risk of contra part- Fund may incur losses in case of a default of a counterparty with which certain transactions are conducted, leading to a decline in the net cash value of the Fund.16

The risk of exchange rate of foreign currency (up to 100% of assets) - Represents the risk of falling into a normal rate of investment, compared with the currency reference of the Fund, which may lead to a significant decline in the Net Asset Value.

Credit risk / ABS / MBS- Securities backed by mortgage or tools may not receive in full the amounts that were owed underlying borrowers.

Credit risk / loans securities- issuer of the securities may not be able to meet its obligations to perform timely payments of interest and principal. This will affect the credit rating of these securities.

Credit risk / failure rate investimit- Securities degree of non-investment, in general, provide higher yields than securities rated above, but will be subject to a larger market, risk credit and that of failure.

The risk of currency / protected classes of-stock changes in exchange rates will affect the return of your investment. The purpose of this class to protect the stock euro is to ensure the return of fund investments by reducing the effects of exchange rate fluctuations between the euro and the US dollar as the base currency of the fund.

Derivativ risk from derivatives used to raise, reduce or maintain the risk level of the fund. The strategy followed by the fund which may not result in significant losses for the fund.

Operational risk / third parties - fund operations depend on third parties and it may suffer disruption or loss in the event of their failure.17

Risk evaluation-This risk is deemed to be determined by the external auditors, who do an audit of pension fund investments, or institutions supervising the Central Bank of Kosovo, but can be made by other parties to the investment regulatory evaluation. Pension Fund Management has an obligation to review any available information and the review of the risk assessment. This risk is also called the counterparty risk which is used by pension funds for investment.

Interest rate risk- associated with market levijet, the cilast can impact on the increase or lowered interest rate which caused a decrease or increase in the value of the investment.

Business Risk- This risk represents the investment of funds in all financial securities, which are expected to reuzťtojně with investment return. These

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16 Nordea Investment Funds SA, Key Investor Information
17 Schroders, Key Investor Information
investments in itself contains the expected risk. The risk investment funds to pension funds can be displayed in two ways:

- As financial means isolated or separated (it has to do with the risk that investors face when investing in only one class of financial assets and taken at only estimates of future consideration of it) and

- As the financial means of a portfolio (large portfolios have a certain amount of risk that can be eliminated by creating a well-diversified portfolio, the cash consideration of any expected combined portfolio of assets

So, the risk that can be minimized or eliminated, called the diversifikueshëm risk, while that part which cannot be minimized or eliminated called market risk or undiversifiable.

Currency specific risk- has to do with setting the upper limit of funds that can be invested in mutual funds that are not denominated in Euros or that are not tied to the Euro.

Market risk- Each market risk investment portfolio carries market risk. In order to address market risk, the Fund Poensional try to find alternative investments that are affordable and which minimize the risk of investment, reorient placements of investment risk-traders with low or risk management with high, with the purpose of realization of the strategy which provides that the rate of return to be more secure. In this case, policymakers use mjetve principle of diversification of the investment as a key factor for market risk mitigation. Market risk is related to factors that systematically influence the financial capital market, as can be: war, inflation, economic crisis, etc. As the financial capital market is adversely affected by these factors, then this risk cannot be eliminated through diversification of financial investments in the same market. To measure the degree of market risk is necessary to use the CAPM model (the pricing model of capital assets - CAPM (Capital Asset Pricing Model\(^{18}\)), which analyzes the mutual connection between the risk and the return norms.

Economic risk- is the risk resulting from the economic downturn or other economic causes that impact on reducing the value of the investment, profits redultuar investment opportunities.

Liquidity risk- that risk estimated by the management of pension funds and managed on the basis of data on the principle ex-ante (before the event)\(^{19}\), as Pension Funds invest in mutual funds that possess the highest degree of liquidity. The liquidity of the pension funds\(^{20}\) in Kosovo maintained through certain amounts of money which are stored in the accounts of the Central Bank of Kosovo, with the purpose of exploitation in terms as short for pension annuities

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19 https://en.wikipedia.org/wiki/Ex-ante
penalty and payment of Expenditure for; Managing fees, operational expenses, refunds, etc. Kosovo Pension Funds hold certain amounts in the CBK accounts for extraordinary payments, which conditioned by laws.

Liquidity risk\(^{21}\) in some placements may be low. Buying and selling of these tools can be time-consuming and unfavorable prices.\(^{22}\)

**Reputational risk** - is related to; transparency of pension funds, honesty and maturity of the members of the Governing Board of the Pension Fund, the level of professionalism of the members of the governing board and the management, efficiency of operations administration, punctuality or accuracy of processing the data, respecting the highest standards of responsibility and the reliability built the reputation of the Pension Fund.

Therefore, the task of pension funds is that during the preparation of investment policies to reduce the level of investment risk exposure, as well as often to review investment policies.

Pension funds in Kosovo adapt policies governing the financial capital market and financial potential of the available funds and undertake activities for investment orientation in the most appropriate, with the aim of forming an optimal structure of portfolio investments.

### 5 Risk assessment function

When the risks identified by the Governing Board or by the management of the Pension Fund, made the analysis of potential impacts they may have on the Fund measured their potential and decisions to react to them.

Depending on the nature of the risks and impacts of their policy makers or managers to take appropriate action; avoid risks, minimize risks, keeping risks, avoidance of risks, transfer risk to third parties,

Recognition, evaluation and management of risks, the use of appropriate techniques of managing risk is a permanent task of Pension Funds. So, prevention of risks and their control of pension funds, which thus ndikonjne in establishing their stability and serve to build the sustainability of the pension system.

### 5.1 Risk Management

The pension funds pay special attention to risk management. They try to gather as much information about each financial capital market, as well as financial trades

\(^{21}\) Pictet - High Dividend Selection, Key Investor Information

\(^{22}\) Developed KBI Institutional Equity Dividend Plus Fund, Key Investor Information
in these markets, depending on the type of asset classes which are traded in these markets. Thus, pension funds trying to determine the reliability scores for investments using the appropriate information to determine the degree of risk in accordance with investment potential. The pension funds pay special attention;

Investment planning, asset managers pergjedhjes, kustodianeve, implementation of investment contracts, development of research on the risk assessment of investments, the risks përzkufizimeve, revenue management process or financial investment, risk control procedures, and to review the investment policies. Depending on the kind presented in response to risks risqevem made by pension funds. Risk assessment by the Governing Board and by the management of the pension fund, enables the use adequate actions in order to rise to minimize or avoided entirely. Risks that belong internal operations, can easily be managed, paying attention to the need for caution or avoid risk, or avoiding in this way the effects of bad choices. The main objective of pension funds is the establishment of principles, which aim to eliminate the effects of risk factors on investment, whether as a definition inadequate bodies politikmakers of pension funds, either as selection evil principles oprimeve, or risk conscience.

5.2 Investment risk carriers

Carrier risking the investment of pension funds are members of the Governing Board of the relevant pension fund. So, the pension plans with defined benefits and bear the investment risk of the pension funds, because they make total investments of assets in the financial capital market. Since pension funds are also responsible for the payments of pension annuities, based on the amount of contributions paid to individual portfolio investment and capitalization. Therefore, the risks for the preservation of qualitative value of pension fund assets and the amount of returns from investments are borne by the Governing Board of the Pension Fund, because it is responsible for covering gaps that arise in the pension scheme.

5.3 Measuring the performance of investment funds

In order to manage as best as risk factors the financial investment of pension fund assets, measure the performance of asset managers in the shortest period of time. So KPST Pension Fund makes measurement of performance in the three-month periods of the asset managers, recording the degree of positivity or negativity of placements, for example; in Q2 of 2015 the highest negative performance had Tobam fund (-4.91%), which turns out to have a maximum of placements in Europe and Asia, which were the main homes of crisis this quarter (Greece, because the problem with debt, and China with massive selling of shares by the collapse of investor confidence). However the other funds (primarily) with a focus on stocks as Nordea GSEF (-3.75%), AIC DPD (-3.13%), and Pictet (-2.68%)
were the most affected by impairment and were influenced by their geographic positioning of foreign investment distribution. Investments in Canada and Australia recognize additional losses this quarter, due to the strong devaluation of currencies. The performance of other investment funds was Vanguard (-0.77%), Schroders (-0.51%), BNY Mellon (-2.15%), AXA WFOI (-0.98%) and AXA GILB (-2.59%). But most importantly it is that only Schroders (-0.56%) and Tobam (-0.08%) had negative performance for the first half year of the year, while all other funds were in positive terrain. Investments in bonds of the Government of Kosovo for the period had performance of 0.48%, and it always depends on the maturities and dates of new investments. So KPST Pension Fund makes performance analysis of placements in quarterly periods for each manager or issuer.

Figure 1
The cumulative performance KPST Pension Fund of establishment (2002-2015)

<table>
<thead>
<tr>
<th>Day</th>
<th>Quarter</th>
<th>Year</th>
<th>1 Year</th>
<th>3 Years</th>
<th>5 Years</th>
<th>Since the establishment</th>
</tr>
</thead>
<tbody>
<tr>
<td>The share price (1.2833 €)</td>
<td>-0.13 %</td>
<td>-3.46 %</td>
<td>-0.36 %</td>
<td>0.60 %</td>
<td>16.65 %</td>
<td>28.21 %</td>
</tr>
<tr>
<td>Gross returns (thousands)</td>
<td>-1,500 €</td>
<td>-44,441 €</td>
<td>-3,008 €</td>
<td>9,432 €</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Table 3
The performance of the KPST Pension Fund on 09.07.2015

Performance and return on investment since its establishment (2002) of the Pension Fund KPST until 2015 has increased the share price of 28.33% compared to gross return, and has increased the share price of 35.17% versus the index of prices consumption in Kosovo that was 30.58%.

### Table 4

<table>
<thead>
<tr>
<th></th>
<th>Momyh</th>
<th>Year</th>
<th>1 Year</th>
<th>3 Years</th>
<th>5 Years</th>
<th>Since the establishment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>The share price</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(1.3517 €)</td>
<td>1.69 %</td>
<td>4.95 %</td>
<td>8.08 %</td>
<td>24.90 %</td>
<td>37.69 %</td>
<td>35.17 %</td>
</tr>
<tr>
<td><strong>Consumer Price</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Index in Kosovo</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-0.24 %</td>
<td>-0.55 %</td>
<td>-0.71 %</td>
<td>2.35 %</td>
<td>13.36 %</td>
<td>30.58 %</td>
<td></td>
</tr>
</tbody>
</table>

6 **Findings**

Pension funds in Kosovo implement sustainable policies on the management of risk factors, based on the principles arising from the OECD guidelines.

In particular, the Governing Board of the Pension Fund Pension Savings Trust of Kosovo has implemented the new investment strategy, which has proven to be responding well to new challenges in the financial capital markets.

7 **Conclusions**

Kosovo Pension Funds develop prudent investment policies, based on conservative investment concept.

These funds are oriented more in the assessment and management of risk factors, which are manageable. While the pay special attention to the process of information regarding risk factors external investment.

To minimize the degree of investment risk, these funds make the transfer of risk to other parties, buying much greater security for the preservation of the value of the assets invested.

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Potential factors which may reikojne pension fund investments Kosovo can arise from external threats, and less by internal reiqet.

Policies governing the management of Pension Funds and are quite rational and professional.

Government intervention in the policies of the kufiuar ershte Pension Funds, or impossible.

The pension funds have paid attention to the advancement of information technology systems, and therefore the possibility of injury to Information system is small.

Kosovo marks a growth of 2, 5% - 3% per year, so the rate of economic development, namely employment and the payment of pension contributions increased vahdueshme marks.

Kosovo uses the euro currency, although not members of the Euro Zone, so the possibility of increasing the inflation rate is limited because of conditioning factors kept inflation under strict control.

References


[10] International Organization of Pension Supervisor, Good practices in risk management of alternative investments by pension funds, June 2010


Efficiency of the Financial Services Institution

Richard Szabó
Óbuda University, Keleti Faculty of Business and Management, Budapest, Hungary
szabo.richard@kgk.uni-obuda.hu

Abstract: This paper analyzes the Hungarian bank type Financial Services Institution by their 2014 Annual Report. The selected method should be the data envelopment analysis (DEA) by simple one input – one output process. Finally will be define the efficient units.

1 Introduction

Like the blood for the human body, the continuous money and capital transfer is a basic need for the economic system. To the modern era has been developed a complex financial services institutional organization. These papers try to analyze this sector.

2 Theoretical background

The efficiency theory was defined by Berger and Humphrey [Berger, Humphrey 1997]. The authors advised to use “nonparametric or parametric frontier analysis to firms within the financial industry”. In the basic article belongs to the financial institutions four types: banks, Saving & Loan Associations, credit unions, and insurance firms.

The Nonparametric frontiers are the data envelopment analysis (DEA) and Free Disposal Hull (FDH). There are three main parametric frontier approaches: the stochastic frontier approach (SFA), the distribution-free approach (DFA) and the thick frontier approach (TFA).

Data envelopment analysis (DEA) is a linear programming based technique for measuring the relative performance of organizational units where the presence of multiple inputs and outputs makes comparisons difficult. The usual measure of efficiency is the output divided by the input.
The measurement of relative efficiency where there are multiple possibly incommensurate inputs and outputs was addressed by Farrel [Farrell 1957] and developed by Farrell and Fieldhouse [Farrell, Fieldhouse 1962], focusing on the construction of a hypothetical efficient unit, as a weighted average of efficient units, to act as a comparator for an inefficient unit.

A common measure for relative efficiency is, the weighted sum of outputs divided by the weighted sum of inputs.

Graph 1 shows a set of units P1, P2,… P6 with each unit consuming the same amount of a single resource and producing different amounts of outputs, y1 and y2 as shown. For a given amount of resource input, units providing greater amounts of the outputs will be the efficient ones. Applying the DEA approach to this set of units will identify units P1, P2, P3 and P4 as efficient and they provide an envelope round the entire data set units P5 and P6 are within this envelope and are inefficient. The data envelope has been notionally extended to the axes by the lines P1y2′ and P4y1′ to enclose the data set.

For unit P5 the peer group consists of the units P1 and P2 and a set of targets for P5 is provided at P5′. These targets are obtained by a pro rata increase in the outputs of unit P5. Clearly there are other possible targets for P5 and for example if the output level Y2 could not be increased for P5 then a target P5″ could be set which would rely entirely on increasing output y1. For unit P6 the pro rata increase leads to the set of targets P6′. However P6′ is clearly dominated by P4 which produces the same amount of output y1 but more output y2. In this case the pro rata increase needs to be supplemented by a further increase in the output of y2 to provide an efficient target. Returning to unit P5 the set of targets P5 can be
obtained from a weighted average of the peer units P1 and P2. Thus P5 can be thought of as a composite unit made up of a weighted average of the peer units and this composite unit provides a target for the inefficient unit. [Dyson, Thanassoulis, Boussofiane 1990]

3 Methods

Vaz [Vaz 2010] described the basic methods of data envelopment analysis (DEA).

![Figure 1](image1.png)

Modell of efficiency analysis Source [Vaz 2010]

During the process first should be defined the input and output variable(s), either one or more. Second all of the homogeneous Decision Making Units should be calculated every input and output variables. Third the output / input (productivity) ratio should be calculated, and comprised. Fourth from the input / output graph will be defined the efficient units, which are like the “upper border zone” of the points (1. graph red line). Final the productivity ration units should be descending ordered by the productivity rations.

In this cases the inputs will be defined as the Equity ration (Equity / Total Assets). The output should be any kind of profits divided by the revenue. The profit category should be chose from EBIT, profit after taxes or net income (balance sheet net profit figure).

4 Sources, Data and Process

After 2013 the National Bank of Hungary merged with the Financial Supervisor Authority. Since 2003 year after year will be published the so called “Golden Book”, which included all the supervised financial institutions Balance sheet and Profit and Loss Statement main figures.

These dates are the subject of this analysis.
Despite the few amount of variables it was used the simplest method: One input and one output. The input variable was the Equity per Total Assets ratio, and for the output was selected the Earning after taxes per Turnover ratio. The calculated input and output dates could be seen at the Table 2. and the items at the Graph 2.

<table>
<thead>
<tr>
<th>Name</th>
<th>Input</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. 2014 Bank of China (Hungária) Hitelintézet Zrt.</td>
<td>69,98%</td>
<td>304,04%</td>
</tr>
<tr>
<td>2. 2014 BUDAPEST Hitel- és Fejlesztési Bank Zrt.</td>
<td>94,38%</td>
<td>111,00%</td>
</tr>
<tr>
<td>3. 2014 Agrár-Vállalkozási Hitelgarancia Alapítvány</td>
<td>20,89%</td>
<td>45,55%</td>
</tr>
<tr>
<td>4. 2014 CIB Bank Zrt.</td>
<td>12,38%</td>
<td>42,96%</td>
</tr>
<tr>
<td>5. 2014 Banif Plus Bank Zrt.</td>
<td>5,61%</td>
<td>28,69%</td>
</tr>
<tr>
<td>6. 2014 DRB Dél-Dunántúli Regionális Bank Zrt. 1</td>
<td>22,96%</td>
<td>20,07%</td>
</tr>
<tr>
<td>7. 2014 Commerzbank Zrt.</td>
<td>10,38%</td>
<td>18,22%</td>
</tr>
<tr>
<td>8. 2014 ÉRB Észak-magyarországi Regionális Bank Zrt. 2</td>
<td>6,89%</td>
<td>13,73%</td>
</tr>
<tr>
<td>9. 2014 AEGON Magyarország Lakástakarékpénztár Zrt.</td>
<td>8,44%</td>
<td>13,41%</td>
</tr>
<tr>
<td>10. 2014 ERSTE BANK HUNGARY Zrt.</td>
<td>8,25%</td>
<td>11,77%</td>
</tr>
<tr>
<td>11. 2014 Dél-Dunántúli Takarék Bank Zrt. 2</td>
<td>2,26%</td>
<td>8,67%</td>
</tr>
<tr>
<td>12. 2014 Fundamenta-Lakáskassza Lakás-takarékpénztár Zrt.</td>
<td>64,15%</td>
<td>7,02%</td>
</tr>
<tr>
<td>13. 2014 BRB BUDA Regionális Bank Zrt. 2</td>
<td>2,17%</td>
<td>5,67%</td>
</tr>
<tr>
<td>14. 2014 DUNA TAKARÉK BANK Zrt.</td>
<td>6,76%</td>
<td>4,65%</td>
</tr>
<tr>
<td>15. 2014 ERSTE Lakás-takarékpénztár Zrt.</td>
<td>3,56%</td>
<td>4,08%</td>
</tr>
<tr>
<td>16. 2014 Credigen Bank Zrt.</td>
<td>18,37%</td>
<td>2,53%</td>
</tr>
<tr>
<td>17. 2014 FHB Jelzálogbank Nyrt.</td>
<td>5,27%</td>
<td>1,26%</td>
</tr>
<tr>
<td>18. 2014 FHB Kereskedelmi Bank Zrt.</td>
<td>4,76%</td>
<td>0,18%</td>
</tr>
<tr>
<td>19. 2014 Garantiqa Hitelgarancia Zrt. 1</td>
<td>5,25%</td>
<td>-0,04%</td>
</tr>
<tr>
<td>20. 2014 GRÁNIT Bank Zrt.</td>
<td>6,59%</td>
<td>-2,76%</td>
</tr>
<tr>
<td>21. 2014 Merkantil Váltó és Vagyonbefektető Bank Zrt.</td>
<td>8,76%</td>
<td>-4,70%</td>
</tr>
<tr>
<td>22. 2014 Porsche Bank Hungaria Zrt.</td>
<td>13,24%</td>
<td>-9,55%</td>
</tr>
<tr>
<td>23. 2014 KDB Bank Európa Zrt.</td>
<td>5,37%</td>
<td>-9,59%</td>
</tr>
<tr>
<td>24. 2014 OTP Jelzálogbank Zrt.</td>
<td>7,20%</td>
<td>-12,83%</td>
</tr>
<tr>
<td></td>
<td>Bank Name</td>
<td>Inputs (%)</td>
</tr>
<tr>
<td>----</td>
<td>-----------------------------------------------</td>
<td>------------</td>
</tr>
<tr>
<td>25</td>
<td>2014 KELER Központi Írtéktár Zrt.</td>
<td>8,59%</td>
</tr>
<tr>
<td>26</td>
<td>2014 MagNet Magyar Közösségi Bank Zrt.</td>
<td>6,46%</td>
</tr>
<tr>
<td>27</td>
<td>2014 Banks Total</td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>2014 Magyar Cetelem Bank Zrt.</td>
<td>8,54%</td>
</tr>
<tr>
<td>29</td>
<td>2014 Kereskedelmi és Hitelbank Zrt.</td>
<td>8,92%</td>
</tr>
<tr>
<td>30</td>
<td>2014 OTP Bank Nyrt.</td>
<td>7,53%</td>
</tr>
<tr>
<td>31</td>
<td>2014 MFB Magyar Fejlesztési Bank Zrt.</td>
<td>18,20%</td>
</tr>
<tr>
<td>32</td>
<td>2014 Pannon Takarék Bank Zrt.</td>
<td>13,02%</td>
</tr>
<tr>
<td>33</td>
<td>2014 Magyar Takarékszövetkezeti Bank Zrt.</td>
<td>27,34%</td>
</tr>
<tr>
<td>34</td>
<td>2014 OTP Lakástakarékpénztár Zrt.</td>
<td>5,29%</td>
</tr>
<tr>
<td>35</td>
<td>2014 Sherbank Magyarország Zrt.</td>
<td>3,85%</td>
</tr>
<tr>
<td>36</td>
<td>2014 NHB Növekedési Hitel Bank Zrt.</td>
<td>9,55%</td>
</tr>
<tr>
<td>37</td>
<td>2014 Raiffeisen Bank Zrt.</td>
<td>9,58%</td>
</tr>
<tr>
<td>38</td>
<td>2014 MKB Bank Zrt.</td>
<td>7,46%</td>
</tr>
<tr>
<td>39</td>
<td>2014 UniCredit Bank Hungary Zrt.</td>
<td>9,45%</td>
</tr>
<tr>
<td>40</td>
<td>2014 Polgári Bank Zrt.</td>
<td>6,35%</td>
</tr>
<tr>
<td>41</td>
<td>2014 SOPRON BANK BURGENLAND Zrt.</td>
<td>9,64%</td>
</tr>
<tr>
<td>42</td>
<td>2014 MV-Magyar Vállalkozásfinanszírozási Zrt.</td>
<td>12,10%</td>
</tr>
<tr>
<td>43</td>
<td>2014 UniCredit Jelzálogbank Zrt.</td>
<td>1,34%</td>
</tr>
<tr>
<td>44</td>
<td>2014 Mohácsi Takarék Bank Zrt.</td>
<td>15,84%</td>
</tr>
<tr>
<td>45</td>
<td>2014 Kinizsi Bank Zrt.</td>
<td>65,97%</td>
</tr>
<tr>
<td>46</td>
<td>2014 Magyar Export-Import Bank Zrt.</td>
<td>81,21%</td>
</tr>
</tbody>
</table>

Table 1.
Inputs and Outputs of the 2014 Hungarian banks
Data Source: “Golden Book 2014”. National Bank of Hungary, Supervisor Department, Author’s calculation

From the analyzed 45 items give only 18 organizations the accepted output value. Bank of China, Budapest Bank and Fundamenta Lakáskassza (Building Society) reach extraordinary outputs. All other received lower level value. Compare these Bank of China should be effective, Budapest Bank and Fundamenta Lakáskassza Building Society not.
Graph 3. shows the lower level group. Following the DEA method gave from the concentrated group four efficient units:

Agrár Vállalkozási Hitelgarancia Alapítvány (Hungarian Rural Credit Guarantee Foundation)

CIB Bank

BanifPlus Bank

Dél Dunántúli Takarék (S&L) Bank
Next step lets calculate the productivity rate, the output per input ratio. These values could be show at the Table 3.

<table>
<thead>
<tr>
<th>Name</th>
<th>Productivity ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. 2014 Banif Plus Bank Zrt.</td>
<td>5.114852</td>
</tr>
<tr>
<td>2. 2014 Bank of China (Hungária) Hitelintézet Zrt.</td>
<td>4.344588</td>
</tr>
<tr>
<td>3. 2014 Dél-Dunántúli Takarék Bank Zrt. ²</td>
<td>3.83295</td>
</tr>
<tr>
<td>4. 2014 CIB Bank Zrt.</td>
<td>3.470295</td>
</tr>
<tr>
<td>5. 2014 BRB BUDA Regionális Bank Zrt. ²</td>
<td>2.605952</td>
</tr>
<tr>
<td>6. 2014 Agrár-Vállalkozási Hitelgarancia Alapítvány ¹</td>
<td>2.180473</td>
</tr>
<tr>
<td>7. 2014 ÉRB Észak-magyarországi Regionális Bank Zrt. ²</td>
<td>1.993252</td>
</tr>
<tr>
<td>8. 2014 Commerzbank Zrt.</td>
<td>1.755339</td>
</tr>
<tr>
<td>9. 2014 AEGON Magyarország Lakástakarékpénztár Zrt.</td>
<td>1.588611</td>
</tr>
<tr>
<td>No.</td>
<td>Year</td>
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<tr>
<td>10</td>
<td>2014</td>
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<td>34</td>
<td>2014</td>
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<td>35</td>
<td>2014</td>
</tr>
<tr>
<td>36</td>
<td>2014</td>
</tr>
</tbody>
</table>
Table 2
Productivity ratios of the 2014 Hungarian banks Data Source: “Golden Book 2014”. National Bank of Hungary, Supervisor Department, Author’s calculation

The Productivity ratio’s value over 1 is good, between 0 and 1 should be accepted, less as 1 is unaccepted bad.

5 Conclusion

By simple efficiency method earned not enough different part of solutions. The DEA methods give more reason and using reduced variables gave also clear and understanding pictures from the analyzed research area.

From the existed 45 units 12 was good, 6 was acceptable and 27 was inefficient in the year 2014. By the DEA approach should be called efficient only 5 units, 4 banks (Bank of China, CIB Bank, BaniPlus Bank, Dél Dunántúli Takarék (S&L) Bank) and one Special Institution (Agrár Vállalkozási Hitelgarancia Alapítvány (Hungarian Rural Credit Guarantee Foundation) ) (which belongs by supervisory to the banks). Both methods, the graphical and the productivity rations give the same effective units!
References


International Experiences as one of main Elements in Quality Education

Helena Kościelniak, Joanna Nowakowska-Grunt, Agata Przewoźna-Krzemińska, Jerzy Szkutnik
Częstochowa University of Technology, Poland
jerzy.szkutnik@interia.pl

Abstract: One of the basic duties of universities is to educate broad-minded, enlightened and versatile people, that is to prepare highly qualified professionals in diverse domains of social life. The modern job market, first of all, it is globalization modern technologies, rising clients' requirements and the omnipresent change. New challenges are just in the face of technical university graduates; an engineer should possess wide and continuously updated knowledge concerning own domain and other specialities. To obtain success in the job market, technical university graduate has to possess special skills and competence. The engineer profession becomes more often a self-employed professional. Technically educated people become experts for hire for a limited period of project realisation. The modern recruitment methods are aimed at searching and checking competences of job candidates. The competence are combination of knowledge, skills and motivation, that is elements which give university graduates a chance to achieve success at work. Theorists of organization and management reduce competence to a triad: talent, style and passion. A number of organizations present an iceberg as a model of an ideal professional engineer, where a small part visible above the water line represents technical skills and knowledge concerning specific domain (easy to change, form and identify) and under the water line there are competence and features of personality. One of the basic tasks of universities is educating people who are broad-minded, smart and versatile, i.e. preparing highly-qualified specialists in different fields of social life. The international labor market, most of all, amounts to globalization, modern technologies, growing demands of customers and omnipresent change. The graduates of technical universities are the ones who are to face new challenges. Polish engineers ought to possess wide and up-to-date knowledge of their own and other specialities. The graduate of the technical university, to achieve success on the international labor market must have specific skills and competences. The profession of an engineer is more and more frequently a freelancing job with no limits. People with university degrees in technology become professionals for rent for a specified period of the project implementation. Recruitment methods in Poland and abroad are directed to searching for and checking competences of those applying for a post. Competences are the combination of knowledge, skills and motivation, i.e. the elements which cause that university graduates have opportunities to succeed at work. The theoreticians of organization and management bring competences to the triad: talent, style and passion. A number of well-known corporations present a model of the sought specialist engineer as an iceberg where there is only a little tip noticeable on the surface – representing technical skills, knowledge in a specific field – easy to change, create and relatively easy to identify,
and below, there are competences and features of personality. The considerations discussed in the paper are an attempt to find an answer to a range of questions, among others: what graduates, with what (mostly “soft”) competences are being searched for by employers on the international labor market now, what characteristics, skills, qualifications the graduate of the technical university, looking for a job both in Poland and abroad, should have, what changes and new directions of education, specialties should be introduced to improve the quality of education and the conditions of the university education etc. In the paper, there will be underlined the role of such engineering competences as: creative thinking, analysis and critical evaluation of data, the ability of appropriate problem identification and definition, reasons or results of activities. To interpret data it is necessary to access them and therefore the ability of accessing information coming from different sources, ordering, interpreting and processing it, also with the application of electronic data, is very important. It is also the ability to see problems in their broader context, as a part of the larger whole, the systems. The ability of managing changes, understanding what factors influence changes (including not only technological development, but also global, international trends – e.g. environmental protection, energy saving, customer requirements, advancement of competitors, requirements of capital markets) is also important. The most important competence, the mostly appreciated by international employers is motivation, readiness for constant development, initiative and passion. The paper is both theoretical and empirical in nature.

Key words: quality of education, international experience, competences, “soft” competences, a technical university graduate, international labor market

1 Introduction

Polish employers more and more frequently notice that (technical) universities pay too little attention to the cooperation with enterprises, also, they do not help create interpersonal skills, e.g. creativity or dealing with conflicts and stress (so called “soft” competences”). Similarly, university graduates express the opinion that they are not sufficiently equipped with these skills and competences. “Soft” competences consist of interpersonal competences combined with personal competences, currently known as psychosocial skills. In international job advertisements, “soft” competences are usually listed among the most desirable requirements (independence, resistance to stress, high auto-motivation) and interpersonal skills (communication skills, ability to work in a team.). While discussing psychosocial skills there must be defined the concept of “competence” itself. The issues of managerial roles and competences have been discussed in psychology and, most of all, social psychology, for a long time. Nowadays, managers in enterprises are required to perform more and more new tasks, particularly at the time of recession there are required the skills for rapid changes, innovativeness, creativity, mobility and, most of all, the abilities triggering the activity and rapid adaptation to the changing environment. It is very important for managers to be aware of their social competences, which they should constantly
develop and skillfully use while working with people. The concept of “competences” comes from the Latin term *competentia*, which means usefulness and responsibility. On the other hand, in English, this term is understood as abilities or skills to perform specific activities. According to a social psychologist, M. Argyle, social competences are “a set of such competences which the ability to respond rapidly to a specific social situation depends on.”

The abilities necessary to process behavioral information, which the social psychologist described as social intelligence, are responsible for the creation and development of social competences. Every person acquires social competences in the course of their whole life. It is called social training, which affects proper interpersonal interactions with the external environment. The subject literature defines social competences as “practical knowledge of something, proficiency at something, ability to perform something”. On the other hand, competences themselves are “a range of one’s knowledge, ability or responsibility”. The mid-level manager, to manage competently, ought to constantly improve their qualifications and skills. “Competences are described as a range of powers of attorney and rights to operate the people with appropriate qualifications and skills are entitled to”. This concept is also specified in theory as “the abilities to use knowledge and skills that serve the effective performance of the role of the manager. Therefore, all managerial skills can be competences when they are effectively utilized.”

Competences amount to types of behavior that some people master better than others, which makes them act more efficiently in specific situations. It should be pinpointed that competences are defined differently and they can be appropriately categorized. The following competences can be identified: generic and specific, threshold and behavioral, differentiating.

Figure 1 presents the categorization graphically.

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2 M. Argyle, Psychologia stosunków międzyludzkich, PWE, Warszawa 1996.
5 M. Holstain – Beck: Jak być menedżerem. CDM. Warszawa 1996.
It often happens in organizations that in spite of possessing relevant formal qualifications (professional education), expertise and skills, employees do not generate the expected results regularly. Therefore, it should be considered whether their poor effectiveness is not just due to a lack of “soft” competences. In such a case, training sessions, i.e. the basic training of this type of skills may bring about significant improvement in the quality and effectiveness of work.

2 Research results

The questionnaire was addressed to the post-graduate students. The questions included in the questionnaire were closed-ended questions, open-ended questions and semi-open questions. Below, there are presented the excerpts of more extensive studies and the obtained results of the questionnaire corresponding to the responses of 40 students. The questions concerning the location, organizational and legal form and size of the company were included in the demographics. In the figures below, there are presented the answers of the respondents.
While analyzing the data in the figure – more than 40% of the respondents work in the companies of Częstochowa but, among the respondents, there are people working very far, e.g. in Szczecin or Zielona Góra. Nearly 80% companies are state-owned companies. It is presented in Figure 3.
The third question in the demographics was: “What size is the company you represent?”
The respondents were, most of all, the managers from large companies (85%), located in big cities (Figure 3). More than 62% of employees (in the respondents’ opinion) in the companies were the people with higher education. Proceeding to the questions connected with the problem discussed in the paper, there was asked the following question in the questionnaire: “What competences are necessary to work in your company?”. The respondents were to choose from among the following: education, experience in a similar post, good knowledge of a foreign language, excellent service of specialized computer programs, additional powers to do the job (courses, training, post-graduate studies), knowledge of modern management tools. The responses to the questions are graphically presented in Figure 5.

![Figure 5](image)

**Figure 5**

The competences necessary to work in the company.

Source: own study

While analyzing the responses of the surveyed students, in the first position, there was indicated knowledge of modern management tools, in the second place - knowledge of foreign languages followed by service of specialized computer programs. The usually mentioned experience in working in a similar post was mentioned by slightly more than 2% of the surveyed students. In that question, the respondents had a possibility to tick three responses. Referring to professional education (Figure 6), more than 62% of those questioned pointed that it is essential, and even necessary to be employed in their companies.
The experience acquired in the previous place of work, in a similar position is extremely important for 35% of the respondents (Figure 7).
One of the questions in the questionnaire addressed to the post-graduate students concerned the most useful “soft” competences at work.

![The most useful “soft” competences at work](image)

**Figure 8**
The most useful “soft” competences at work
Source: own study

While answering the question concerning “soft” competences at work, the respondents had a possibility to tick three answers (in the questionnaire). Analyzing the above figure, it can be noticeable that the ability to work in a team or group is what counts most, i.e. all the issues related to communication and interpersonal skills. The second position was occupied by resistance to stress, which is an integral element of work nowadays. Pace of work, the requirements, particularly in crisis situations, bring about that, to function efficiently in the organization, one must be resistant to stress. In the third position, there was management of time, i.e. the resource that cannot be stored or warehoused and that runs out irretrievably.

A lack of this competence brings about that work is affected by chaos and disorganization. The subsequent position was occupied by creativity, i.e. inventiveness combined with innovativeness. Creativity is frequently listed as a leading competence during recession, followed by selection of employees. On account of the editorial limitations of the present paper, only the selected competences, necessary to work in the companies, have been the focus of attention. The people subjected to the questionnaire were mostly the graduates of technical universities. Also, on the basis of the research results, it can be concluded that they have knowledge concerning competences and they are the ones possessing these competences.

Summing up, the results of the empirical studies presented in the paper refer only to a part of the research on the (engineering) competences desired by international
employers, the competences which are the evidence of the quality of education, the quality of education at the technical university. While analyzing the considerations in the paper, both the theoretical and empirical ones, the following conclusions can be drawn: the benefit from possessing “soft” competences is e.g. the ability to easily motivate oneself to coherent action, resistance to stress, assertiveness, ability to build authority and favorable personal image, ability to strongly affect thoughts, decisions and behavior of others, ability to inspire others to the activity compliant with one’s own vision and efficient team management. Possessing high “soft” skills is necessary for every person whose job is related to the contact with other people (e.g. managers), towards whom there has been applied the team form of work organization (e.g. a team of programmers, IT specialists or engineers). The most prestigious posts are connected with a great deal of independence and responsibility. Without correspondingly high abilities to manage themselves, employees have no opportunities to develop the path of their professional career, in spite of having formal qualifications. Therefore, the role of the university is not only specialized preparation of graduates but also equipping them with knowledge of all competences and indicating the way through which these competences can be developed. It will be much easier for the graduate to move in the international labor market (emigration of professionals) and, in the end, to be an efficient and creative organization member – a professionally competent graduate of a university. Employers are competing in regard to more and more creative ideas, which are to show them in the proper light, generate confidence among potential employees as for an attractive workplace. The development of information society and knowledge-based economy implies the necessity of expanding and updating the acquired knowledge and skills permanently. Even in the framework of one profession or position, the nature and scope of work and professional activities rapidly change. Not only meeting the demands of the modern labor market but also functioning in the society and adapting to changes is associated with possessing increasingly different skills and competences. For these reasons, in human capital analyzes, less and less attention is drawn to formal education and more and more attention – to actual competences of the population, including the level of knowledge and skills, fields of education and practical (professional) skills. In the framework of the activities for the benefit of increasing the level of competences and qualifications of citizens, there is planned a range of activities aimed at: improvement in accessibility and quality of education, development of creativity and innovativeness of learners, directing education and training towards the achievement of core competences. The majority of students of technical universities wish to obtain thorough and flexible preparation for further personal and professional career, also in the international labor market, which amounts to the need for the change in the approach of higher education to the achieved educational outcomes, taking into account more significantly the skills and competences necessary for professional career and personal life. In the last decades, there have been a number of important changes affecting the development of competences of university graduates. They mostly
refer to the changes taking place in the systems of higher education. The number of people using information and communication technologies and the share of working people pursuing occupations requiring the possession of higher level of competences is growing. The requirements concerning competences set by employers are also increasing. Consequently, the level of Polish human capital is rising, too, which is confirmed by the demand for Polish specialists in the international labor market. Summing up, universities should provide the conditions favorable for high quality of education and respond to the demand of the international labor market. International experiences confirm that there is a great demand for Polish engineers, particularly from the IT sector.

In the paper, all the objectives assumed in the introduction have not been answered. Therefore, this will be undoubtedly the subject of another paper.

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The Contribution of Circular Migration to Economic Growth in Developing Countries

Radu Trifan
West University of Timisoara, Romania
radutrifan@gmail.com

Abstract: In this paper I am especially interested in exploring the impact of circular migration on the developing countries, the benefits and the vulnerabilities brought about by migration in its circular form and the effects it has on the economic growth of the sending countries. The objective of this paper is to explore the underpinnings of circular migration and contribute to a better understanding of the phenomenon as a form of evolved temporary migration. I show both the positive and negative influence of circular migration in the developing economies and I emphasise how new forms of circular migration arise when the proper conditions are met.

Keywords: migration theory, circular migration, economic growth, developing economy

1 Introduction

The theory of circular migration that I seek to elaborate here is focused on the emergence of new types of circular migration as a result of labour market interactions between receiving and sending countries. By exploring the new paradigms of migration we find useful connections in the creation of better migration policies. My analysis complements the existent literature on migration economics and in particular the impact of circular migration on the less developed countries.

2 Theoretical aspects of circular migration

Circular migration is not a new phenomenon. In the 20th century, as more economies from Asia or Africa started developing, circular migration was the

1 According to the International Organization for Migration, circular migration is a „fluid movement of people between areas, usually for the purpose of employment.”
dominant form of international migration, while in the case of Europe and its southern, developing neighbours, of the Mediterranean area, circular migration has only in the past decades become familiar (Fargues, 2008).

But economic shocks, the power of labour unions, political motivations and a general protective stance in the face of rising living standards have come together with more restrictive immigration policies in the Western countries. Circularity almost disappeared from the public discourse, giving way to a bipolar view of either temporary (regulated) or definitive migration.

Only in the past decade, circular migration has been emerging as a self-standing concept. It draws from the lesson of the old paradigm of temporary migration to become a more fluid concept, based on freedom of international movement and better integration of national economies, in an ever increasing globalised world.

A distinction between circular migration and temporary migration needs to be made, although the two have seldom been used as interchangeable terms. While temporary migration can be a one-time action, circular migration involves more than one step, it is a movement of going back-and-forth between two or more countries and is more linked with freedom of movement and free access to labour markets.

One definition of circular migration is that of “repeated migration experiences involving more than one migration and return” (Wickramasekara, 2011). Another one shows that circular migration is an age-old pattern of mobility, whether rural-urban or cross-border and has been called repeat, rotating, multiple, seasonal, cyclical, shuttling or circuit-based modes of migration (Vertovec, 2007, p.5).

Instead, temporary migration has been used in the past to describe carefully-planned state migration schemes, like the bracero programme2 started in the 1940’s in the US or the guestworkers scheme in 1970’s Europe3. From a historical perspective, these are now viewed as a form of circular migration (Zimmerman, 2013).

More so, what was believed to be permanent migration, turned out to be much more flexible. In the case of Germany, it was found that more than 60% of migrants from the guest workers countries are in fact repeat migrants. The explanation, as simple as it is, was not seen as such: Having established a base in Germany, they are prone to migrate back and forth (Constant, 2013).

The circularity and frequency of migration are heavily dependent on the incentives to return and the degree of freedom of movement. The more reasons a migrant has

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2 The Bracero program (1942 through 1964) was an agreement between the United States and Mexico that permitted Mexican citizens to take temporary agricultural work in the U.S.

3 The German Gastarbeiterprogramm was the most significant of the european immigration schemes, allowing the country to cope with the severe labour shortage following World War II.
to return to its home country, the stronger the arguments and the less obstacles, the more likely he or she will return.

The main point is that while circular migration is clearly a form of temporary migration, it is at the same time a more comprehensive and complex concept and therefore migration literature is bound to make a clearer distinction between circular migration as a term that may include types of temporary migration.

2.1 Development and circular migration

In times of ever increasing globalization, labour markets are stretched outside the national confines. Migrants no longer decide to migrate permanently to one place but instead decide to keep all their options available. This means they are ready to move to other countries if economic conditions deteriorate or to return to their home country if conditions there improve in order to allow them to better express their economic potential (Constant, 2013).

Circular migration is also becoming more and more important because of the perceived benefits to all parties involved in migration: sending and receiving countries, third countries and immigrants themselves (Zimmerman, 2013). It is now usual to find in policy documents such characterisations as “triple win”; because of its perceived benefits to all parties involved.

If in the early days researchers of international migration tended to focus on remittances, today most research stresses the importance of global migration flows in the globalised world and the complex links between migration and development (Clemens, 2014).

2.2 Types of circular migration

Circular migration is far from being homogenous in its manifestations. There is one underlying particularity – the movement of back and forth between the origin and receiving country - but the types and shapes it takes are quite various.

From an economic point of view, labour markets in many countries are no longer completely national, because they transformed to a greater or lesser degree into international ones, under the continuous pressures from the globalising forces. In fact, segmentation on such markets produced situations where native workers totally avoid some types of jobs that instead are filled by immigrants (many of them circular) (Hugo, 2003).

In a study of circular migration in the Mediterranean (between Morocco and Italy, Morocco and Spain, Albania and Greece, Albania and Italy) and in Eastern Europe (Ukraine and Poland, Ukraine and Hungary), Triandafyllidou et al. (2013) identify three main types of legal circular migration: seasonal labour migration,
programmed and spontaneous, long-term migrants who start circulate because of unemployment or underemployment, and two semi-legal types: informal workers and informal return of long-term migrants.

Their conclusion is that circular migration is quite different from what is described in official policies and initiatives, mainly for the worst. We can add that categorization of circular migrants could be misleading because the process appears to be much more fluid than expected.

However, it should be pointed out that many other forms of circular migration arise, and they are based on more loose criteria. The purpose of such classification is to show how old barriers are being broken and how emigration patterns from developing countries start to show new characteristics or begin to imitate those who define developed countries.

2.3 Different types of circular migration

2.3.1 “Winter-jobs” for farmers

Ever since Romania joined the European Union, many farmers in the western part of the country have become involved in some type of seasonal migration. After finishing harvesting and selling their crops, in autumn, they take the path to Austria or Germany to fill the so-called “winter jobs”, i.e. to work in factories, shops or less-seasonal agribusinesses, only to come back the next spring, when they start working to prepare their fields.

Farmers supplement their revenue by filling “winter jobs”, which in turn help them increase their living standard but in some cases it might help them build capital to be invested in their farms, therefore having the power to unleash more potential growth than other types of migration revenues. This trend in seasonal migration inside the borders of the EU is worth studying more.

2.3.2 Circular migration of elites

Elites in developing countries, no matter their age and background, also have tendencies to migrate, but only for limited periods of time, and only in certain conditions. In this context, we especially use the term of "elites" to define all those who enjoy a high social status in developing countries and therefore have little or no incentive for permanent migration. They can be professors, entrepreneurs, people of fine-arts, politicians, employees of the public administration etc.

Much different from the large migration forces, they are immigration temporarily with the clear goal to fulfil a certain task, acquire more knowledge and experience, upgrade their skills etc. Their movement is driven by other forces than those pulling and pushing classical economic immigrants.
An explanation can come from the fact that for the elites in developing countries, the cost of losing social status can be higher than the expected monetary gains obtained by working in developed countries. Elites have more incentives to return to their home country and less incentives to stay abroad. Their economic position at home is generally above the average and have greater social status. Often, they go abroad not to directly improve their economic condition but in order to maintain or increase their social status at home.

2.3.3 Circular migration of expats

Expats are most often viewed as high-skilled people from developed countries sent abroad by their corporate employers, working in countries all across the world, bound to return to their home countries sooner rather than later. But as companies go ever more global, outsourcing almost all the production chain, right up to R&D, more and more local high-skilled corporate workers emerge in developing countries too.

Such corporate workers can be assigned tasks all over the globe, in both developed and developing countries. They become “expats” just like their counterparts in the developed countries, moving all across the board, in the grand-scheme of corporate global operations.

2.3.4 Circular migration of pensioners

It may seem odd in view of the classical economic migration theory, but old people can migrate too, for different reasons. Pensioners could also migrate for economic purposes, when there is enough freedom of movement and less strict labour markets.

Pensioners in developing countries are pulled back into the labour market when they have the opportunity to go back and forth into a developed country. Many of them are still able to work and have very low pensions, like those in the Eastern European countries. Because of their low standards of life, they are more likely to be forced to extend their working life and can potentially migrate to supplement their revenue. They have much less desire to stay for extended periods of time and are prone to return to their homes after short periods of time. Such examples are grandparents brought about by the Diasporas in order to look after the children, or to babysit for the children of locals. They can sometime work as companions, cooks, house-cleaners etc. for people in rich countries.

Although their numbers are not substantial, pensioners as migrants can have the potential to fill some low-skilled, less-attractive jobs, that don’t involve physical hardship. However, some social benefits come from their interaction with Diasporas, so their impact shouldn’t be underestimated and is worth being researched.
3 The economic impact of circular migration on developing countries

All forms of international migration have a certain impact on the origin countries, especially when these are developing ones. Migration in general has been found to hold both positive and negative macroeconomic effects for the country of origin.

When workforce leaves the country, disequilibrium and dysfunctions on the labour market are likely to arise, such as: loss of high qualified labour (brain drain\(^4\)), shortage of workers, wage distortion, more informal economy etc. On the other side, migration greatly decreases unemployment, eases public spending efforts and lessens social tensions. (Roman, 2010)

Circular migration does have a few particular traits that I intend to explore here. If we take on the neoclassical theory, migrants are considered more of financial assets rather than social beings (Castles, 2014, p.28). This has a great implications in the political efforts to manage circular migration according to economic and financial needs.

Conventional economics say that when faced with chronically lack of workforce, enterprises in developed countries stop creating new, low-skilled jobs and find ways to improve their competitiveness either by relocating their productive facilities, by turning to technological improvements or straight forwardly abandoning potential business that is labour-intensive.

More so, certain sectors of economy, like agribusiness or health-services are less flexible and require human workforce in order to flourish. When businesses lack enough of the work-input, go into a state of chronic underperformance and the solution can be attracting international workforce for limited periods of time.

It is only when political consensus is built in receiving countries that we see the emergence of state-sponsored schemes of circular migration. That is to say, when unionised workers agree that some jobs are not going to be filled anytime soon, then governments are free to take action without the risk of political fallout. The recent opening of EU labour market to the Eastern European countries, despite its many problems, is a good example of how supply and demand meet in the modern international labour market.

As to the impact of circular migration, studies show both positive and negative impacts of the sending countries.

For example, a study of circular migration schemes between Canada and Mexico show that migrants invest their earnings in land, business, children’s education,

\(^4\) Brain drain is the departure of educated or professional people from one country, economic sector, or field for another usually for better pay or living conditions (Merriam-Webster)
housing and medical treatment. Their remittances stimulate local economic growth around the villages and towns in Mexico (Vertovec, 2007, p.6).

Another study of Albanian circular migration, characterised by a relative good education standards, concluded that there is a positive impact on aggregate demand via remittances and repatriated savings. But it also found that there is no significant transfer of skills and technology, except for the case when migrants settle back and start up their own businesses (Vadean, 2009).

Other approaches are more critical and show how precarious circular migration can be: “Circular migration involves moderate economic gains for the circular migrant and her/his family. It is mainly a means of survival—a dynamic response aimed at surviving, and improving their living conditions and the future of their children to the extent possible” (Triandafyllidou, 2013)

There are also other risks for the migrants: becoming dependant on a certain relation with employers, being trapped in a closed labour market created by policy regulations or the lack of social integration with its derived problems.

As to the skills they acquire, it is easy to overestimate the impact, to see it as a net positive transfer of knowledge to sending countries, when in fact such skills have a limited impact on the country of origin since the number of circular migrants involved in planned temporary schemes is rather small (European Migration Network, 2011).

4 Managing circular migration

Circular migration is not a managed process, it is in fact “unregulated”, created by the migrants themselves. The very idea of managing this process will turn it into a temporary, regulated, program of migration. However, some concessions need to be made in order to accept that some forms of regulatory actions do exist and are taken by states and institutions with the official goal of improving the conditions of circular migration.

If receiving countries develop policies to facilitate the interaction between migrant workers and their home country, then they have a greater chance of making such migrants circular rather than permanent (Hugo, 2003). To increase skills and opportunity development at home, temporary migration schemes should encourage Diasporas to strengthen the links with their country of origin (European Migration Network, 2011).

At one end there is no circular movement, at other end we see emerging a sort of “shuttle migration” made possible by the free movement across the border, such in the case of the European Union.
On the other side, simply imposing tight restrictive policy measures on labour mobility can have unintended consequences and appear to be counter-productive. Such measures can trigger an increase in family reunification, as in the case of Germany in the 1970’s, or more illegal migration, as in the case of U.S. (Constant, 2013).

According to the European Commission, circular migration is a form of migration that is managed in such a way to allow some degree of legal mobility back and forth between countries. In other words, we have a mix between freedom of movement and state planning, embodied by the “mobility partnerships” of the EU. Eight such Mobility Partnerships have been signed so far: Moldova (2008), Cape Verde (2008), Georgia (2009), Armenia (2011), Azerbaijan (2011), Morocco (2013), Tunisia (2014) and Jordan (2014).

Finally, it is worth noted that in the Agenda 2030 for Sustainable Development, signatory countries recognize “the positive contribution of migrants for inclusive growth and sustainable development”. They show that “international migration is a multi-dimensional reality of major relevance for the development of countries of origin, transit and destination, which requires coherent and comprehensive responses” and “underline the right of migrants to return to their country of citizenship”. Moreover, countries pledge to take action to “facilitate orderly, safe, regular and responsible migration and mobility of people, including through the implementation of planned and well-managed migration policies” and to “reduce to less than 3 per cent the transaction costs of migrant remittances and eliminate remittance corridors with costs higher than 5 per cent” (United Nations, 2015).

5 Conclusions

With the fall of nationalism and the rise of globalisation, borders are no longer impenetrable walls between populations, but conventions ready to be negotiated one way or another. The consequences are dramatic both in the width and the depth of the migration phenomenon.

Because international migration involves such large populations from almost any country of the world, researchers have tried to find patterns that would explain the underlying drive and pull factors. Circular migration is one such pattern and in the last decades it emerged as one of the most relevant because of its size and perceived consequences. But its complexity and fluidity make it hard to classify.

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5 A remittance corridor is the path connecting a specific pair of countries or a specific pair of cities between which international remittances flow (IMF)
At an individual level, in each decision to migrate lies the seed of return. When favourable conditions arise, the migrant finds his way back home, either for a short time, for a longer period or definitively. Circular movements become the norm in the presence of security and freedom of movement. Spontaneous effects appear in line with the theory of optimum allocation of resources.

At a macroeconomic level, circular migration has both positive and negative impacts on all players. We focused on the impact on the developing countries but we showed that, with time, as conditions change, the scope and objectives also change therefore new forms of migration start to arise.

On the international scene, State actors spend ever increasing energy into finding ways to regulate migration. But such regulation is often badly focused and instead of providing the perceived benefits, it becomes a source of poverty, inequality and exploitation. State interventions are more successful when they aim to break the barriers standing in the way between the migrant and its home country.

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The Role of the Internet in The Innovation of SMEs: Opportunity and Threat

Alexandra Vécsey

Óbuda University, Keleti Faculty of Business and Management, Budapest, Hungary
alexandra.vecsey@kgk.uni-obuda.hu

Abstract: Hungarian small and medium-sized enterprises’ ability to innovate is considered a weak point in the index of competitiveness, and its strengthening is a strategic goal of the country. Several related questions arise: is the SME sector able to adjust to the quickly changing, developing market with continuous innovation? Is it able and willing to change itself and its ways in order to increase its efficiency? Does it have the tools and sources of information for this? The boom of the Internet has changed the main channels and pace of the flow of information. Will domestic SMEs follow this pace? The article introduces the main features and tools of the Internet use of Hungarian SMEs, and mentions the related threats as well as opportunities to decrease the risks.

Keywords: small and medium-sized enterprise, Hungary, Internet use, online marketing, IT safety, innovation, competitiveness

1 Introduction

The economic importance of small and medium-sized enterprises (SMEs) in Hungary is inevitable. [13] [14] According to the data of the European Commission published in 2014 the proportion of the SME sector is 99.8%, within which 94.5%

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Small and medium-sized enterprise: According to paragraph 3. § (1) of law XXXIV., 2004. an enterprise may be qualified as an SME if:

a) the total number of its employees is less than 250 people and
b) its annual revenue is maximum 50 million Euros or its equivalent in HUF, or its bottom line maximum 43 million Euros or its HUF equivalent.

(2) Within the SME category an enterprise may be qualified as a small enterprise if
a) the total number of its employees is less than 50 people and
b) its annual revenue or its bottom line is maximum 10 million Euros or its equivalent in HUF.

(3) Within the SME category an enterprise may be qualified as a micro enterprise if
a) the total number of its employees is less than 10 people and
b) its annual revenue or bottom line is maximum 2 million Euros or its equivalent in HUF.
of all the enterprises are micro enterprises. 70.8% of the labour force are employed by the SME sector. [10]. The ecologically efficient development of smaller enterprises is important [11]. The competitiveness of SMEs has an impact on the whole of the country [25], the most important pillar of which is innovation² [26]: is the SME sector able to adjust to the quickly changing, developing market with continuous innovation? Is it able and willing to change itself and its ways in order to increase its efficiency? Does it have the tools and sources of information for this? The boom of the Internet has changed the main channels and pace of the flow of information. Nowadays information is considered as a factor of production as labour force or capital assets, which might help to improve the better assessment of sources of finance or making them tailor-made for the company [3]. Will the domestic SME sector follow the pace? The article introduces the main features and tools of the Internet use of Hungarian SMEs, and mentions the related threats as well as the opportunities to decrease the risks.

2 Internet Use in Hungary

According to the profile of the European Commission measuring the state of development of digital economy and society concerning the year 2014 Hungary can be classified as a country with low performance. Even if the Internet is used by numerous private individuals (75% of the age group between 16 and 74), their time is spent primarily reading the news and visiting social websites. The weakest points of the index can be experienced in the field of public service and the business integration of digital technologies. According to another survey published by the European Commission concerning the same period of time 38% of the respondents do not use the Internet, i.e. only 62% claimed that they use the worldwide web with a certain frequency. [9]

Besides the most developed area of Hungary, Budapest and its region only Balatonfüred, Szeged and Debrecen and their regions use the Internet similarly often. It can be well observed in Figures 1. and 2. that, concerning the development of the small regions of Hungary, parallel to their economic backwardness the possibilities of the virtual world are the most scarcely used in north-east Hungary and in the south of the region Dunántúl. It is interesting, however, that the frequency of Internet use in the more developed regions of the north of Dunántúl are not inevitably proportionate with their economic maturity.

Innovation: “Innovation is the application of new or significantly developed products (goods and services) or processes, new marketing methods or organisational solutions in business practice, at workplaces or external relations. We can speak about a new or developed product if it has appeared on the market, a new process, marketing method or organisational solution if it is applied in the operation of the company in effect. We consider innovative activities those scientific, technical, organisational, financial or commercial measures which lead to the innovations defined above, but are at least aimed at that.” [17]
3 Internet use of SMEs

In the information society of the 21st century knowledge is becoming the most dominant of all productive features, the significance of employees working with expertise and information is gaining weight. Market transactions are carried out in increasing proportions on the Internet, the usual system of organisation of companies is changing due to outsourcing and teleworking. Real time business
processes are becoming virtual while geographical position is considered less important. [7]

According to the results published in 2014 by the Institute for Economic Studies (GKI) a significant majority of companies using the internet use cable connection, sometimes mobile internet and landline connection as well. According to the analysis of the data of different sectors it can be seen that the sector of public service uses the Internet the least. While in other sectors the proportion of those who do not use the Internet is insignificant, in the public service sector this is nearly 5%. [1]

Figure 3
The proportion of Internet use according to sector (%) [1]

“The introduction of digital technologies is an important incentive of the increase of work efficiency, therefore it needs to be initiated. In Hungary, proportionally very few companies use such technologies.” [8] The threats which are followed by the growth of Internet use, personal and corporate dependency on the internet cannot be neglected, more and more use the Internet with less and less technical knowledge, therefore, there are more opportunities for data hackers and spies. The SME sector is especially exposed to these attacks. [4]

A significant majority of information can be accessed on the Internet, and mainly in English. The knowledge of the English language is a basic skill in most countries. [21]. Those who are able to communicate in English and are able and willing to use
the Internet to improve their companies can purchase their raw materials and can order their tools and equipment at lower prices. Those who speak English can compare their products, pool for ideas, collect information about prices, make contacts easier, are able to negotiate, sell, and enter foreign markets. Besides, the Internet is the place that provides further education, as international novelties are not necessarily translated into Hungarian, and a part of specialist books and technical descriptions is only published in English.

The lack of language knowledge can be considered as an obstacle of Internet use and competitiveness. According to the report of the European Commission published in 2012 13% of Hungarians speak at least one foreign language apart from their mother tongue, occupying the last position together with Portugal [22]. According to the recommendations of the business forum set up by the European Commission as an immediate result of the lack of language knowledge and intercultural competence a significant proportion of the SME sector loses business opportunities. Language knowledge is not only necessary for sales and marketing activities but also, as a consequence of globalisation, supply chains, just like international services and export activities, reach beyond borders, and so does the globalised labour market [21]

4 Internet presence in the SME sector

The field of application of the Internet is continually growing, and with it broaden the opportunities of small and medium-sized enterprises. While the SME sector could earlier only consider low-budget, considerably low efficiency offline advertisements, the online world offers several methods nowadays, which can also be considered cheap, but much more efficient for the expert eye to popularise products and services. Earlier, information was only accessible from the office, however, with mobile internet and services based on clouds the area for movement has considerably and literally increased. Threats have also increased together with the new online tools, which fact needs more attention in order to protect sensitive business data.

4.1 Online marketing activity and other applications

An enterprise might explore the benefits given by the Internet in several ways, apart from collecting the before mentioned professional, market information and selecting the appropriate channels of distribution for purchase, in order to increase its business efficiency, the various tools of online marketing may be used [18]:

- online presence (website), a way to publish easily accessible information about the company and its products or services,
− electronic commerce, with which complete orders can be carried out through the web shop,
− providing online services (e.g. bank transfer),
− easily found by those who are interested in its products or services,
− company presence on community websites,
− Business blogs or other publications strengthening its professional credibility.

Apart from the above the Internet supports the interior business functions of the company, external and internal communication and remote or mobile work (e.g. through email or solutions based on clouds). It can be stated that the Internet is becoming as important for society and economy as electricity.

Hungary, compared to the average of the EU, shows rather weak results in the business application of digital technologies. “Without digitalisation enterprises will not achieve such a degree of efficiency and productivity with which they could set foot on the global digital market.” [8] It is a remarkable fact that only 61.4% of Hungarian enterprises possess their own website. [12]. It can be stated that nearly half of small and medium-sized enterprises do not take the opportunity of an interface where it is easier to search, orientate and gather information.

„Few SMEs sell online (9.8%). Those who do practice it primarily outside the EU (only 3.9% in the EU) with an insignificant turnover (6.9%).” [8] All things considered, the turnover of Hungarian electronic trade increased by 26% in 2014 compared to the previous year, exceeding European trends. In the GDP of all of Europe the share of e-commerce doubled within 5 years, and according to experts, it will double again within another 5 years [20]. While they used to try to sell mass products with one-sided, message-oriented communication, nowadays they provide various products in small quantities for consumers of smaller numbers, who live in diasporas but can be accessed through the Internet. The benefits of e-commerce lay in better access, measurability and cost efficiency [18]

A survey carried out in the circle of small and medium-sized enterprises, published in 2011, revealed that 71% of the interviewed enterprises had not done any activity of advertising at all. The author draws attention to the fact that the world of the Internet is rapidly developing, opportunities are unmined, therefore all of those who wish to improve and apply their knowledge will gain competitive advantage compared to the majority of enterprises [6]. Studying the secret of successful enterprises the Institute of Economic Research (GKI) arrived at the conclusion, proven by statistical data and figures, that enterprises can be successful, i.e. can achieve lasting results and make their company sustainable, their products and technologies able to improve “if they form a harmonic relationship with their operational and business environment, if they set their goals appropriately and choose a suitable strategy, which cannot exist in the long term without the learning
ability of the company”. [27] For this, they need the ability to implement the innovations and cooperativeness. [15]

Controlling or carrying out marketing activities belong significantly (82.5%) to the responsibilities of the manager of the company. According to an expert taking part in the survey Gábor Wolf, this can be assessed positively as the decisions concerning marketing have to be taken by the leader of a small enterprise. If the leader of the company possesses the knowhow of gaining costumers he will not expose his company to the threat that his employee responsible for marketing leaves the company together with the knowhow of gaining costumers, which might be dangerous for a small company [19]. Real, practice-oriented and useful marketing knowhow, as knowledge is at least such a basic skill of a company as technology. If the employee responsible for acquiring costumers leaves the SME will be in a rather difficult situation, therefore enterprise knowledge management processes as, for instance, socialisation have been gaining a more emphatic role [16].

4.2 Internet and security

In 2014, 34% of the internet attacks were directed against small and medium-sized enterprises employing less than 250 people, which is not much less than the proportion of companies employing over 2500 people, which were the most exposed to attacks. It can be seen that small size and relative anonymity do not mean protection. [4]

![Distribution of Spear-Phishing Attacks by Organization Size](image)

Figure 4
The proportion of enterprises exposed to attacks of data fishing according to categories of size [4]

The attacks apply mainly to engineers producing products and sales workers, that is, the basic skills of the enterprise. Meanwhile it is the SME sector which is the least concerned with cyber-attacks, therefore, without the appropriate security
measures and infrastructure, they become easy prey for hackers. [2] Certain hackers, avoiding the security system of the target company attack the related supply chain, whose members are the small and medium-sized enterprises possessing weaker security. [4]

Threats to information security have several forms, on one hand, failures occurring from the nature of storing data, without external penetration, as a result of which all data might disappear from our equipment (computer, mobile phone, other). On the other hand, our equipment might be exposed to attacks of a personal motivation, i.e. definitely against our person, a colleague or the company, either for a general purpose, i.e. malicious applications applied against the hardware (as a skipping board for the illegal activity or e.g. by spam) [5]

The majority of attacks uses human naivety, credulity, therefore the activity of the so-called ‘social engineering’ through which victims are deprived of data with the help of false appearance or false personalities in emails, is gaining weight. [5]

Hackers may also gain information from the data stored in search engines, what is more, the Internet service provider and the content provider also keep track of our activities. In the course of downloading the applications of mobile phones we give access to several of our data voluntarily. All kinds of data acquired these ways might provide a basis to act malevolently against the target person. [2]

The fragility of mobile equipment has to be highlighted, as this showed 58% increase within a year, due not only to the fact that mobile phones might be stolen together with the personal data in them but also due to the increased number of dangerous programmes. [2] The waste of human work, IT and other resources touches an increasingly sensitive ground nowadays.

Péter Bányaśz, in his article published in the journal ‘Military Science’ (Hadtudomány) puts proposals in order to reduce the threats [28]

- appropriate physical protection for IT equipment at work and home,
- the increase of sensitivity of employees for security of data and information,
- the knowledge of the risks arising from the use of social media,

3 András Keszthelyi lists the conditions of the normal use of information systems that he defines as basic conditions as follows [29]: readiness to provide service or availability for authorized users; integrity (lack of vulnerability, authenticity, confidentiality depending on classification); credibility; operative ability of the whole information system.

**Based on above, information security can be defined as it exists if the protection of the information system is closed, complete, continual and proportionate to risk. Closed: considers every important threat. Complete: Includes every element of the system. Continuous: uninterrupted against the changing circumstances in time. Proportionate to risk: the product of the value of the likely damage and the probability of the damage cannot exceed a set previously. This threshold value is the result of a business decision. Achieving and sustaining such information security is possible with the appropriate use of physical, regulational and algorithmic protection.”[29]
– mapping one’s own vulnerability (in case of both physical and human risks),
– the increase of security investments,
– limiting the access to data,
– segmentation of the network.”

5 Conclusion

Internet is a means which is efficient for both well-meaning and malevolent users. As a result of the information revolution and information boom gaining space, it is unavoidable as the offline world is too narrow for the 21st century man. Information and knowledge are basic conditions for innovation and therefore, competitiveness. The appropriate reaction to the positive and negative challenges of the Internet and information society is if companies do not lock themselves away from opportunities but learn to use them as fast and efficiently as possible before they would finally lose the race.

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Political Risk and National Debt Markets in Advanced Economies

Grzegorz Waszkiewicz, PhD
Military University of Technology, Poland, Warsaw
ecogreg@onet.pl

Abstract: The importance of the sovereign bonds within the investment alternatives all over the world, encourages to broaden examination of political instability in context of debt markets. Problem of political risk is mainly scrutinized with reference to developing and emerging economies on microeconomic level, however, it is worth separating that issue from political threat for debt markets. Moreover academics face problem with finding universal indicant to measure political factors responsible for national solvency on debt markets. Considerations were based on literature’s review, results of empirical studies as well as accessible statistical data. In effect, political risk as a potential hazard for debt markets in advanced economies was underlined. There was also suggested that persistent, adverse tendencies in political risk may negatively influence country’s solvency on debt markets.

Key words: political risk, debt market, instability, index, threat

Introduction

The matter of political risk was originated in economic science in 1960s as an effect of raising financial flows from the USA to Europe and creating Eurodollars markets. At the beginning concerns for capacity to settle the debts were growing and political risk was linked only to transforming and developing countries [Green 1974]. In the late 1980s the notion about limiting financial flows among countries was deliberately consolidated against unfinished public debt’s problems and high political risk in many national economies [Lucas, 1990]. Since then, uncertainty of political conditions was considered only towards developing countries and it was mainly discounted concerning companies which invested in unpredictable regions of the world. Then appeared a flowering of studies presenting the correlation between political unsteadiness and foreign direct investments [Sigh, 1995] and the impact of political risk on capital markets’ volatility, especially in developing economies. Such a state of studies was held for over two decades in turn with omnipresent belief that political instability had been indispensably replaced with economic risk. Nevertheless, the appearance of
new threats in XXI century compel to ponder over the nature of political risk, not only in context of developing and low-income, but also in regard to advanced economies. The recent study of IMF [2014] projected that geopolitical risk correlated with Ukraine’s situation may cause the threat for global financial stability through surge of risk aversion and its spills over, what disrupts the trade and finance in the region. Not only does that region, but also advanced European economies may be endangered by that threat1. On the other hand, despite mounting uncertainty of political environment, financial markets are careless with geopolitical risk [Khan, 2014].

1 Political risk – general characteristic

Political risk is broadly defined as a political decisions’ influence on economy, which can be stabilizing or destabilizing free market [Titman et al., 2011]. It is peril less amenable economic analysis than economic or financial risk because its interpretation covers wide range of poorly measurable variables [Pilbeam, 2006], which can be searched on three planes: microeconomic (firm – specific), macroeconomic (country – specific) and global –Table1.

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### Table 1
Political risk – grounds and sources

<table>
<thead>
<tr>
<th>SOURCES OF RISK ON EACH GROUND</th>
<th>Microeconomic</th>
<th>Macroeconomic</th>
<th>Global</th>
</tr>
</thead>
<tbody>
<tr>
<td>Firm</td>
<td>Economical</td>
<td>Terrorism and war</td>
<td></td>
</tr>
<tr>
<td>Project</td>
<td>Social</td>
<td>Poverty</td>
<td></td>
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<tr>
<td>Industry</td>
<td>Government action</td>
<td>International crisis</td>
<td></td>
</tr>
<tr>
<td>Host country</td>
<td>Environmental concerns</td>
<td>Cyberattack</td>
<td></td>
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<tr>
<td></td>
<td>Anti globalization</td>
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</table>

Source: Own elaboration on the basis of: Eiteman et al., [2010] and Alon, Herbert [2009].

Political risk in microeconomic view refers to firms activity in selected trades in the overseas markets. Ch. Hill [2013] determines political risk as a possibility that political moves provoke drastic changes in economic surrounding and it negatively impacts returns or other goals of business activity. Political uncertainty in micro ground affects particular industries, firms, projects realization by overseas companies in the host economy (and domestic firms too). Nevertheless, micro political risk cannot be perceived strictly in context of host economy owning to firm nationality and its connections with country of origin. Accordingly, micro risk is not included in macro plane totally (Table 1) since micro uncertainty also refers to firms origin economy whereas macro is linked only to the host country.

Overseas companies are exposed to two kinds of dangers. Firstly risk of adverse exchange rate’s shifts if they use different currency in transactions outside and in home country, where its assets are valued. This sort of uncertainty pertains to governmental interfering with exchange rate relations between two currencies (i.e. purposely appreciation or depreciation of own currency). Secondly, governance risk springs from remote priorities of government and foreign company in following fields: harmful influence on host country’s development, threat of national sovereignty’s infringement, overseas domination in key industries, impact on country’s balance of payment, control over export market and excessive exploration of natural resources [Eitman et al., 2010]. To defense own interests host countries take actions which rise governance risk. That may be: expropriation of equipment, expropriation with minimal compensation that is below market value, blocked funds, non-convertibility foreign money into...
parent’s currency, substantial shifts in taxes, numerous controls in foreign firms and new requirement for overseas investors [Eitman et al., 2010]². In fact, foreign companies functioning in strategic businesses for host country e.g. natural resources, banking, finance and insurances are highly exposed to political instability.

Political risk in macroeconomic aspect accounts for aggregated country risk, next to financial and economic risk [Erb et al., 1996]. Instability in macro ground overlaps micro ground because they mostly share the same sources. First of all, governmental actions complicating firms’ existence in particular trade, hamper competitiveness (ownership structure, nepotism and corruption, protectionism, secure intellectual property), and can contribute to negative assessment of total country risk. Moreover, each country is prone to social anxiety, disorders and other disturbances which generally result from bad governance (high and prolonged inflation, raising debts, falling living standards of citizens). This can easily billow into demonstration, religious tensions and even violent conflicts. Subsequently, moves to appreciation of political instability. Therefore political risk is strictly connected with mixture of inner social and economic (financial) conditions.

Political instability in global ground gained momentum after 2000 with technology development and its application in financial market (cyberattack) as well as with progressive globalization and appearing of the new social movements focused on global an environmental problems. However, the basic sources of threats coming from global plane remains unchangeable - war and poverty (inequality) [Eitman et al., 2010]. Additionally, growing role of terrorism must be articulated because it posed highly unpredictable danger, especially in the aftermath of numerous terror attacks, since 2001.

To conclude, so far political risk was mainly considered towards developing countries on firm specific level, but present global situation encourages to take up that issue in regard to financial sector in rich countries where ties are stronger and risk can be transferred quickly and easily.

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² Commercial insurers consider following actions: confiscation, expropriation or assets nationalization, export/import embargoes or cancellation of export/import licenses, physical damage to assets from political violence, termination of or default on contracts, non-payment or moratorium due to exchange transfer and currency inconvertibility, non-delivery of goods, calling of on-demand bid or contract bonds and guarantees for political reasons, forced abandonment, non-payment by government owned entities of trade related debt to financial institutions. Source: www.aon.com (28.08.2015)
2 Political risk on sovereign debt markets

Aggregated risk on debt markets consists of some fundamental groups of risk such as: market risk (interest rate, currency, inflation), credit risk, liquidity risk and global aversion to risk. Nevertheless, changes in government policy as well as above presented unexpected politics-related actions can lead to uncertainty and instability of economic surroundings that bond investors experience even if they are outside because of cash flows from issuer to investors.

The political risk constitutes a small subgroup of uncertainty, rarely scrutinized because of limited number of quantitative data as well as of confidence that political instability was replaced with economic risk some decades ago. Nevertheless, macroeconomic factors inform only whether government will be capable of repaying the debts while political factors explain additionally government’s un/willingness to do it. [Easton, Gersovitz, 1981]. For these reason investors should take into consideration not only country’s ability, but also country’s willingness to service its debt. The core point of political risk analysis is to look for non-economical and non-financial determinants which could force debtor to turn away from settling his debts. By the way, the rising role played by these factors discourage investors from investing in politically unstable economy.

The state of national debt market may be assessed by seeing gross amount of public debt (short- and long-term, domestic or foreign) and by caparisoning to other countries the costs of issuing debt (credit rating, bonds yield, bond spread premium). According to that view, political risk can impact debt market bidirectionally.

Firstly, it weakens the national economy fundaments, through the quality of conducting fiscal policy (large expenses, prolonged budgetary deficit) which provokes increasing taxes, limiting incomes of individuals as well as future efforts to repay public debt – that course of action can simply leads to unpredictable social events.

Secondly, through financial channels where financial and individual investors as well as other institutions evaluate credibility of national debtors. The role of effective financial markets is to contain all feasible information into price of financial instruments. Therefore political risk is a result of perceiving the national economy by creditors and investors, for those global hazards are crucial factors, what was suggested early by D. Jodice [1985].

In case of poor remarks (from rating agency), government must offer higher yields and lower price of public bonds to meet investors’ requirements. That is why worsening the credit rating may complicate the access to external funding as an effect of rising costs – higher risk premium payed by public and private issuers [Cantor, Packer, 1996; Kaminsky, Schmuckler, 2002].
A huge threat to debt markets stems from the fact that growth of global instability, provoked by political actions, can be spilled over national borders through financial channels. However, the role of economy, where undesired act happens, in the region or in the world is crucial for the swift spreading risk over other countries. Besides, sudden negative political event can generate high political risk and it may have an impact on financial and economic components of aggregated country risk. This risk can be easily transferred (through banking system and other business and financial ties) to the next countries, where it might complicate political and economic situation.

On the whole, both investors and other market participants (e.g. rating agencies) should try to determine the future solvency (credibility) of selected national economy on the basis of all accessible data, not only from financial and economic spheres, but also from others, such as unexpected information and events from political area in order to contain them into price (yield) of debt instruments. Therefore new approach to analysis of national debtors’ solvency should fortify well-known economic and financial threats with political risk.

3 Measuring political risk

There is a great problem with measuring political risk and majority of researchers face that. Some of them strain to create own proxies, others try to abstract value of political risk from boarder indicators. The first approach is typical for G. Beraert et. al [2014], who proposed own indicant - political risk spread on the basis of bond spread. What is more, he even stated that, on average, one third of sovereign spreads reflects political risk. Whereas J. Duyvesteyn et. al [2015] presented second option and converted political risk rating from Political Risk Service (PRS) into risk points. Basing on PRS data and subjective analysis, he created the scale of that risk.

In fact, there are some international institutions, which offer own reliable data which presents the scale of political risk or allows to abstract political risk from others. The great example of data on that threat, especially for economic purposes, can be International Country Risk Guide from PRS. That indicator presents aggregated country risk and includes financial risk rating, economic risk rating and political risk rating at once. Political Risk Rating (PRR) constitutes weighted average of the risk rating of the following components: government stability, socioeconomic conditions, investment profile, internal conflict, external

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3 Economist Intelligence Unit, Heritage Foundation Index of Economic Freedom, Global Insight Business conditions and Risk Indicators.
conflict, corruption, military in politics, religious tensions, law and order, ethnic tensions, democratic accountability, and bureaucracy quality.

Data from PRS group was employed to identify the level of political risk in selected advanced economies in that paper. On the grounds of six different fields: voice and accountability; political stability and absence of violence; government effectiveness; regulatory quality; rule of law and control of corruption\(^4\), the aggregated final index (average of six fields) was constructed – PR\(_{\text{index}}\). What is interesting, PRS publishes own Global PRS Risk Index which also present the same direction of changes as proposed measure on the basis of PRS data, however PR\(_{\text{index}}\) may be more sensitive to shifts in macroeconomic and political background. For example, Greece in years 2011-2013 had still rank 68 (according to PRS Index\(^5\)), however the economic and political situation changed a lot.

The scale of political risk is inversely proportional to the proposed measure–Table2. In other words, political risk in 2002 was lower in France (0.772) than in Greece (0.713).

\(^4\) Each field is evaluated from 0 to 1. The highest value of indicant, the lower risk described to the economy (higher quality of institutions and governance). These scores are comparable over time and across countries since individual measures are based on similar methodologies.

\(^5\) https://www.prsgroup.com/category/risk-index (30.08.2015)
<table>
<thead>
<tr>
<th></th>
<th>Finland</th>
<th>France</th>
<th>Greece</th>
<th>Spain</th>
<th>Germany</th>
<th>Portugal</th>
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<tr>
<td>2002</td>
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<td>0,772</td>
<td>0,713</td>
<td>0,838</td>
<td>0,872</td>
<td>0,840</td>
<td>0,723</td>
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<td>2003</td>
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<td>0,712</td>
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<td>0,845</td>
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<td>2007</td>
<td>0,987</td>
<td>0,842</td>
<td>0,732</td>
<td>0,817</td>
<td>0,912</td>
<td>0,842</td>
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<td>0,837</td>
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<td>0,770</td>
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<td>0,758</td>
<td>0,678</td>
<td>0,730</td>
<td>0,868</td>
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<td>0,727</td>
<td>0,663</td>
<td>0,703</td>
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Table 2
Political risk prescribed selected countries [PRindex]; 2002-2013
Source: Own calculation on the basis of PRS data.

On the basis of Table 2, it can be also observed that the most politically secure country in 2013, among selected, was Finland, but the most unsecure was Greece, however there are also two economies from outside the Eurozone. In terms of PR stability, it can be stated that the greatest deviations of coefficient were noticed in Hungary (0,046) and Greece (0,032), while other economies feature rather low deviations, the lowest in Germany and Poland (0,016).

Financial markets employed rather economic and financial indicants to assess the instability before 2008, therefore debt markets of Eurozone’s members showed lower risk than it really was. Before the last crisis transpired, the euro area was a territory of high economic security and stability, that’s why member states received credit on easy terms because investors did not anticipate the adverse course of events (Table 3). There economic and financial risks were believed to be under control, but political risk was totally ignored.

On the grounds of Table 3 it can be noticed that some economies bear lower costs of debt service than PRindex suggested. For example countries such as Hungary or Poland payed more for their debts (Table 3) than Greece until even 2009, then Portugal up to 2010, though these countries were on the edge of bankruptcy.
That way of risk evaluation performed by international investors (Table 3) and institutions (Table 4) was especially interesting in case of Poland, where economy was robust, but country got capital more expensively than Italy and Spain up till 2012.

<table>
<thead>
<tr>
<th>Year</th>
<th>Finland</th>
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<th>Spain</th>
<th>Germany</th>
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<th>Poland</th>
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<td>3.91</td>
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<td>7.12</td>
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<td>4.50</td>
<td>4.31</td>
<td>4.22</td>
<td>4.42</td>
<td>4.49</td>
<td>6.74</td>
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<td>4.52</td>
<td>4.68</td>
<td>8.24</td>
<td>6.07</td>
</tr>
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<td>3.12</td>
<td>9.09</td>
<td>4.25</td>
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<td>5.40</td>
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<tr>
<td>2011</td>
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<td>5.42</td>
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<td>22.50</td>
<td>5.85</td>
<td>1.50</td>
<td>10.55</td>
<td>5.49</td>
<td>7.89</td>
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<td>2013</td>
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<td>2.20</td>
<td>10.05</td>
<td>4.56</td>
<td>1.57</td>
<td>6.29</td>
<td>4.32</td>
<td>5.92</td>
<td>4.03</td>
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</table>

Table 3
10 Y sovereign bond yields [%]; 2006-2013
Source: Eurostatdatabase.
### Table 4
Credit ratings for selected national debtors; 2006-2013


<table>
<thead>
<tr>
<th>Year</th>
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<td></td>
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<td></td>
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<td>Aaa</td>
<td>A2</td>
<td>Aa2</td>
<td>A1</td>
<td>Aa2</td>
</tr>
<tr>
<td>S&amp;P</td>
<td>A</td>
<td>AAA</td>
<td>BBB+</td>
<td>AA-</td>
<td>BBB+</td>
<td>AA-</td>
</tr>
<tr>
<td>Fitch</td>
<td>A</td>
<td>AAA</td>
<td>BBB+</td>
<td>AA</td>
<td>BBB+</td>
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<tr>
<td>2008</td>
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<tr>
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<td>Aa2</td>
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<tr>
<td>S&amp;P</td>
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<td>AAA</td>
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<tr>
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<td>2009</td>
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<td>AA+</td>
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<td>BBB</td>
<td>AA-</td>
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<td>2012</td>
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</tr>
<tr>
<td>Moody's</td>
<td>C</td>
<td>Baa3</td>
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<td>Ba3</td>
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</tr>
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<td>S&amp;P</td>
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<td>Moody's</td>
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<td>BB+</td>
<td>BB+</td>
<td>A-</td>
</tr>
</tbody>
</table>
Looking on the data in Table 4, it can be stated that until the last crisis, the credit ratings were stable. Only in case of Hungary (one institution) and Italy (two institutions) ratings were changed in 2008. The drastic shifts in assessment of public debtors started in 2009 because of worsening public financed stance as well as constructive criticism over rating agencies policy. Since then credit ratings were regularly downgraded for Greece, Spain and Portugal. These facts allow to suspect that credit ratings akin to bonds yields presented low sensitivity to macroeconomic situation of public borrowers, especially before 2009.

On the other hand, Poland set exception because within all analyzed years national credit rating was not downgraded, however, Poland, beside Hungary and Greece, used to pay the most for own debt service until 2010. It is worth noticing that, apart from rigidity of credit ratings and bonds yields up till 2009-2010 towards Greece, Portugal and Italy, the level of political risk (measured by PR\textsubscript{index}) informed about higher security (solvency) in Poland in comparison to mentioned economies since 2005 – Table 2.

Taking into consideration some countries without common currency (Hungary, Poland) and euro members (Greece, Portugal, Italy, Spain), it can easily draw conclusion that financial markets might have valued political risk with a higher care than economic and financial risk. Both credit agencies as well as international investors underestimated the threat of insolvency in some developed economies since coefficients from bond markets (bond yield, credit ratings) did not alert investors. Even though, the scale of political risk was assessed precisely (PR\textsubscript{index}), that kind of uncertainty played minor role in evaluation of future countries’ solvency.

4 Conclusion: Political risk—potential threat for debt markets

In XXI century, political risk may be viewed as potential threat for advanced economies because of military operations’ transfers from the vicinity of Europe (Near East) into its terrain (Ukraine, Turkey) and acts of terror in resilient economies (e.g. Great Britain, France). According to neoliberal thesis about the night watchmen, who provides citizens with the public order and national security in uncertain times, the role of governments’ activity may grow. Finally, the domination of political and institutional decisions over economic choice will provoke higher exposition to political risk.

For that reason evaluation of risk incorporated in sovereign bonds could be supplemented by political risk analysis since modern investors should take into consideration not only country’s ability, but also country’s willingness to service its debt. The example of advanced economies from European Union proves that
persistent and adverse tendencies in political risk may negatively influence country’s solvency in the future apart from economic and financial conditions.

References:


