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EDITOR SPEECH

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- Computer Science and Information Systems
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- Life Sciences and Technologies (Health and Food)

This conference is the major scientific event of the University for Business and Technology. It is organizing annually and always in cooperation with the partner universities from the region and Europe.
In this case as partner universities are: University of Vlora, University of Tirana – Faculty of Economics and University of Durres.

As professional partners in this conference are: Kosova Association for Control, Automation and Systems Engineering (KA – CASE), Kosova Association for Modeling and Simulation (KA – SIM), Quality Kosova, Kosova Association for Management. This conference is sponsored by EUROSIM - The European Association of Simulation.

We have to thank all Authors, partners, sponsors and also the conference organizing team making this event a real international scientific event.

This year we have more application and publication than last year. Congratulation!
Edmond Hajrizi, Chair

University for Business and Technology
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Tax Evasion as a Crime: A Survey of Perception in Kosovo

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Abstract. The goal of this paper is to explore the perception of Kosovo’s citizens of the severity of tax evasion relative to other crimes and abuses. Perception of tax evasion may somewhat clarify the degree of rebelliousness with the tax laws. Using data from a self-administered survey and a personnel structured interview, the results of mean and comparative analysis will be examined to show where the tax evasion is ranked in Kosovo in the list of fifty listed crimes. Studies, conducted about the perceptions of tax evasion as a crime, have suggested that the tax non-compliance environment has been created from the perception of the taxpayers towards tax evasion as a non-serious crime. Consequently, the degree of non-compliance with the tax laws could be explained somewhat by the perception towards the tax evasion. And, it is obvious that the public's perception of the severity of a crime has important implications for society. [1] However, those studies are inconclusive in explaining the variability of the perceptions towards tax evasion as a crime. Despite that fact that these researches conducted on this area in US, Australia, and Malaysia are a few, a study about the perception of tax evasion in Kosovo does not exist. Evidence on tax evasion perception found in the developing countries may not be generalized to the context of Kosovo because of the differences in the environmental factors such as economy, business, culture, and regulations. Consequently, differences in the environmental factors are expected to cause differences in the perception. The results of this study should be useful to business and government representatives in Kosovo and elsewhere in the Balkans or wider.

Keywords: tax evasion, tax ethics, crimes, Kosovo

1. Introduction

It is no doubt that, in every country tax evasion has weakened the government’s tax and lowered the ability of government to provide public goods. Additionally, the tax evasion also causes some other problems being adverse to the economic development. For example, the tax evasion distorts the tax system, increasing the deadweight loss. While increasing the government’s law enforcement costs, it also reduces the government tax revenue and the ability to repay. Therefore, to examine the perception of tax evasion as a crime is very important for us.

1.1. Literature Review

Although many studies regarding tax evasion have been made worldwide, there are just a few studies made of Kosovo as a case study. Abdixhiku, L., in his doctoral dissertation defines tax evasion as one of the major problems facing transition and developing economies. According to him, it imposes several economic costs: it slows down economic growth; it diverts resources to
unproductive activities; it provides an incentive for firms to remain small and invisible; and it generates inequity between the evaders and the honest taxpayers. The aim of his thesis has been to investigate the determinants of business tax evasion for transition economies. He has adapted the individual theory to the case of businesses; that is by assuming that the behavior of businesses is similar to the behavior of individuals, and that the determinants of business tax evasion may be similar, at least qualitatively, to the determinants of tax evasion by individuals or households. More specifically, beyond theoretical and empirical review of the tax evasion literature, this thesis provides three related empirical investigations: a panel investigation of tax evasion at the country level; a pooled-cross section investigation of firm-level behavior across the transition economies and a cross-section investigation of business tax evasion and tax morale in Kosovo. [2]

Tax compliance is mainly seen from a financial and economic point of view, rather than a psychological or philosophical point of view. One of the most important and rare documents regarding the ethics of tax evasion was a doctoral thesis written by Martin Crowe (1944). This thesis covered the moral point of view of paying taxes to the government. This paper is mostly focused on Crowe’s writing and on Robert McGee’s articles related to the perception of tax evasion as a crime, conducted in different countries. [3]

Tax evasion is inevitable. Only most fanciful thoughts can dream of a world whose citizens inspired by altruism, pride or even religious passion and beliefs are willing to fully comply without the need for institutional enforcement. [4]

2. Methodology and Results

2.1. Methodology

This research tries to investigate the level of seriousness of tax evasion compared to other offences. A comparison will be made among the rank of each crime and violation given by the respondents as a high or low rank crime or violation. Further, the tax evasion crime rank will be identified among the list of the offences to determine the level of the seriousness of this crime compared to other offences. The level of seriousness of tax evasion compared to other crimes and violation has been evidenced, previously, by a few studies. [1][5] The results indicated by those studies that there is a significant difference in the perceptions of tax evasion compared with violent crimes, drug related crimes and traffic offences. The results suggest that people do not perceive tax evasion to be as serious as violent crime and drug related crimes. Thus, the following hypothesis is developed to be tested by the current study:

H1: Tax evasion is perceived a less serious crime compared to other offences.

A sample of 365 individuals from Kosovo was selected for the current study to obtain data from using the disproportionate stratified random sampling. These individuals are the most suitable people to provide data about the dimensions of the study. Under simple random sampling, all elements in the population are considered and each element has an equal chance of being chosen as the subject. The sample subjects include individuals who are students, working for private and governmental sectors, businessmen, jobless and self-employed individuals. Two hundred sixty-nine (269) questionnaires were returned, which represent a 76.85% response rate. Forty percent of the sample was female and sixty percent male.

In this study, data are obtained from primary sources by conducting a survey. Using this method of data collection, individuals were asked to fill in the self administered questionnaire. This questionnaire is adopted and adapted from the previous studies conducted to measure the perceptions toward tax evasion as a crime by McGee, Robert. [3] A survey is chosen because it involves surveying people and recording their responses for analysis. The strength of the survey
as a primary data collecting approach is that it does not require a visual or other objective perception of the information sought. [6]

2.2. Results

The questionnaire is divided into two sections. The first section of the questionnaire is designed to obtain demographic characteristics of the respondents, and the second section measured opinions on 50 different offences. The respondents are asked to indicate their agreement on all items by indicating numbers from 1 to 100, representing the following levels:

- 1-20 Not Serious
- 21-40 Somewhat Serious
- 41-60 Serious
- 61-80 Very Serious
- 81-100 Extremely Serious.

As we already mentioned, the first part of the questionnaire is designed to obtain a demographic profile of the respondents. Questions asked in this part relate to age, gender, marital status, education, birthplace, and religion.

As shown in Table 1, the majority of the respondents (60%) were male, and 40% were female. The largest group (68%), in terms of age, was those aged between 18 and 29. Specifically, 17% were aged between 30 and 49, while 15% were aged above 50. In terms of marital status, the majority of the respondents (80%) were single, 19% was married, and 1% was either divorced or widowed. Regarding the level of education, the largest group (64%) was undergraduate student or a bachelor degree holder, 23% was a graduate student or graduated, and 13% have other kind of education. The majority of respondents (76%) were Muslim, 14% were Catholics, 4% were Orthodox and 6% have different beliefs. In terms of birthplace, 96% were born in Kosovo, and the rest somewhere else.
Table 1 Socio-demographic data of respondents

<table>
<thead>
<tr>
<th>Demographic Variables</th>
<th>Frequency (n=269)</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>162</td>
<td>60</td>
</tr>
<tr>
<td>Female</td>
<td>107</td>
<td>40</td>
</tr>
<tr>
<td><strong>Age (years)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-29</td>
<td>183</td>
<td>68</td>
</tr>
<tr>
<td>30-49</td>
<td>47</td>
<td>17</td>
</tr>
<tr>
<td>50 and above</td>
<td>39</td>
<td>15</td>
</tr>
<tr>
<td><strong>Marital Status</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>214</td>
<td>80</td>
</tr>
<tr>
<td>Married</td>
<td>52</td>
<td>19</td>
</tr>
<tr>
<td>Other</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td><strong>Education</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Undergraduate</td>
<td>162</td>
<td>64</td>
</tr>
<tr>
<td>Graduate</td>
<td>73</td>
<td>23</td>
</tr>
<tr>
<td>Other</td>
<td>34</td>
<td>13</td>
</tr>
<tr>
<td><strong>Major</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accounting</td>
<td>29</td>
<td>11</td>
</tr>
<tr>
<td>Business</td>
<td>131</td>
<td>48</td>
</tr>
<tr>
<td>Law</td>
<td>45</td>
<td>17</td>
</tr>
<tr>
<td>Other</td>
<td>64</td>
<td>24</td>
</tr>
<tr>
<td><strong>Born in</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kosovo</td>
<td>258</td>
<td>96</td>
</tr>
<tr>
<td>Elsewhere</td>
<td>11</td>
<td>4</td>
</tr>
<tr>
<td><strong>Religion</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Islam</td>
<td>204</td>
<td>76</td>
</tr>
<tr>
<td>Catholic</td>
<td>37</td>
<td>14</td>
</tr>
<tr>
<td>Orthodox</td>
<td>11</td>
<td>4</td>
</tr>
<tr>
<td>Agnostic/Atheist</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Other</td>
<td>16</td>
<td>6</td>
</tr>
</tbody>
</table>

The second section highlights perceived differences in perception of tax evasion offences compared to other offences. Table 2 highlights the Mean Scores and Rank of the 50 offences examined under this study.

As it is shown in Table 2 that the most five serious crimes are murdering someone, and drug trafficking/dealing. On the other side, the least serious offences are ranked as: Overstatement of tax deductions; Understatement of taxable income; Ticket scalping; Failing to report rental income; Cheating on your tax return. It is obvious that the three items related to tax evasion are ranked 46th, 49th and 50th offences.

Importantly, the results of the previous studies ranked the first five offences to be murder, rape and child molestation, drug trafficking and robbery with firearms and the least serious crimes as failure to submit a tax return, driving while using mobile phone, speeding, overstatement of tax deductions and understatement of taxable income. [5]
### Table 2: Perceptions towards Tax Evasion Compared to Other Offences

<table>
<thead>
<tr>
<th>Description of Offense</th>
<th>Mean</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Killing a nice person who has a family and who is a productive member of the community</td>
<td>99.21</td>
<td>1</td>
</tr>
<tr>
<td>Killing someone who asked you to kill them because they have a terminal disease and are in a lot of pain</td>
<td>98.76</td>
<td>2</td>
</tr>
<tr>
<td>Killing a politician</td>
<td>97.23</td>
<td>3</td>
</tr>
<tr>
<td>Killing a drug dealer</td>
<td>96.03</td>
<td>4</td>
</tr>
<tr>
<td>Taking hard drugs</td>
<td>94.02</td>
<td>5</td>
</tr>
<tr>
<td>Selling hard drugs</td>
<td>92.33</td>
<td>6</td>
</tr>
<tr>
<td>Rape</td>
<td>91.35</td>
<td>7</td>
</tr>
<tr>
<td>Soliciting a prostitute</td>
<td>87.45</td>
<td>8</td>
</tr>
<tr>
<td>Sexually harassing someone</td>
<td>85.64</td>
<td>9</td>
</tr>
<tr>
<td>Prostitution</td>
<td>83.22</td>
<td>10</td>
</tr>
<tr>
<td>Smoking marijuana</td>
<td>81.17</td>
<td>11</td>
</tr>
<tr>
<td>Selling marijuana</td>
<td>80.05</td>
<td>12</td>
</tr>
<tr>
<td>Causing a hit-and-run accident</td>
<td>78.77</td>
<td>13</td>
</tr>
<tr>
<td>Driving through a red light</td>
<td>76.58</td>
<td>14</td>
</tr>
<tr>
<td>Driving without a license</td>
<td>74.24</td>
<td>15</td>
</tr>
<tr>
<td>Driving while intoxicated</td>
<td>72.04</td>
<td>16</td>
</tr>
<tr>
<td>Firing someone because of delivery and child care</td>
<td>71.02</td>
<td>17</td>
</tr>
<tr>
<td>Paying less than the minimum wage</td>
<td>69.87</td>
<td>18</td>
</tr>
<tr>
<td>Not hiring someone because of age</td>
<td>67.22</td>
<td>19</td>
</tr>
<tr>
<td>Not hiring someone because of gender</td>
<td>66.45</td>
<td>20</td>
</tr>
<tr>
<td>Bicycle theft</td>
<td>65.78</td>
<td>21</td>
</tr>
<tr>
<td>Stealing $50 from a friend</td>
<td>65.38</td>
<td>22</td>
</tr>
<tr>
<td>Pocketing $50 from the company which you work for</td>
<td>64.87</td>
<td>23</td>
</tr>
<tr>
<td>Stealing $50 from a stranger</td>
<td>64.33</td>
<td>24</td>
</tr>
<tr>
<td>Shoplifting</td>
<td>64.12</td>
<td>25</td>
</tr>
<tr>
<td>Robbery</td>
<td>63.89</td>
<td>26</td>
</tr>
<tr>
<td>Avoiding a fare on a bus (that is owned by a private company)</td>
<td>62.33</td>
<td>27</td>
</tr>
<tr>
<td>Avoiding a fare on a bus (that is owned by the local government)</td>
<td>61.59</td>
<td>28</td>
</tr>
<tr>
<td>Helping a client cheat on taxes</td>
<td>60.87</td>
<td>29</td>
</tr>
<tr>
<td>Faking one’s academic record</td>
<td>60.43</td>
<td>30</td>
</tr>
<tr>
<td>Claiming government benefits to which you are not entitled</td>
<td>59.76</td>
<td>31</td>
</tr>
<tr>
<td>Speeding – driving over the speed limit</td>
<td>58.45</td>
<td>32</td>
</tr>
<tr>
<td>Soliciting a bribe</td>
<td>58.13</td>
<td>33</td>
</tr>
<tr>
<td>Cheating on an exam</td>
<td>57.88</td>
<td>34</td>
</tr>
<tr>
<td>Accepting an unsolicited bribe</td>
<td>56.65</td>
<td>35</td>
</tr>
<tr>
<td>Paying a bribe when pressured to do so</td>
<td>56.32</td>
<td>36</td>
</tr>
<tr>
<td>Offering to pay a bribe</td>
<td>55.23</td>
<td>37</td>
</tr>
<tr>
<td>Purchasing a term paper and submitting it as your own</td>
<td>54.25</td>
<td>38</td>
</tr>
<tr>
<td>Sneaking into a movie without paying</td>
<td>53.24</td>
<td>39</td>
</tr>
<tr>
<td>Buying a pirated CD/DVD</td>
<td>52.64</td>
<td>40</td>
</tr>
<tr>
<td>Copying software illegally</td>
<td>51.46</td>
<td>41</td>
</tr>
<tr>
<td>Paying cash to avoid paying sales tax [value added tax]</td>
<td>50.74</td>
<td>42</td>
</tr>
<tr>
<td>Accounting fraud</td>
<td>50.62</td>
<td>43</td>
</tr>
<tr>
<td>Insider stock trading</td>
<td>49.28</td>
<td>44</td>
</tr>
</tbody>
</table>
**CONCLUSIONS AND RECOMMENDATIONS**

**Conclusions**

The results of the performed analysis indicate that citizens of Kosovo perceive tax evasion as the least serious crime compared to the other 47 given offences and there is a difference between the category of tax evasion as a crime and the other categories of crimes in terms of their severity. The three tax evasion items were ranked 46th, 49th and 50th offences out of 50 crimes and the tax evasion category was ranked as the least mean score. Accordingly, hypothesis H1, which is developed as tax evasion is perceived a less serious crime compared to other offences, is accepted.

The general trend of perceptions seems to be similar and consistent with the previous studies of Karlinsky et al. [1] and Abdual Manaf and Abdul Jabbar [5]. Kandri, E. and Mamuti, A., are considering that tax evasion is not a matter of state financial policies rather than a society’s principles and morals. Nevertheless, it may never be addressed as an ethical deed rather than lack of will to contribute to the society you live in.[7]

**Limitations and Recommendations**

This study is still subject to some limitations. One of the limitations of this study is that this paper has reported 269 respondents’ opinion towards tax evasion. Thus, the results have not shown a whole picture of all people in Kosovo. Future research is required to extend the results of this research and fill in this gap. The second limitation of this study is that the time considered under investigation is limited to the perception of people in 2016. Hence, future research is required to extend the results of this study by covering a range of previous years to this study and/or post-periods to this study. Finally, this study has explored the perception of people from Kosovo towards tax evasion using questionnaires. Therefore, the results found in this study are limited to the methodological approach used. Future research is required to extend and confirm these results by using different methodological approaches and introducing several variables such as the country-specific factors: culture, political system, economic development, etc.

**References**

Abstract: Behavioral finance studies reveal that investors’ sentiment affects investment decisions and may therefore affect stock pricing. This paper examines whether the geographic proximity of information disseminated by the 2014 Ebola Outbreak combined with intense media coverage affected asset prices in the United States. The results show that the effect is generally negative on the stock prices, also local media coverage strongly affects local trading, and the effect is more pronounced in small and more volatile stocks and in companies belonging to less stable industries. Furthermore, we find that both retail and institutional investors are more sensitive to the intensity of coverage than to the content of information. Additional tests suggest significant return spillover effects from U.S. markets to other markets one day after the determined event date.

Keywords: Ebola outbreak, Information dissemination, Geographic proximity, Media coverage, Investors’ sentiment

JEL Codes: G10, G11, G14

1. Introduction

One of the central issues in the behavioral finance studies is explaining why market participants make decisions contrary to the assumptions of rational market participants. A large number of studies show that “bad moods” and anxiety may affect investor decisions; anxiety in particular, drives investor sentiment against taking risks, contributes to pessimism regarding future returns and thus dictates corresponding asset prices (see for e.g. Kaplanski and Levy, 2010). The prime focus of this study is the geographic proximity of information to the financial markets and their impact on stock prices within the scope of the 2014 Ebola outbreak events. Our main hypothesis is that the Ebola outbreak events unequally affect investors’ mood, thus their sentiment about stock returns, depending on their distance to the events. Generally, we expect to find that investors’ anxiety as a result of the outbreak events negatively affects the investment in risky assets. Indeed, we find significant evidence that Ebola outbreak events negatively affect stock prices of different magnitudes depending on investors’ distance to the market.
“Geographic Proximity of Information to Financial Markets and Impact on Stock Prices: Evidence from the Ebola Outbreak”

Fig. 1 Abnormal rate of return. The figure depicts the average abnormal return (AR) around the event date (t=0). The abnormal return is calculated using the market model on both NYSE and NASDAQ Composite Indexes. The events occurred during the 2014 Ebola outbreak period and include 40 event days of outbreak.

The effects found in this study comprise both event effects and reversal effects one day after the event. Possible reasons for these effects may be that first, investors act irrationally to the news on the Ebola outbreak and after one day they stabilize their behavior, and second, investors’ mood affects their preference about certain stocks; hence it affects the degree of risk aversion. Fig.1 presents the main findings in this study. Fig.1 depicts the average abnormal returns (ARs) around dates when Ebola outbreak events occurred. On event days, when the newspapers and media are flooded with articles, pictures and live streaming, the abnormal market returns sharply decline. This decline represents an average loss of about $300 million per event, whereas the upper bound of the total Ebola outbreak cost is roughly estimated at $30 billion (Thomas, 2015). Furthermore, we find that the event effect is followed by a reversal effect on the first day after the event when it reverts again on the second day. What can we learn from this? If the market loss were due to loss resulting from the outbreak events rather than due to anxiety and investors’ mood, we would not expect to find double reversals or no reversal effect at all. The fact that we clearly observe reversal effect is one more element in favor of our hypothesis asserting that mood and anxiety induce the effect.

To further study the event effect, we perform several additional analyses. Adopting Baker and Wurgler’s (2006) idea, we test whether there is a difference in the magnitude of the effect in portfolios constructed by size, volatility, industry and portfolios exposed to intense media coverage. At the end, we also observe whether the effect spills over to other international financial markets. Indeed, we not only find that the effect exists in all observed portfolios, but a relatively large effect is found in small firms, in more volatile stocks, in specific industries and especially in stocks highly exposed to media coverage. In observing potential spillovers, we find that financial markets are integrated among themselves, thus any news arising in one country has an impact on another country to some extent.

Our findings shed new light on the role of geographic proximity of information to the financial markets and its psychological effects on investors’ decision making process. The results show that there is a clear association between the relevancy of the Ebola outbreak events to U.S. investors’
actions and the magnitude of the event effect. Namely, the effect is stronger and arrives more quickly when the events occur on U.S. soil than when the effect corresponds to faraway events, Europe and West African countries region in our case. This association may also be related to the intensity of media exposure, public attention and the sophistication of information channels. Given the practical importance of these findings, our results will be appealing to individual and institutional investors, portfolio managers and financial and industry analysts. The remainder of the paper goes as follows. Section 2 provides theoretical background. Section 3 describes the data, the methodology and presents the hypotheses tested in this study. Section 4 presents the results and the additional assessment. Section 5 concludes the paper.

2. Data, methodology and hypotheses

The data examined cover the entire history of mass-media circulated after the Ebola outbreak events in the U.S., in the time period from December 2013 to June 2016. The period incorporates 20 non-overlapping events, which we consider to be our main event days. We use the LexisNexis news provider to browse the three largest by coverage U.S. newspapers and the WHO disease database to double check the relevancy of the news published about the events in our sample. About 51% of the news events are published in "The New York Times" and the rest in the "Washington Post" and "The Wall Street Journal" combined. All news items that we encounter are official statements communicated to the public with regards to any new information related to the 2014 Ebola outbreak. For example, on the 8th of October 2014 the first death case on U.S. soil was publicly reported by the WHO and the U.S. media. In addition, the WHO emergency committee stated the conditions and security guidelines for disease prevention. Usually, the mass media uses such WHO news releases to communicate the information to the greater public. Last but not least, to avoid missing event-information bias we include release dates of official statements provided by government institutions and stock market listed companies. For instance, information disseminated in the media about a particular company’s actions against the Ebola outbreak may positively affect that company as well as its competitors’ stock prices.

To test whether the geographic proximity of information to the financial markets has an impact on companies’ stock prices, we employ the value-weighted return index (see Appendix, "RI") on both NYSE and NASDAQ Composite Indexes taken from the CRSP. In addition, we use the S&P500 index as a market performance benchmark. We chose the NYSE Composite because it primarily contains large stocks, taking into account the fact that shares of large companies generally do enjoy information dissemination, whereas the NASDAQ Composite primarily includes a bunch of tech stocks. Both markets have two important reasons to be chosen: 1) they are the most closely followed in the world, thus very efficient with respect to dissemination of new information (Kaplanski and Levy, 2010a, b); 2) U.S. stock markets are among the leading stock markets in the world and account for almost 50% of the global market (Hou et al., 2011). To fully

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1 For further knowledge on information channels to financial markets, consult Kaplanski and Levy (2010).
2 Notice that there are 41 Ebola outbreak news events in the US, however after filtering out the overlapping events we end up with the current number of 20. Detailed overview of the event data is available in Table A.2 in the appendix.
3 http://www.who.int/mediacentre/news/statements/en
6 Calculated from the stock market index whose components are weighted according to the total market value of their outstanding shares.
7 Center for Research in Security Prices
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capture the impact of geographic proximity, we further use the Orbis database setting its filter\(^8\) to produce only the sample of companies which are listed on the U.S. stock markets and operate in the regions of interest. In our case we distinguish between three different geographic regions: United States, Ebola outbreak region i.e. West African Countries region\(^9\) and Europe. At the end, the sample consist all companies listed on NYSE and NASDAQ Composite from which 67 are classified for the West African Countries region and 164 for Europe.

Furthermore, to observe a potential differential effect regarding company industry, company size and stock volatility, we employ Fama and French’s (1993) 10 value-weighted portfolios constructed by industry, size and volatility accordingly.

To test whether the information disseminated about certain event leads to bad moods and anxiety among investors which may therefore negatively affect portfolio returns, we use the VIX and VXO\(^10\) indexes as proxies (see Whaley, 2009). Referring to Bloom (2009)’s idea, we observe statistically significant volatility shift when the U.S. stock market volatility shows matched-pair t-test on the VIX and VXO values significant on at least 10% level.

To assess whether intense media coverage has a significant impact on a specific company, we use the number as well as the frequency of news articles published about that stock in the media. We refer to LexisNexis “relevance score” to measure the quality of matching an article to a specific company and we use 70% or above news frequency score as a threshold to distinguish the company’s securities heavily exposed in the media.

Last but not least, we theoretically assess whether the events in our sample enhance spillover effects across various international stock markets. For this, we use the S&P Dow Jones Indices to retrieve the market return data and the correlation matrix between each of the markets of interest.

To test the null hypothesis, as well as to estimate the impact that the events have on company securities, we use the traditional event-study methodology based on the single-factor\(^11\) and the two-factor model\(^12\) as adopted by prior research (see, e.g. Kaplanski and Levy, 2012; Kamstra, Kramer and Levi, 2003; Brown and Warner, 1985). We position 100 days in the estimation period and 21 days in the event window symmetrically distributed around the event day noted as day 0.

The sample of events we observe is temporarily clustered, meaning that if all events were taken into account, the event study would suffer from overlapping windows. For this reason, as stated before, we use only events with non-overlapping event windows. Hence, we run the following regression model:

\[
AR_t = \gamma_0 + \sum_{i=1}^{5} \gamma_{1i} AR_{t-i} + \sum_{i=1}^{5} \gamma_{2i} AR_{t-i+1} + \sum_{i=1}^{4} \gamma_{3i} D_{it} + \epsilon_t,
\]

where \(AR_t\) is the daily abnormal return on the day of the event, \(\gamma_0\) is the regression intercept and \(AR_{t-1}\) is the \(i^{th}\) previous day abnormal rate of return. \(AR_{t+1}\) is the abnormal rate of return on the day after the determined event day and \(D_{it}\) is a dummy variable for the day of the week: Monday, Tuesday, Wednesday and Thursday.

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\(^8\) Orbis database can be found from Bureau Van Dijk’s menu of databases. Furthermore, we set the filter to sort all active companies in the period from December 2013 until June 2016. Second, we choose the companies listed on NYSE Composite and NASDAQ Composite Indexes only. Third, we match the companies corresponding to the benchmark-S&P 500. Fourth, we filter out the U.S. companies owning branch, subsidiary or affiliates in the region of interest. This is necessary in order to sufficiently match each foreign unit to its parent/domestic unit listed on the financial markets and thus establish the geographic proximity relation between the two.

\(^9\) WAC region: Liberia, Guinea, Sierra Leone, Nigeria, Mali and Senegal.

\(^10\) Retrieved from Chicago Board of Options Exchange (CBOE) website: www.cboe.com

\(^11\) Single-factor model where the factor is the AR

\(^12\) Two-factor model where the first factor is the AR and the second is the Industry AR
The reason for observing the previous days’ abnormal rates of return, $AR_{t-1}$, is the possible presence of serial correlation. As recorded by previous studies, serial correlation may occur as a result of time-varying expected returns, non-synchronous trading, transaction costs and etc. (see, e.g., Schwert 1990a, b). We look at as many past abnormal returns as is necessary to ensure that all significant correlations have been accounted for. In our case it is the first five previous days’ abnormal rates of return. Furthermore, we use the first five abnormal rates of return, $AR_{t+1}$, following the main event day to control for possible reversal effect, or differently put, for potential positive sentiment effect (Kaplanski and Levy, 2010 a). Lastly, taking into account that the Ebola outbreak events may not be evenly distributed over the week, we use dummy for the day of the week, $D_{it}$, to capture the so-called “Monday effects”. For more evidence of this effect, see French (1980), Schwert (1990a) and Cho, Linton and Whang (2007).

Below, we present the hypotheses tested in this study.

1. We first test whether the geographic proximity of the information (disseminated by the determined event) to the financial markets plays important role i.e. has statistically significant impact on companies’ stock prices. Since our focus is on the U.S. financial markets, we expect that the event effect will be stronger for U.S. investors and companies operating only on U.S. soil. Thus, the $\gamma_{2i}$ coefficient will be larger (in absolute terms) than the coefficients corresponding to the companies operating in the West African countries region and Europe.

2. We hypothesize that the event effect is stronger upon the stock returns of small companies relative to large companies. This hypothesis is supported by past research suggesting that local investors are usually the ones investing in small firms, thus their sentiment is affected by event information that is specific to the place and firm that they invest in (see, Brown and Cliff, 2005; Edmans et al., 2007).

3. The Ebola outbreak as a type of event is perceived to increase the bad mood as well as the anxiety among the investors, which may negatively affect company returns. We proxy investors’ sentiment through securities’ volatility and we hypothesize that the event day coefficient is larger for stocks belonging to relatively small firms rather than for stocks belonging to large firms (see, Kaplanski and Levy, 2010a).

4. Investors quite often hold very polarized stock portfolios. In our case, this means that some investors bet on positive impact from the Ebola outbreak upon certain companies’ stocks while others hold the opposite view. Having this in mind, we select the 12 largest industries, by contribution to U.S. GDP, and test how (positively or negatively) the Ebola outbreak events affect each industry. For instance, we expect companies from the pharmaceutical and biotechnological industry to be positively affected in terms of stock returns, whereas the companies from airlines and tourism to experience negative impact.

5. Previous studies confirm that intense media coverage significantly affects stock prices, trading volume, stock liquidity and stock variability (see, Fang and Peress, 2009). We collect the required security data from CRSP and test whether the events and companies exposed to intense media coverage are more affected than the ones receiving no strong media exposure. In addition, we expect to see significant and larger, in absolute terms, coefficients for stocks heavily covered by the media than for the stocks with lower media exposure.
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3. Concluding remarks

In this study, we find that the Ebola outbreak events are followed by negative abnormal rates of return in the financial markets accompanied by a reversal effect one day later. As the transitory decline in the financial markets is very different from the total economic loss, we look for an explanation in the realm of behavioral economics. Indeed, behavioral economic studies show that media coverage of Ebola outbreak events can provoke anxiety, bad mood and fear which may induce risk averseness and pessimism among the investors.

The main hypothesis in this study examines whether the geographic proximity of the information to the financial markets plays important role, i.e. has a statistically significant impact on companies’ stock prices. Indeed, we find that the effect is largest for events taking place on U.S. soil and both smaller, but highly significant for Europe and West African Countries region.

Additional tests on the event effects reveal that the market sentiment has a larger effect on stocks with valuations that are highly subjective, stocks of small firms, firms with more volatile stocks and firms belonging to specific industries.

While it is possible that the bad mood and anxiety induces an increase in the degree of risk aversion, we find that the implied volatility, as reflected by the Fear Index (through VIX and VXO) significantly increases, which may imply that the Ebola outbreak events also affect the perceived volatility. Our results confirm the hypothesis stating that fear and anxiety, rather than real economic factors, affect people’s decisions in the context of Ebola outbreak.

The relationship between mass media and communication of risks has long been a subject of intense debate. Relying on past research that high-consequence and low-probability events, such as the Ebola outbreak, are overemphasized in the media, our results support both the events’ intense media coverage hypothesis and explain possible sentiment effects. We find that although the news about the Ebola outbreak event was publicly available on the day of the event, there is only partial evidence of the effect on this day. On days following the event, when the media is flooded with information on disastrous causalities accompanied with live streaming and pictures, do we detect the full negative effect. What probably affect the investor’s anxiety are not only the articles published in the newspapers, but also media’s live streams.

Lastly, an assessment of whether the Ebola outbreak events enhance spillovers among various international financial markets shows significant results for the US-Europe relationship. However we do not find evidence on spillovers among the rest of the markets. From these results, one can conclude that the financial markets are integrated among some countries. Any news arising in one country have an impact on the other country to some extent. Moreover, previous day news of a country can influence the future price on another country if markets are well integrated.

Given the practical aspect of our findings, we believe our results will be appealing to individual and institutional investors, portfolio managers, financial and industry analysts and inspiration for further research. In addition, and interesting idea for further research is to study whether one can obtain desired abnormal returns by executing an investment strategy based on the findings of this paper. Another possible idea is to examine the relationship between stock price volatility and option prices and whether returns can be predicted based on this relation and the insights of this study.

References


“Geographic Proximity of Information to Financial Markets and Impact on Stock Prices: Evidence from the Ebola Outbreak”


Abstract. Management of an organisation is a very sensitive matter which involves many aspects. The most important aspect of a good management is to do the things which are necessary and in the correct places in order to achieve higher effectiveness which is desired by all the management staff. In order to achieve this a good manager needs to possess abilities to envision the future development of the section he’s in charge of by applying proper strategies. Motivation, proper management of the staff, setting goals that need to be achieved and proper rewarding of the people are things that are necessary to be applied.

The most important thing crucial to the public sector as a significant part of a nation’s economy is good management of people. The significance of proper motivation of the staff is also crucial. This paper will discuss these aspects and especially the aspect of implementation of good management in the Republic of Macedonia. The economy worldwide indicates serious changes especially in the public sector. The aspect of role of the managers in the process of moving forward and applying good management policies will also be discussed paying special attention of the decision making process, motivation, and rewarding of the staff in the public sector. Nevertheless, one thing that has to be also noted is proper and regular training of the employees in the public sector in order to raise their performance by doing things efficiently and in such way to achieve the desired effectiveness.

Empirical research that was made and which will be shown here will emphasize the level of good management implementation in the Republic of Macedonia and the areas that needs to be improved.

Keywords: Good management, public sector, effectiveness, proper management of the staff, decision making.

Introduction

In the course of the 21st century the global economic development its challenge and complexity as a whole create needs for good management policies. The public sector itself represents an enormous apparatus of a state, and cannot be isolated from the surrounding processes which demand changes in that area too. The managers of the public sector have to improve their knowledge in managing the staff strategically in order to achieve higher level of effectiveness. This work will show some of the characteristics of a good management policies of the public sector and it will show some results of the empirical research made in the Republic of Macedonia that will show some areas that show what kind of management policies are currently applied.
Characteristics of a good management

Applying good management strategies has arisen from the need of the ongoing pace of activities, making daily decisions under pressure, focusing on the crucial matters that need direction and initiative as well as prioritizing matters that are of fundamental importance of an area in the public sector run by a management staff. The responsible manager of the area has to have strong management capabilities because in order to give directions, regardless of being short or long term he / she has to be aware of the environment, both internal and external, and to be aware of the constant and continuous changes and fast pace of the environment as well. The changes in the needs of the society, the trends in the politics, relations between governments, fiscal policy and expectations of the citizens as well make constant changes in the responsibilities in both the state and local government as well. Capability to anticipate these changes and effective adaptation to them requires responses that are flexible, forward-looking and efficient which labels strong management capacity able to strategically provide these responses.

According to Nirmal Kumar Betchoo [13] there are 9 areas that need to be considered when it is aimed to apply good management strategies. However, these are by no means absolute since the society is changing continuously so some others may arise in the future. These are the areas:

1. Appraise the needs and concerns of the public service in the future.
2. Understand seismic shifts in the public service.
3. Develop strategies to build a citizen-centric government.
4. Develop the cluster concept in the public service.
5. Use analytics to better define the future public service.
6. Identify selected visions of the public sector in the future.
7. Apply digital democracy to the digital citizen.
8. Learn the need for crowdsourcing in the public sector.
9. Appreciate the effort of innovative collaboration in the public sector.

The needs and concerns of the public service in the future represent the uncertainty that the public sector has to deal with and at the same time to provide effective services and cope with the constant changes. The table below shows the seismic shifts in the public service that is what was and what should the public service be like:

<table>
<thead>
<tr>
<th>Citizen under control</th>
<th>Citizen in control</th>
</tr>
</thead>
<tbody>
<tr>
<td>Governing for citizens</td>
<td>Governing with citizens</td>
</tr>
<tr>
<td>Organisation silos</td>
<td>Organisation networks</td>
</tr>
<tr>
<td>Public sector organisations as big, all-in-one giants</td>
<td>Public sector organisations as small, flexible, purpose-driven entities</td>
</tr>
<tr>
<td>Government as service provider</td>
<td>Government as service facilitator/broker/commissioner</td>
</tr>
<tr>
<td>Government owning inputs and processes</td>
<td>Governments and citizens owning outcomes</td>
</tr>
<tr>
<td>Measuring outputs</td>
<td>Measuring outcomes</td>
</tr>
<tr>
<td>Forced cooperation based on enforcement</td>
<td>Mutual collaboration based on trust</td>
</tr>
<tr>
<td>Trust in the ‘strong leader’</td>
<td>Trust in each other, the ‘servant leader’</td>
</tr>
</tbody>
</table>

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As it can be seen the shape of the policy for the public services has shifted towards the citizens, the public sector has stopped being self-centered, it should measure the quality of the provided services and the managers has to be mutually cooperative. Build a citizen-centric government implies that the citizens should also take responsibility for the outcomes and this is achieved by involvement of citizens, that is, end users in the design and the future development of the services. The development of the cluster concept in the public service requires development of the processes such as innovation, knowledge, and supply-chain. However central coordination is needed due to external nature of some of the activities and raising the meaningfulness of the dialogues between the public and the private sectors and that means involvement of internal ministries and/ or internal agency committees that will make the concepts, the designs and will respond to the policy recommendations. The usage of analytics will provide raising the efficiency of the operational level of the public sector, reduce of the costs, optimisation of the public sector workforce and managing risks as well, and the services that need to be provided to the citizens will not be disrupted by this activity. Selected visions of the public sector in the future and applying digital democracy to the digital citizen are seen as applying digital means in the public sector services. This also directs to the development of e-government and e-services as the modern era and the development of the society dictates. The modern development requires the need for crowdsourcing in the public sector and it is recognized now that it is very important to reveal the preferences among different options (i.e. public opinion), measuring the levels of support for specific actions and examining or testing for ideas or suggestions. The effort of innovative collaboration in the public sector is understood as recognising the power of social innovation, and the activities include establishment of legal entities which will facilitate the innovations by funding the promising innovative models. In the addition to all the said above motivation must not be forgotten. The public employees have to be motivated as motivation itself creates feeling of appreciation and meaningfulness for the person’s efforts to perform and the performance itself will be increased if the employees are rewarded frequently.

An insight of the management of the public sectors in the Republic of Macedonia

The way the areas in the public sectors are currently managed in the Republic of Macedonia is shown with a research [15]. The public employees are those who are directly involved in the public sector and their responses are plausible. This research shows a scientific insight and clear picture of the reformation processes and their presence and / or non-presence as well as their slowness which naturally become an obstacle in the further development in the further development of efficient and effective public administration. The research was conducted in period July-August on 610 respondents. The group of respondents included the employees in the ministries, state agencies and municipalities: managers, professionals and professional-administrative officials. The research itself covers various areas but for the purposes of this paper the following are extracted as the most important.

14 Nirmal Kumar Betchoo, Public Sector Management: A Millennial Insight 1st edition, 2016 1-287
15 Xhemaliti, Sejdi Strategic management in the public sector in the Republic of Macedonia (PhD thesis), Skopje 2014,
The first picture shows the answers to the question and covers the way managers make their decisions. The analysis showed that 29.18% of the responders consider that their managers make individual decisions which means that in up to 1/3 of the institutions covered by the research autocratic way of managing things is still present. This fact is not good if it is compared with the 28.03% responses that show group way of decision making process.

![Picture 1 How does your manager make decisions?](image1)

The second picture shows the level of freedom given to employees by their managers.

![Picture 2 Do you have freedom at making decisions by your manager?](image2)

Complete freedom at making decision by their managers have 26.23% which is not a satisfactory percentage especially if it is about respondents from whom sometimes is required to make decisions in the absence of their managers. The data of 51.15% (if the responses neutral, small percentage and those without the freedom of making decisions are added) are almost without freedom of making decisions brings concerns since this high percentage shows presence of autocratic management in those organizations. Openness for ideas, that is, whether the managers are open for the employees’ ideas show the data in the following picture.
Is your manager open for your ideas?

Regarding openness for ideas 34.26% and 24.92% or total of 59.18% from the managers are almost always open for ideas of the employees, yet a high percentage of 40.82% remains with those managers who do not allow their employees to show creativity and to express their ideas.

The training of employees is also very important so the next question goes to that i.e. the respondents were asked about attending trainings for the specific work areas.

Have you attended trainings of the area where you work?

The training attendance of 23.11% and 25.74% i.e. total of 48.85% cannot be positive way of movement since a large portion of 51.15% goes to respondents who answered that they have never or rarely attended trainings of the areas where they work. Global changes are influencing the national changes which do not make the organizations of public administration immune and thereto they have to pay attention to appropriate training of their employees.
As a support of the previous question the respondents were asked if they have a need of additional training.

An indicator showing that 28.69% and 28.69% i.e. total of 57.38% of the respondents feel that they do have a need of additional training of the area where they work which is necessary if we intend to follow the constant changes in the environment.

All the indicators that were listed above show that the public administration in the Republic of Macedonia has a long way to go in order to achieve satisfactory progress towards the reforms and to gain efficient and effective modern administration.

Conclusion

As the nature changes the society changes too. The modern 21st century has brought fast economic, business and social pace. Nothing can be kept in a shell – so the inertness of the public administration has to be eliminated. There are areas that need to be improved and changed and to shape the future looks of the public administration. It has to be understood that the public service has shifted the way of providing their services and that it is now more than obvious that it has to serve the citizens. On the other hand, the awareness of the citizens has to be risen and they have to take responsibilities too in shaping and improving the public administration.

The Government – both, the State and local has to find way to motivate and finance the innovative positive processes and to improve the dialogue between the private and the public sector. Creating e-government public services needs to be speed up, there are some attempts in Republic of Macedonia but they are far from sufficient. The necessity of conducting on-line researches shows up where citizens can be asked about many issues and the responses may be used for further improvements.

Training, as it is seen out of the research, is additional point that public administration employees have to receive. That will improve their performance in their working places and the performance of the organisation will be better too.

Last but not least is motivation. It must be present – it is human nature to be praised and rewarded. By doing so the management will raise the self-confidence at the employee and that should be done at regular intervals.

All in all reformation process is slow and it takes time but it also needs initiative from the current management of the public sector to conduct the changes in full.
Topic: Role of a good management in the public sector in the Republic of Macedonia

Resources:

2. Xhemaili, Seji Strategic management in the public sector in the Republic of Macedonia (PhD thesis), Skopje 2014
“Joint Venture as a market entry mode into the foreign market. Case study: Kosova”

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Abstract. The economic, political, and social changes that had happened over the last decade have radically changed the landscape of global businesses. The entry mode strategies of multinationals into foreign markets can be analyzed considering two perspectives: ownership and establishment mode. The process of decision making on the mode of entry is a complex issue in international business because of the many factors involved, and also the impact that such a decision could imply to a firm’s performance in the external market. This paper focuses on environmental factors such as political and economic issues with the aspect of entrance of foreign banks into Kosova’s market. Despite the existence of several studies on the mode of entry into the Balkan countries, little is known about entry modes adopted by the foreign companies when entering Kosova’s market. Thus, the present study aims to investigate the Kosova’s market within focusing on particularly joint venture entrance mode from a banking perspective. The research is based on a case study with a qualitative approach. This paper concludes that the joint venture offer benefits to both partners as well as other stakeholders—providing customers with more and a higher quality variety of banking services.

Keywords: International Entry Mode, market, Joint Venture Mode, Banking Sector, Politic dimension.

1. Introduction

The globalization of markets has certainly accelerated through almost universal acceptance of the democratic free enterprise model and new communication technologies, including cell phones and the Internet. The economic, political, and social changes that had happened over the last decade have radically changed the landscape of global business. As John Graham, the authors of the book International Marketing (2011) says, we can explain the current interest in international marketing by changing competitive structures, coupled with shifts in demand characteristics in markets throughout the world. Within the increasing globalization of markets, companies know that they are unavoidably enmeshed with foreign customers, competitors, and suppliers, even within their own borders (Ceteora & Graham J, 2011).

Nine years after declaring independence, Kosovo has made important but incomplete progress on creating the business and legislative environment required to reach its full economic potential. An ongoing dialogue process between Kosovo and EU, is still unclear whether Kosovars will be able to benefit from visa-free travel in Schengen area. A long ongoing dialog with Serbia has resulted in
numerous agreements that aim to make the trade, commerce, and travel between the two countries simpler; however, there are still major disagreements left to resolve. Strategies of entry modes directly impact on other strategic decisions and strongly influence the organization performance. The entry mode strategies of multinationals into foreign markets can be analyzed considering two perspectives: ownership and establishment mode. Modes of entry that involve ownership are divided between wholly owned subsidiaries (WOS) and joint ventures (JV), while the entry modes by establishment mode can be divided between acquisition and greenfield (Fonfara, 2014). According to the Foreign Investment Law, foreign investors may wholly own businesses in all sectors of the economy, with the exception of the manufacture or distribution of military products, where equity is limited to 49 percent. Foreign investors in all other areas are subject to the same licensing requirements as local investors. Foreign investors may be required to file a statement with local authorities identifying principal stakeholders and types of investment. No other filing requirements in excess of those required for similar domestic businesses are required for foreign investors (DBK, 2012).

2. METHODOLOGY

Through a single case study, in order to get in depth information about the Kosov’s market, this paper utilized a qualitative approach. The data collection instrument used were few interviews as well as available secondary data. Paper work is focused on TEB Bank as a case of joint venture entry mode into Kosova’s market. In the next section the literature is reviewed about join venture mode into foreign markets and its determinants. The next part of this paper is focused on Kosova’s market and its environmental factors by focusing on economy, financial and banking sector, business environment and politic dimension. There are described also the potential barriers on banking sector in Kosova. In the fifth section are discussed the results of the study. In the last section, are presented the main conclusions of the study. There were three main methods used for the study, a literature review, an internet research of the reports and the case study interview. The literature review was conducted to review the market entry modes of the foreign companies into foreign markets and its determination. An internet research had helped to define the banking sector in Kosova and the business environment and its factors.

3. THEORETICAL BASIS

This section presents the market entry mode through Joint Venture and the factors determining the international entry mode choice. Joint ventures are domestic or international enterprises involving two or more companies joining temporarily to undertake a particular project. They have grown in popularity in recent years—joint ventures between U.S. and foreign firms, for example, have increased at an average of 27 percent since 1985. Certainly, not all of them will be successful; estimates of the failure rate of joint ventures reaches as high as 70 percent. Nonetheless, companies persist in initiating them for a variety of reasons. Joint ventures are very helpful to some companies in gaining access into the foreign markets such as Henkel Teroson Automotive, Sony-Ericson, Microsoft and GE Joint Venture, Caradigm or Siemens AG and Nokia Corp Joint Venture. Any party may really be interested in the primary project, but they participate simply to gain access to the new market. Such projects basically represent a direct investment, which is sometimes limited by laws in the country in which the operation
One of the aims of a partner in a joint venture is to have a majority interest in it, that way, it maintains control over a project. This explains why some countries such as Russia or China do not permit foreign companies to hold majority interests in their domestic business ventures. More to the point, companies seeking to cut the costs of doing business see joint ventures as a way to save money. In effect, they are sharing the risks should a particular project fail. As it’s explaining Ms Duliniec, International marketing (2011) as an example, if two oil companies wish to produce a new drilling platform to search for the oil in swamps or some ocean areas, and neither one can finance the project on its own, they might join forces. In this case they are sharing the costs of the projects and reducing their individual risk should they find no oil. That is a decided advantage to many business people (Duliniec, 2011).

Businesses shouldn’t engage into joint ventures without proper planning as well as strategy. They cannot let it be, since the ultimate goal of joint ventures is the same as it is for any type of business operation: to make a good profit for the owners as well as for the shareholders. A successful company in any type of business is often recruited heavily for participation in joint ventures. Thus, they can pick and choose in which partnerships they would like to engage, if any. They follow certain ground rules, which have been developed over they years as joint ventures have grown in popularity(Walas, 2006). The example of the bad strategy of the join venture is Tata Motors Ltd and Italy’s Fiat Spa. Fiat joined hands with Tata Motors with the objective of using the latter’s expansive sales, service and distribution network to gain access to one of the world’s fastest growing car markets. It became evident in the first few years of the joint venture that the model was not working.

Among the benefits which are from joint ventures is that partners save money and reduce their risks through capital and resource sharing. Joint ventures gives the smaller companies the chance to work with larger ones to develop, manufacture as well as market new products. They also give companies of all sizes the opportunity to increase sales, gain access to wider markets, and enhance technological capabilities through research and development underwritten by more than one party (Duliniec 2011).

4. CASE STUDY: TEB Bank Kosova

4.1. TEB Profile

TEB is an abbreviation from Türk Ekonomi Bankası (Turkish Economy Bank) which was founded in 1927 by private investors as a regional bank under the name of Kocaeli Bankası T.A.Ş. in Izmit. In 1981 the bank was purchased by the Çolakoğlu Group, which changed its name to Türk Ekonomi Bankası A.Ş. in 1982. In March 2005, TEB signed a joint venture agreement with the French BNP Paribas SA, which is one of the largest financial services groups in the world. TEB has been aggressively expanding its retail network in Turkey ever since and had 541 branches as of 2013. TEB has also two other subsidiaries outside Turkey: TEB NV (The Economy Bank) in the Netherlands, and TEB Sh.A. in Kosovo and on the second one the research will focuses on (TEB Bank, 2015). TEB Mali Yatırımlar A.Ş., one of the shareholders with 84.25% of shares at TEB, which went public in 2000, executed a partnership agreement with BNP Paribas in 2005, which is the six largest bank in the world and is the largest of Euro zone with ongoing operations in 87 countries around the globe. The partnership enabled TEB, one of the respectable and strong brands engaged in the Turkish finance industry, and BNP Paribas, an international brand, to combine the forces and experiences. With this partnership agreement BNP Paribas had shares in TEB Investment, TEB Leasing, TEB Factoring, TEB Insurance, TEB Portfolio Management and TEB NV, a bank of the Netherlands, displaying activities...
in Amsterdam. BNP Paribas is the first bank of the Euro zone as far as profits and total market capitalisation are concerned. With a prominent and international network of banking, BNP Paribas plays a key role in Corporate and Investment Banking, International Retail Banking and Asset Management. 80 out of the largest 100 group around the globe are customers of BNP Paribas. The target of TEB and BNP Paribas collaboration is to pave the way for a much stronger Turkish bank, as well as to convey and make available international fund of knowledge, services and products of BNP Paribas to a wider range of customer group, and to achieve an international initiative for TEB as a brand. As a significant indication of strong collaboration with BNP Paribas, and of TEB’s opening up to the world; TEB has now become involved in the Trade Centres network of BNP Paribas that are established in 48 countries and nearly in 80 locations. Trade Centres that are open in Istanbul, Izmir and Adana throughout Turkey give support for foreign trade consultancy and banking, and offer an international opening for customers. Furthermore, this partnership has allowed TEB to set Turkish Desks in the countries where Turkish entrepreneurs are intensely operating and BNP Paribas has a strong hand.

4.2 Joint venture as the way of entry TEB Sh. A Bank into Kosovo market

During the time when TEB Bank decided to enter into Kosovo market, there were no more than two powerfull banks in Kosovo which were dominating this sector. Government wanted to change this situation and to promote opportunities to other banks, in order increase the competition in banking sector. In 2008 TEB decided to enter into Kosovo market, and it was very easy to achieve it. The process of improving banking sector was provided by the USA so the procedures were very clear and the system as strict so there was no risk to enter the market. The political situation didn’t influent on the banking sector and the shareholders of the bank had to be sure about that since they decided after analyzing the market to entry there. Since than this bank has been providing innovative and practical financial products and services. During those nine years TEB had established a trustful reputation, leadership and innovation. Today it is one of the country’s leading banks. Both banks decided to entered into Kosovo market within joint venture since both banks equipped with a global banking experience, which enabled them to develop and introduce financial solutions that serve to the best interest of clients based on responsible banking in Kosovo. They goal was to offer a wide range of corporate, commercial, trade finance, SME and individual banking products and services. Is it is shows, they had launched some of the most advanced products in the Kosovo market, including secure e-banking, advanced and fastest payment systems, possibilities for innovative loans and deposits products. As we can find the information on the brochures and internet website of the bank, customers of the TEB Bank are served through an effective branch network, including dedicated business-client centers, and thought a good quality of the delivery channels, including retails and corporate e-banking, call centers ATM’s and close to 3,000 POSs. The share capital of the Bank is € 24,000,000 issued shares each with a par value of €10. Number of shares relates to ordinary shares with no rights, preferences or restrictions attached to them and it is the ownership structure as of June 24, 2013.

4.3 Environmental factors and entry modes

Kosovo has the youngest population in Europe and these individuals come into the labor market each year finding limited employment options. An important component of Kosovar life and the labor market is migration. Traditionally, migration has been very high, which in turn has alleviated some of
the labor market pressures. Another positive influence from migration is the fact that returning migrants bring to the local market their experience and skills gained abroad. Both these factors coupled with the low wage levels, make local labor an important incentive for investment in Kosovo. By entering the Kosovo market, both banks had to be awarded of a many environmental factors involved, and also the impact that such a decision could imply to a firm’s performance in the Kosovo market starting from general information about the country, economy condition of the country and more specific, relating to the sector in which they wanted to act so financial sector of Kosovo as well as banking sector. It is also extremely important question of the political situation of the country, especially in the country, which is still undergoing transformation and reconstruction after the war. In order to analyze these issues, we will bring each of these aspects in the context of the current situation of the country.

**Economy of Kosovo**

The economy of the country characterize a high reliance on the import of goods which negatively affects the growth rate and the current account balance. Compared to other countries in Southeastern Europe, Kosovo experienced the highest growth rate, noting a real GDP growth of 5 percent in 2011 followed by Macedonia with a growth rate of 3.2 percent. Such growth is mostly attributed to increase of consumption and level of investments. Kosovo’s GDP per capita incurred a slight increase by reaching EUR 2,700 in 2011. However, it still continues to be low compared to other countries in the region such as Albania, Bosnia and Herzegovina and Serbia which exceed the amount of EUR 4,000. The inflation rate of 7.3 percent in 2011 more than doubled compared to the prior year. Inflationary pressures were more persistent in the first half of 2011, especially with respect to prices of food products and oil. The main driver of such pressures continues to be prices of imported products which are reflective of prices in the global economy. The current account deficit further deepened in 2011 by reaching around EUR 672 million representing an annual growth of 21 percent. The ratio of deficit to GDP during 2009-11 stands at an average 13 percent of GDP. The main driver for the level of deficit continues to be the trade deficit (KPMG, 2013).

Kosovo is the youngest country in Europe located in the central part of the Balkans. The geographical position of the country enables to serve as a connecting bridge with all other countries of Eastern Europe. Kosovo creates a good conditions for foreign investment. Kosovo currently is a part of free trade within the Central European Free Trade Agreement CEFTA which is enabling its producers to access the regional market of 25 million customers without any customs duty. What is important Kosovo has free unlimited access to the entire European Union market, market with over 500 million customers? In addition, similar agreements exist with the U.S., Japan and Norway. What is important from the TEB Bank point, Kosovo have signed a free trade agreement with Turkey. Kosovo also offers an efficient tax system, citing IMF officials, as the best system in the world after New Zealand. Besides the efficient tax system, Kosovo offers the lowest taxes in Europe, offering foreign investors only 10% for corporate profits, 5% compulsory pension contribution and 0% tax on dividends. Any non-resident person who is subject to taxation in accordance with the tax legislation of the Republic of Kosovo must appoint a fiscal representative prior to starting any economic activity in the Republic of Kosovo. The fiscal representative must register with the Tax Administration of Kosovo within five days of being named. All major sectors of the Kosovo economy are open to foreign investment. In 2011, the Government took substantive steps to further open Kosovo to foreign investment through the passage of the Public Private Partnership (PPP) Law, no. 04 L-045 of 2011. The new PPP Law has been harmonized with the European Council regulations and the EU Acquis Communautaire. The law creates separate definitions for Concession and PPP, meaning that FDI transactions can be structured more flexibly. A provision for unsolicited proposals has been removed, ensuring that all procurements are
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...the result of a competitive bidding process, while prior limits on the length of investment projects have been removed.

- Banking sector in Kosovo

Financial Sector General characteristics GDP of Kosovo increased by 5 percent in 2011 reaching EUR 4.7 billion. The value of the total financial sector assets at the end of 2011 reached EUR 3.5 billion, which represents an annual increase of 9.3 percent. This indicates a lower growth increase than in 2010, during which the financial sector assets had an annual growth of 15.1 percent. Commercial banking sector assets comprised around 76.3 percent of the total financial sector assets, while pension funds made up 17.0 percent, microfinance institutions 3.7 percent, followed by insurance companies with 3.0 percent and financial auxiliaries with 0.02 percent.

There are nine banks operating in Kosovo: Bank for Business, Banka Kombetare Tregtare – Kosovo Branch, Economic Bank, Komercijalna Banka ad Beograd – Mitrovica Branch, NLB Prishtina, Procredit Bank, Raiffeisen Bank, Turkije Is Bankasi and TEB. Foreign banks dominate the market both in terms of the number of banks and their share of the total banking sector assets. Foreign banks in 2011 represented six out of eight commercial banks operating in Kosovo, while they accounted for 89 percent (90.2 percent in 2010) of the total banking sector assets. The three largest banks, Procredit Bank, Raiffeisen Bank and NLB Prishtina, manage 73 percent of the banking sector assets. During 2011, the network of commercial banks continued to expand reaching 311 branches and sub-branches (eight more than in 2010), while the number of staff employed by these banks reached 3,728 compared to 3,610 in 2010. The banking sector is expanding its network also in terms of the number of automated teller machines (ATMs) reaching 460 in 2011 (415 in 2010), and the number of points of sale (POS) that reached 7,534 in 2011 (6,194 in 2010). The number of accounts using e-banking has continued to increase from the previous years, reaching 68,992 in 2011 (55,292 in 2010). This expansion of the banking network through additional banking units and additional services such as ATMs, POS and e-banking has improved the accessibility of clients to banking services. In 2011, the contribution of the banking system accounted for 57.2 percent of the total GDP, which represents a decrease of 1 percent compared to 2010. Assets of the banking sector reached EUR 2.66 billion in 2011, which represents an increase of 8.4 percent compared to 2010 (increase of 9.3 percent in 2010). The value of loans issued from banks in 2011 reached EUR 1.7 billion, which is an increase of 16.4 percent compared to 2010 which itself increased by 13.2 percent compared to 2009. In volume, loans make up 63.6 percent of the total banking system assets (59.4 percent in 2010). The return on average assets (ROAA) remained at the same level as the previous year at 1.5 percent, whereas the return on average equity (ROAE) reached 15.3 percent in 2011, compared to 14.8 percent in 2010 (KPMG, 2013).

In Kosovo commercial banks started opening in the year 2000, after the 1999 conflict and they do their activities under the Kosovo law for banking system and the Central Bank of Kosovo who works as a regulatory instrument (CRIRK, 2015). Nowadays Kosovo’s private banking sector remains well-capitalized and profitable. Difficult economic conditions generally, the lack of strong rule of law and contract enforcement processes, and a risk-averse posture have caused banks to be conservative in lending. This overall cautiousness in the banking sector is evident in its excess reserves, which are above the minimum level required by the Central Bank of Kosovo. Most deposits are demand deposits and total assets of the three largest banks, which are international banks, amount to 71.8% of the entire banking sector in Kosovo. As of June 2012, Kosovo’s banks increased loans at an annual rate of 6%; however, this was half the rate of the year before. Approximately 76% of all lending activity is to businesses. Despite positive trends, relatively little lending is directed to long-term investment activities. High interest rates (averaging approximately 14%) and collateral requirements act as
disincentives to borrowers. The slow-down in lending is most notable in the northern part of Kosovo where a weak and ineffectual municipal court system and tension arising from protests and blockades following the government's July 2011 action to take control of its northern border gates have also slowed commercial lending.

**Political dimension**

Before deciding to enter within joint venture bank in Kosovo market, both banks have had to answer the question whether the political situation of the country is stable enough to be able to enter the market, which in their opinion was. An equally important question was whether this young state which is Kosovo has enough legislation regulated by the Bank to be found in the realities of this country. The banking sector in Kosovo was built from scratch in the aftermath of the armed conflict. The main priority in the process was ensuring the stability of the sector, therefore for a new bank to enter in to the Kosovo market significant reserves had to be held by the banks. The country had passed pro-business legislation that specifically seeks to attract foreign investment. Under domestic legislation, foreign firms operating in Kosovo are granted the same privileges as local businesses, except that foreign investors cannot hold more than 49% ownership in a business producing or selling military-related products (Reg. No. 2001/3, Section 6).

Banking sector is very clear and stable in Kosovo and the barriers are invisible, especially because the country is supervised by the Western countries which makes the procedure in this sector clear. Kosovo is a country oriented into the West that desires to be part the European Union. Current legislation and regulations are written with EU standards in mind.

However economist specialists in Kosovo says that the perceptions of official corruption, the growing state bureaucracy, weak property rights protections, and the lack of universal recognition of Kosovo’s 2008 independence at times prove to be obstacles to attracting higher levels of foreign investment as well. These obstacles exist notwithstanding the government’s stated pro business posture, the country’s strategic location, rich natural resources, low wages, and the entrepreneurial nature of its citizens. In the summer of 2011, a trade dispute with neighboring Serbia, one of Kosovo’s trading partners, led to a blockade of cross-border trade between both countries for around two months. Isolated incidents of interethnic as well as sporadic political protests, have occurred since then, but none of these events adversely affected Kosovo's political stability or overall economic situation. The Kosovo Police, Kosovo Security Force, the European Union's Rule-of-Law Mission in Kosovo, and the NATO Kosovo Security Force (KFOR) have responded to and investigated these events, according to their legal mandate. Kosovo's judiciary is augmented by EULEX, which has a Monitoring, Mentoring, and Advising (MMA) role in rule of law matters (Riinvest, 2015).

The World Bank’s “Doing Business” Report for 2013 ranks Kosovo 98 out of 185 economies, an improvement of 19 places in one year. Corruption, real and perceived, remains one of the most significant problems in attracting foreign investment in Kosovo. Transparency International’s 2012 “Corruption Perceptions Index” ranked Kosovo 105 out of 176 countries and territories surveyed, similar to the prior year’s results.

**CONCLUSIONS**

Joint ventures can offer a lot of benefits to the potential partner firms through access to new resources including markets, distribution networks, capacity, staff, purchasing, technology, intellectual property,
Joint Venture as a market entry mode into the foreign market. Case study: Kosova

and finance. Often, one firm supplies a key resource such as technology, while the other firms might provide distribution or other assets. There are, however, a number of risks related to joint ventures that can result in loss of control, lower profits, conflict with partners, and transferability of key assets. The case study on TEB Bank illustrates that joint venture offer benefits to both partners as well as other stakeholders— providing customers with more and a higher quality variety of banking services. Today it is one of the country’s leading banks what’s shows that it was a good position to enter into Kosovo market. Banking sector in Kosovo is clear due the fact that legislation and regulations are written with EU standards in mind. Even if there is many of the potential barriers such as corruption or political violence in Kosovo, they do not influence that much on the banking sector.

There are, however, many risks to be considered for the future for the companies who would like to enter into Kosovo market. Especially taking into account the internal situation of a developing country like Kosovo. The country continues to struggles with problems of imperfect legal situation. There is still a lot of legal gaps that prevent the operation of businesses in such conditions. Focusing on the political situation, as it shown us last year and the beginning of 2016 years the country continues to struggles with internal dilemma. The numerous protests the society caused by bad situation in the country, widespread poverty, unemployment and corruption choking the country affected by the negative sentiment in society. However as the case study of the TEB Bank shown, that is not indicate on the banking sector of the country. Investors are leaving due to the lack of political stability and lack of a suitable business climate. It is normal that investors doesn’t want to hold their capital in countries where is a political crises. The political crisis is having an impact in the economy of the country. The teargars let off in the parliament of Kosovo in a very frequent action and it is a very bad signal that can be sent to international partners and potential investors.

International organizations should continue effort to help Kosovo to gain the economic, political and institutional stability in the country. All parliamentary parties must bear in mind the economic consequences that the can cause and that a solution must be found in order to enable institutional stability, which is so important in attracting foreign investments.

REFERENCES

18. TEB BANK. Profile and history information. Available at: www.teb.com.tr/about-teb/history/
Multiple correspondence analysis method for evaluating the standard of living. Case study Albania

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Abstract. The main purpose of this study is to see the implementation of the multiply statistical method MCA (Multiple Correspondence Analysis) in large databases. Objectives of this study are to find the connections between qualitative variables categorized, concretely in our paper the connections between socioeconomic indicators and the standard of living. Otherwise this is called the concept of the multidimensional poverty. Different variables are being extracted like indicators that have a connection with the measuring of the multidimensional poverty. The data were obtained from the survey of measuring the life standard (LSMS) in 2012, which includes in the study about 6671 household, that are representative for the entire country. MCA results reflect several dimensions, where the first dimension, which is the more important, is called the welfare dimension. We represent the different discrimination measure of this dimension in connection with all the variables, where it is noted that from all the variables the biggest discrimination measure has the educational attainment of the household head. So the latter is the variable that has the greatest importance in relation to the welfare dimension. The results of this study help in the orientation of social policy to increase the standard of living, where the main role in this has the educational level.

Keywords: Multiple Correspondence Analysis, LSMS, welfare, educational level.

1. Introduction

Measuring the standard of living has historically been problematic because of the difficulty of defining an aggregate measure that captures the notion of welfare [1]. The evaluation of economic status methods are basically: the first is based in the incomes or the expenditure of consumption and the second, that’s not based in the mentioned elements, is called the non monetary poverty. According to INSTAT [2], the non monetary poverty is composed of some indicators that have no relation with the monetary aspect. Non-monetary poverty includes indicators that are not related to monetary terms but with access to basic services such as water supply, sanitation infrastructure, power supply etc, as well as their quality. Often, to fulfill the monetary aspect of poverty with the non-monetary index is used the index of unmet basic needs (NBP). This index is comprised of five indicators located together and show: inadequate water supply and toilet (lack of running water and toilets with sewage in flat), inadequate housing conditions (as perceived by own family), inadequacy of power supply (outage for
6 hours or more per day), overcrowding of dwelling (3 or more persons per room) and the inadequacy of the level of education of the household head (with primary education or lower). Kabudula et al (2016) [3] show us three different indices for socioeconomic status (SES) which are constructed from asset-based indicators of households. One of these indices is based on the MCA method. From the results it turns out that the index, which is obtained from MCA, is such that the positive weights are assigned with the asset expected to be associated with higher SES, and negative weights are assigned to items expected to be associated with lower SES. In Ndjayou paper (2007) [4] is used MCA method which take into account 37 variables, which aims to identify the indicators that describe the real situation of poverty, where the first dimension is called the dimension of welfare. A positive weight to the variable modality in relation to this dimension contributes in growing the welfare, and a negative weight reduces the level of welfare. Based on the MCA method is obtain an index for each household. From the results is obtain a result equally the same with our paper: educational attainment of the household head has a great importance in explaining welfare dimension. Noglo (2014) [5] uses the MCA technique to build a composite poverty indicator. The results of the multidimensional poverty from the two approaches MCA and FGT showed that the households consisting of a large number of members living in rural areas, which are directed from the head with age greater than 51 years old, and who are less educated are the poorest. Njong et al (2008) [6] uses techniques PCA, MCA and fuzzy set to evaluate the multidimensional poverty index (Multidimensional Poverty). The results show that the index created on the basis of PCA dominates in relation to indexes created by MCA and fuzzy set. From the results it is concluded that the index created by the PCA shows a lower level of poverty than the indices generated by MCA and fuzzy set.

2. Methods

The data used to analyze the poverty are taken from the 2012 Living Standards Measurement Study (LSMS) for Albania. The survey covered both rural and urban populations. MCA is the generalization of correspondence analysis (CA) to more than the categorical variables. CA and MCA can be viewed as an adaptation to categorical data of principal component analysis (PCA), Jolliffe (2002) [7]. As PCA, MCA aims to identify a reduced set of synthetic dimensions maximizing the explained variability of the categorical data set in question. The advantages in using MCA to study associations of categorical data are then to obtain a simplified representation of the multiple associations characterizing attributes as well as to remove noise and redundancies in data. The exploratory and visualization based approach characterizing MCA provides immediate interpretation of the results. The indicators of asset ownership of all households are organized into a matrix $X$ of ones and zeros called the “indicator matrix”. In the indicator matrix, each categorical asset indicator is decomposed into a set of mutually exclusive and exhaustive binary categories that each take only the value 0 or 1 such that every household has a ‘1’ in exactly one of each asset’s set of categories and a “0” in the rest of the asset’s categories. Second, a matrix $S$ is calculated by taking the $X^2$ metric on row/column profiles of $X$. Greenacre (2007) [8] gives the calculation of $S$ by the following formula:

$$S = D^{-1/2}_t(P - rc')D^{-1/2}_t$$ (1)
Multiple correspondence analysis method for evaluating the standard of living. Case study Albania

Where $P$ is the matrix formed by dividing each element of the matrix $X$ by the sum of its elements, $r$ is a vector whose elements are the sums of the row elements of the matrix $P$, $c$ is a vector whose elements are the sums of the column elements of the matrix $P$, and $Dr$ and $Dc$ are diagonal matrices formed from $r$ and $c$ respectively. Singular value decomposition (SVD) is then performed on the matrix $S$ to decompose it into three matrices such that:

$$S = UD\alpha V'$$

The columns of the matrices $U$ and $V$ referred to as left and right singular vectors, are respectively the eigenvectors of the matrices $SS'$ and $SS$ and the columns of the diagonal matrix $D\alpha$ known as singular values. In the following table appear categorical variables that are used in this study. These variables are being considered having in view the concept of non-monetary poverty given by INSTAT for Albania.

1. Outside appearance of building: (Plastered, partially plastered, not plastered)
2. Condition of dwelling unit: (under construction, inappropriate for living, appropriate for living, very good condition)
3. Area of dwelling: (Less than 40 square meters, 40-69, 70-79, 100-130, more than 130 square meters)
4. Type of toilet: (wc outside without pipping, wc outside with pipping, wc outside the dwelling but inside building, wc inside the house, two or more wc inside)
5. Inadequate heating
6. Leaking roof
7. Damp walls, floor or basement
8. Father educational level: (Completed primary 4 years, Completed primary 8 years, Completed secondary, Completed university degree)

3. Results

The results of the Multiple Correspondence Analysis are listed in table 1 with the discrimination measure for each variable.
Table 1. Discrimination Measures

<table>
<thead>
<tr>
<th>Variables</th>
<th>1st Dimension</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outside appearance of building</td>
<td>.005</td>
</tr>
<tr>
<td>Condition of dwelling unit</td>
<td>.001</td>
</tr>
<tr>
<td>Area of dwelling</td>
<td>.009</td>
</tr>
<tr>
<td>Type of toilet</td>
<td>.002</td>
</tr>
<tr>
<td>Inadequate heating</td>
<td>.004</td>
</tr>
<tr>
<td>Leaking roof</td>
<td>.002</td>
</tr>
<tr>
<td>Damp walls, floor or basement</td>
<td>.003</td>
</tr>
<tr>
<td>Father educational level</td>
<td>7.248</td>
</tr>
</tbody>
</table>

Table 2. Results

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Total (eigenvalue)</th>
<th>Inertia</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>7.5</td>
<td>0.937</td>
</tr>
</tbody>
</table>

Table 1 and Table 2 show the information of MCA solution: discrimination measures, eigenvalues and inertia. Discrimination measures as shown in Table 1 indicate the relationship between (latent) dimensions and manifest variables. The first axis with higher explanatory power is the basis to explain the non-monetary welfare and for this reason, it is also named the welfare axis. Discriminating measures of variables are numbers corresponding to the variance of factorial scores of the variable. As the measurement of discrimination is a variance, it gives an account of the importance of the variable according to the phenomenon. Its values on the first dimension (axis) which is welfare dimension show that, when many indicators are taken together, those which permit the best to distinguish the poor from the non-poor. It is noted that the variable which have a high rate of discrimination is the education of the household head.

The main use of inertia is as an indicator of the number of axes to retain for further analysis. To define the number of dimensions to retain, the following criteria/considerations were employed: a) scree test b) eigenvalue (inclusion of MCA dimensions with inertia above 0.2 [9]. It is noted that in our case the inertia which has showed in Table 2 is 0.937. We have chosen only one dimension (axis) to interpret because it is difficult to interpret other dimensions.
Conclusion

The objective of this study was to investigate the links between qualitative variables, namely the links between socio-economic indicators and welfare. This aim is achieved by using the method MCA. This method aims to reduce dimensionality with the least possible loss of information, whereas the interpretation of the extracted dimensions (latent) is based on the categories of the variables that have been analysed. The relational structure between categories (of manifest variables) and the (latent) dimensions provides the information which category-clusters are explained by which latent dimensions. From our results dimension (latent) is interpreted as a dimension of welfare, and from all of the variables, the education of the household head has a higher discrimination measure. This variable has the greatest importance in explaining the welfare dimension. The results of this study help in the orientation of social policy to increase the standard of living, where the main role in this has the educational level.

References

2. www.instat.gov.al
5. Noglo, Y.: Measuring and analyzing the non-monetary approach of multidimensional poverty by the basic needs in Togo, Social Science Research Network (2014), 36-55
Foreign Direct Investment (FDI) Types and Theories: The Significance of Human Capital

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Abstract. One of the economic problems of undeveloped countries, and Kosovo, is that they do not have enough national savings to finance their investments. They are in constant need of foreign capital in forms of both direct and indirect investments, but not every country is able to attract the right mode of FDI, nor does every investor risks his investments without studying the conditions in the host country. The practice of FDI attraction generally incorporates numerous fiscal and monetary incentives. However, one should note that FDI attraction should be accompanied by development and an increase in the level of human capital, as a prerequisite to attract the right FDI and not every kind of foreign investment.

FDI, together with human capital development, are considered among the key drivers of growth as they play complementary effects and reinforce each other. The role of human capital in stimulating FDI and vice versa is one of the controversial issues in the development literature.

Human capital is the factor where the transition process has had significant and long-term implications. Human capital became a crucial determinant and a prerequisite for FDI attraction that a country, including Kosovo, must have if willing to attract the right mode of foreign capital.

This paper seeks to understand the weight of human capital in different types and theories of FDI. Theory and empirical studies are inconclusive as per direct impacts of FDI in developed countries, but when it comes to transition and undeveloped economies, and Kosovo, there is more agreement on the positive effects of FDI in economic development and human capital.

Key words: FDI, human capital, transition, theories

1. Introduction

The transition process from communism-central planning, to capitalism-open economy, in most of the transition countries has gone through structural and dramatic changes. Domestic capital, in most of these transition countries and Kosovo, was incapable to meet huge investment needs that transition required. In the early stages of the transition process, the importance of Foreign Direct Investments (FDI) is seen as crucial and a top priority for policy makers. In general, the practice of FDI attraction usually incorporated numerous fiscal and monetary incentives. However, one should note that FDI
attraction should be (apart from monetary and fiscal incentives) accompanied by development and an increase in the level of human capital, as a prerequisite to attract the right FDI and not every kind of foreign investment – something that happened in Kosovo. Determining which kind of foreign investments a country will attract is a very important step in terms of development and orientation of available human capital stock. Because of structural problems with human capital, Kosovo and other countries that have high unemployment sometimes attempt to attract every kind of FDI, even if it proves to be of limited help, but decreases high unemployment. Such investments (rent seekers) are not necessarily long term oriented and do not create long-term employment and sustainable development of human capital. Moreover, according to Hoti (2005), these investments, in short term, also push wage inequality hence placing strong pressure on the public sector for wage increases (Hoti, 2005).

In the beginning of transition from communism to capitalism, many researchers argued that the average level of education embodied in human capital within transition economies was relatively high (Duczynski, 2001; Druska et al., 2002, Spagat, 2006). However, later on, a number of researchers and empirical studies from well-known international institutions suggested that transition economies lag behind compared with industrialized countries in terms of the quality of their workforce (EBRD 2008). One of them is a supply of trained and educated human capital (UNDP 2010). Since attracting FDI has prerequisites, no doubt, such situation acted as a big barrier to attract higher and qualitative FDI in these countries. Because of this, in the case of Kosovo, which is heavily populated by young people and high unemployment, it is very important to make strong bridges between education and economic development, hence FDI attraction.

As stated earlier, and according to the literature, the problem of human capital was not predicted in the earliest years of transition. When transition started, some researchers argued that the level of human capital in transition countries was quite high, and it did not pose a problem for these countries. The opinion was grounded on simplified proxy by comparing enrollment rates in educational institutions in transition countries to those in the developed countries. In this instance, Spagat (2001 & 2006) shows that based on the educational levels one might suppose that transition economies are in great shape in terms of human capital. However, later it was realized that skills, knowledge and education that exist might not be relevant for foreign investors from industrialized countries. A report by EBRD (2000), and confirmed also in 2008, stated that companies in transition economies lag behind those in advanced industrialized countries in terms of the quality of their workforce. Many skilled workers are performing jobs that do not reflect their level of education, and over time their ability to perform high-level tasks will diminish. A starting point is the study by Druska et al. (2001), who confirmed the problem of human capital in transition countries. In their study, Druska et al (2001) showed that there is a significant mismatch between the type of skills and competencies that the new economy demands and foreign investors and the types of skills and competencies that workers possess. As a consequence, the mismatch between the huge stock of human capital (the supply) and the necessary skills required (the demand) from foreign companies is thought to be a barrier to attract FDI, especially foreign investors that need specialized and trained human capital for their operations in host country. This phenomenon was emphasized more for transition countries that entered very late into the transition process, and FDI was seen as an important injection to boost investment capacities. More specifically, Talpos & Enache (2010) argue that FDI inflows in Central and Eastern Europe (CEE) “have specific patterns of human capital, different from the ones specific to the rest of the developing countries” (p.487).

Having said this, one can conclude that human capital matters in attracting FDI inflows and can speed up the transfer of know-how from foreign investor to host country. The importance of human capital in economic development is widely accepted nowadays. It has been shown that the aim of development
is the human being who is at the same time the actor and the beneficiary of development (Fongang, 2006). For a new country such as Kosovo, the human capital development and FDI inflows are considered equally vital factors for future economic development. There are many reasons why Kosovo desperately needs higher inflows of foreign capital and availability of qualitative human capital. Kosovo currently lacks the domestic capital that is needed to fulfill huge domestic needs and is faced with high unemployment.

2. Literature review

This part, targets, and discusses the main theoretical aspects of existing literature review pertaining to FDI and human capital relationship. It begins by defining FDI from different perspectives, approaches, authors and institutions toward some common fundamentals that are present in all definitions of FDI hence leading to the discussions of the main types and modes of FDI relative to the role of human capital.

Defining and measuring the impact of FDI is not an easy step to be undertaken, especially when the literature on FDI is massive, but inconclusive in many crucial aspects of FDI. Nowadays, the flow of capital might be intangible, short-term but decisive, not always measurable but rather virtual and complex. Moreover, the literature on FDI also recognizes the challenge that explaining FDI in transition countries is easier said than done. FDI behavior, modes and forecasts are different in developed and democratic countries compared to transition countries (including Kosovo) which are not only imperfect but rudimentary too. According to Vasyechko (2012), “the literature review has shown that besides well-known traditional determinants, drawn from the theory, some transition-specific factors have an unambiguous general impact on FDI patterns in these countries” (p.119).

In general, FDI is the course of action whereby residents or companies of one country-source country (sometimes referred as ‘home country’) acquire ownership of assets for the purpose of controlling the production, distribution and other activities of a company in another country-host country (sometimes referred ‘foreign country’). Economically, FDI is a mechanism to transfer resources, including financial capital as well as technology and human resources across national borders while keeping it under the control of the parent company. FDI definition takes on different meanings depending whether it is seen from the perspective of the foreign investor or the host country. However, according to Moosa (2002) “there is something in common in both perspectives: a) there is a control through substantial equity shareholding; and b) there is a shift of part of the company’s assets, production or sales to the host country” (p.2).

According to the International Monetary Fund’s Balance of Payments Manual (IMF, 2011) “FDI is an investment that is made to acquire a lasting interest in a company operating in an economy other that of the investor, the investor’s purpose being to have an effective voice in management of the company” (p.7). Almost the same definition is found in United Nations Conference on Trade and Development World Investment Report (UNCTAD, 2011) which defines “FDI as an investment that involves a long term relationship and reflecting lasting interest and control of a resident entity in one economy (foreign direct investor or parent company) in a company resident in an economy other that of foreign investor” (UNCTAD, 2011).
The rationale behind these two credible international institutions who used ‘long term’ and ‘lasting interest’ in their definition is to make a distinction between FDI and portfolio investments which are characterized with a lack of long term commitment of foreign investor and involve high turnover of securities. Even the most recent and contemporary literature on the most widely accepted definition of FDI is known as “IMF/OECD benchmark definition” because it was provided by the joint workforce of these two international organizations with the objective of providing standards to national statistical offices for compiling FDI statistics. The gist behind the IMF/OECD benchmark definition is that “FDI is an international venture in which an investor residing in the home economy acquires a long-term “influence” in the management of an affiliate firm in the host economy” (OECD 2008, p.61).

Current FDI trends have not changed much about the mature definition of FDI. For example, a recent book by Theodore Moran (2012) declares the same opinion that FDI takes place “when a corporation in one country establishes a business operation in another country, through setting up a new wholly-owned affiliate, or acquiring a local company, or forming a joint venture in the host economy (p.3).

Other FDI definitions that are debated in similar terms include “control” and “lasting interest.” In this line Ragazzi (1973), describes FDI commitment “as the amount invested by residents of a country in a foreign company over which they have effective control” (p.471). Contessi and Weinberger (2009) following the IMF/OECD common definition postulates the existence of such long-term control and influence “should be assumed when voting shares or rights controlled by the multinational firm amount to at least 10 percent of total voting shares of rights of the foreign firm” (p.63).

However, one must note that shareholding or voting shares is not the only circumstance to exercise control. According to Lall and Streeten (1977) and Contessi et al (2009), it is not necessary to be the majority shareholder in order to exercise direct control as this can be achieved and exercised even with low equity share or even without an explicit management contract (Lall and Streeten, 1977; Contessi et al 2009). For example, according to actual legislation in Kosovo, an investment is considered foreign only if a foreign entity (or group of foreign entities – in the same company) holds 25 percent of total shares (Law nr. 02/L-33 on foreign investment, p.108).

In the abovementioned definitions, the role and impact of human capital is essential but relative to the mode of investment, location, industry and long-term goals of investors. In some cases, the magnitude of human capital is the central and influential determinant of the decision making process on the location choice of the foreign investor. The relative importance of human capital, however, is not as straightforward as it might appear. The availability of cheap human capital sometimes is not a sufficient condition in the later stages of FDI attraction. For example, cheap and huge availability of human capital might be an advantage for foreign investors and host country in the stage of attraction; but in long term it might become a significant barrier accompanied with policy implications for the host country in increasing FDI in high technology industries or automation of some industries. This is especially so in those cases where the main goal of FDI is no longer to decrease unemployment but instead to increase human capital productivity.

The impact of human capital on FDI and vice versa is surprisingly wide range, inconclusive and differs in least developed countries, developing, developed and transition countries. Theoretical literature, in general, presumes human capital among the most important ingredients of inflow of FDI (Agarwal 1980; Dunning 1988; Lucas 1990; Zhang 1999; Markusen 1999; Aavik & Walsh, 2010 and Rizvanolli 2010). The role of human capital is not much related to the definition of FDI, but more so with operations, competencies, productivity, spillover effects of foreign investment operating in a host
country. The results reported from different studies differ in respect to their measures and proxies used, estimation methods, specifications and period covered. According to Bačić, Račić and Šonje (2004), “FDI can facilitate growth of recipient country via capital formation channel directly and via positive spillovers and inclusion into international productive and innovate networks indirectly” (p.59).

Moreover, Zhang and Markusen (1997) in their empirical study found that the poorest countries attract less foreign investment share of world FDI than their share income. In the same study, the researchers found that small markets attract fewer investments per capita when compared to big markets. Their models also suggest the existence of a development trap for small, skilled-labor-scarce countries (p.19-20). In this line, Kucer (2002) in his cross-section analysis found a positive impact of net average FDI on human capital (proxies: literacy rates, and average years of education for population over 15 years old) during the period of 1993-1999. Another study to find positive correlation between human capital and FDI inflow is the study undertaken by Shatz (2003) in 100 developing countries. The study used only one proxy: years of education for people over 15-year-old and over. The results from the study conclude that FDI is positively impacted by human capital (Shatz, 2003).

The correlation between human capital and FDI is found also in a study of Teixeira (2005). His study concludes that foreign capital positively affects human capital in the education and specific skills needed to perform a job. Moreover, the same study points out that research and development (R&D) has a significant mediating role in that positive correlation between FDI and human capital intensity (Teixeira, 2005).

3. **Types of FDI: the significance of human capital**

Depending from which perspective is studied and other specific purposes, researchers distinguish different types of FDI. In a broader sense, and for the purpose of this study, the major classifications are: 1) Greenfield Investments; 2) Mergers and Acquisitions (M&A); and 3) Joint Ventures.

3.1. **Greenfield investments**

Greenfield investments are made when foreign companies expand the bulk of investment or establish new production capacities in the host country. Greenfield investments are a most welcomed foreign investment for host countries, especially when the main goal is to decrease high unemployment. Greenfield investments are the primary target of a host nation’s promotional efforts because they create new production capacity, jobs, transfer technology and know-how, and can lead to linkages to the global marketplace. In terms of human capital greenfield FDI usually creates new jobs and increases the productivity. Though greenfield investments are welcomed in the host country, one should note that this might crowd out local companies and some specific industries (particularly those dependent upon technology). While the profit of local companies flows back into the domestic market, this is not always the case with foreign companies that undertake greenfield investments. Because of high unemployment, in case of Kosovo, this type of FDI or similar sub-types are most welcomed.
3.2. Mergers and acquisitions

Mergers and acquisitions (M&A) usually are undertaken when a transfer of existing assets from local firms to foreign firms takes place. In other words, assets and operation of firms from different countries are combined to establish a new legal entity. It is assumed that in countries with lower levels of development there are fewer opportunities for M&A behavior that exist. According to IPAK (2012) Annual Study on Perception of FDI, compared to greenfield investment “M&A provide no long term benefits to the local economy, because in most deals the owners of the local firm are paid in stock from the acquiring firm, meaning that the money from the sale could never reach the local economy” (p.9). The most emphasized benefit from this type of FDI is increased productivity of the workforce, but not much can be proved in terms of increased employment. Empirical studies in this line are inconclusive and contradictory.

3.3. Joint ventures

Joint ventures can involve a local company, government or a foreign company operating in the host country. Cross-border joint venture is one in which economic entities from at least two countries are involved. One positive spillover in terms of human capital is technical spillover especially when there is a combination of foreign and local company. According to Dunning and Lundan (2008), one of the main factors “influencing the viability and success of cross-border joint ventures concerns the choice of partner and reciprocal trust between partners” (p.273). Rather than profit gain, there are different factors and motives behind joint ventures. According to the model of Casson (2000), formation of joint ventures has nine factors such as: economies of scale, market size, economies of scope, technological uncertainty, technological change, cultural difference, interest rates, protection of autonomy and missing patent rights (Casson, 2000). The significance of human capital development in joint ventures varies in developed countries compared to transition and undevelopment countries.

4. FDI theories and hypothesis: the significance of human capital

Historically, the first attempt to explain international trade and FDI was considered Ricardo’s theory of comparative advantages (Denisia, 2010). Though realistic, one should note that FDI cannot be explained by a theory that is based only in two countries, two products and perfect mobility of resources. Recently, capital flow, international trade and FDI marked an enormous increase. The choice of FDI depends on preliminary analyses, factor analyses and long-term objectives of the investors.

Numerous theories and hypothesis are used to separate FDI from international trade theory. To clarify the terminology, we use term ‘general FDI theory’ to encompass all the mainstream theoretical variety on the issue. In this line, theories and hypothesis seeking to explain the motivations behind FDI are related with MNCs’ choice of particular entry modes and localizations. Several studies provide overviews of FDI theories: for example, Agarwal (1980); Calvet (1981); Helleiner (1989); Cantwell (1991); Meyer (1998); Markusen (2002) and more recently, Faeth (2009) and Denisia (2010). Overall, in particular based on a classification proposed by Faeth (2009), there are 12 main branches of FDI theory:

   1) Monopolistic advantage theory, (Hymer, 1960; Vernon, 1966)
2) Aggregate variables as determinants of FDI (Scaperlanda and Mauer, 1969)
3) The substitute theory (Mundell, 1968),
4) The complement theory (Kojima, 1975),
5) OLI paradigm (Dunning, 1981),
6) The theory of traditional multinational activity determinants of horizontal FDI according to the proximity-concentration hypothesis and vertical FDI according to the factor-proportions hypothesis (Markusen, 1984; Helpman, 1984),
7) The theory of horizontal FDI, vertical FDI and the knowledge capital model (Markusen, 1996, 1997; Markusen and Venables, 1998),
8) The resource-based theory (Wernerfelt, 1984; Barney, 1991),
9) The business network theory (Jarillo, 1988; Ebers and Jarillo, 1998),
10) Theory of new economic geography (Krugman, 1995),
11) Diversified FDI and risk diversification model (Rugman, 1975, 1976; Kopits, 1979; Miller and Pras, 1980), and
12) Policy variables as determinants of FDI (Bond and Samuelson, 1986; Black and Hoyt, 1989; Hauffler and Wooton, 1999; Haaland and Wooton, 1999).

Another approach of studying FDI theories is by classifying all theories under two headings: i) from macroeconomic point of view, FDI is a “particular form of capital flows across borders, from countries of origin to host countries, which are found in the balance of payments. The variable of interest is: capital flows and stocks, revenues obtained from investments” (Denisia 2010); and ii) from microeconomic point of view that tries to put forward the main motivations of foreign investors (Lipsey, 2001). It also examines the “consequences to investors, to the country of origin and to the host country, of the operations of the multinationals rather than investment flows and stock” (Denisia 2010, p.54).

Even the newest theories on FDI cannot capture entire complexity of FDI, and other forms of foreign investments, thereby, are difficult to find a general framework, approach or theory that is accepted and explains everything about FDI and some classifications of FDI theories may result in some overlap (Agarwal 1980; Lizondo 1991; Dunning 2008; Vasyechko 2012).

Despite numerous classifications of FDI theories, for our purposes, the standard classification and approach employed by the author is the one followed by Agarwal (1980), discussed and analyzed in Moosa (2000) and Denisia (2010) that splits most FDI theories into two categories: 1) Theories assuming perfect markets; 2) Theories assuming imperfect markets.

4.1. Theories assuming perfect markets

The most important theories and hypothesis that assume perfect markets are: a) the differential rates of return theory and hypothesis; b) the portfolio diversification theory and hypothesis; and 3) the market size theory and hypothesis.

4.1.1. The differential rates of return theory and hypothesis.

The theory of differential rates of return is among the oldest theories that attempts to clarify why some companies run after new markets or indulge in FDI. The main idea and hypothesis of this theory is that capital flows from countries with low rates of return towards countries with higher rates of return. “The
rational for this hypothesis is that companies considering FDI behave in such a way as to equate the marginal return on and the marginal cost of capital” (Moosa 2002, p.24). It is obvious that this theory assumes risk neutrality hence making the rate of return alone as main determinant why a foreign investor selected a specific location or mode of investment. Based on this assumption, domestic and foreign investments are perfect substitutes.

In this respect, some empirical studies tried to examine the correlation between relative rates of return in a number of countries and the allocation of FDI among them, but failed to provide supporting evidence (Agarwal, 1980). Among influential studies testing such hypothesis is that of Weintraub (1967), who used US data to test main hypothesis of this theory. The conclusion was that “there was no significant relationship between inter-country differences in the rate of return and the flow of capital” (Weintraub, 1967). In addition, the studies by Bandera (1968) and White (1986) also rejected the main hypothesis of this theory. However, an important step in their studies is the recognition of sufficiency of return as a prerequisite for the movement of capital (Bandera, 1968; White 1986).

An observed problem and consistency of the main hypothesis of this theory is that countries simultaneously experience inflow and outflow of FDI. If the main hypothesis of this theory is that capital flows from countries with low rates of returns toward countries with higher rates of returns, then it will flow in one direction – only toward countries with higher returns and not vice-versa, which is not a consistent with current situation in international trade, FDI stock and location.

In terms of human capital, a very interesting study is that of Barrel and Holland (2000). In their study, they found that FDI has led to increasing labor productivity, hence, to higher rates of returns in the manufacturing sector in Central Europe (CE), especially in cases when capital moved from developed to undeveloped countries. Another interesting research study was that of Yang (1999), who tried “to adjust the rates of return on physical capital to allow for differences in human capital as an explanation for why FDI may go low return countries. The study tried to explain why the majority of FDI in China has been flowing to rich coastal areas rather than to poor inland areas, when rates of return are higher in poor areas.

4.1.2. The portfolio diversification theory and hypothesis
The unique theoretical background of this theory can be traced back to the theory of portfolio selection of Tobin (1958) and Markowitz (1959). The impact of this theory is observed in increasing international trade and capital mobility. In contrast to the differential rates of rate of return theory, here risk is an essential determinant. According to Moosa (2002) “capital mobility and FDI will be constrained by the desire to minimize or reduce the risk, which is achieved by diversification” (p.26). In the case of transition countries, including Kosovo, this theory is very helpful to explain some behavior patterns of FDI decisions and risk associated with such investments.

There are numerous ways to test the relationship between the amount of FDI and risk existence in a particular areas or a group of countries. As discussed in Moosa (2002), documented by Haußbauer (1975) and Agarwal (1980), and later by Denisia (2010) “One way to test this hypothesis is to examine the relationship between the share of FDI going to a group of countries and two decision variables: the rate of return, and risk as measured by the variance or the standard deviation of the rate of the return” (p.26).
Like the differential rates of return theory, the portfolio and diversification theory does not explain why MNCs are the greatest contributors to FDI, and why they prefer FDI to portfolio investment. In this respect, a good explanation is given by Ragazzi (1973) that might be true also in the case of Kosovo. According to him, in the case of developing countries, financial markets are not only imperfect but also rudimentary, hence making portfolio investment less attractive than FDI (Ragazzi, 1973). Another reason might be also the degree of control. MNCs prefer FDI compared to portfolio investment because it gives more control over the assets and other financial means in the host country. In terms of human capital, most of the studies are inconclusive and derived from country specifications.

4.1.3. **The market size theory and hypothesis.**

The market size theory and hypothesis explains the volume and directions of FDI in light of the market size of the host country. According to this theory, large market size is expected to have a positive impact on FDI. The market size hypothesis argues that “inward FDI is a function of the size of the host country market, usually measured by GDP” (Majeed and Ahmad 2008, p.79).

A majority of the empirical studies on the determinants of FDI, in one way or another, contain some measures of market size in the host countries, typically using real GDP comparing to nominal GDP as a proxy (Moore 1993; Bajo-Rubio 1994; Sosvilla and Rivero 1994; Wang and Swain 1995; Lipsey 2000; Love & Lage Hidaldo; Bogdanova and Olovska 2008; Dunning 2008; Contessi and Weinberger 2009). These studies used either real GDP or nominal GDP as a proxy to determine the significance in attracting FDI.

Should this be true, then Kosovo, which has small market size and GDP, will find that efforts to attract FDI are not productive. But, this conflicts with apparent “real life” results since Kosovo is a net importer of goods and services. However, some studies did not find this relationship. For example, studies by Groenewold (2000); Tcha (2000) and Yang (2010).

4.2. **Theories assuming imperfect markets.**

There are many FDI theories that assume imperfect markets. These section discusses the following theories and hypothesis: a) the location theory and hypothesis; b) the internalization theory and hypothesis; c) the eclectic theory or OLI paradigm and hypothesis; c) the international product life cycle theory and hypothesis

4.2.1. **The location theory and hypothesis.**

The main idea of this theory is mobility of some factors of production, such as labor and natural resources. According to this theory and hypothesis, FDI exists because of mobility of some factors of production hence such mobility leads to location-related differences in the cost of factors of production.

One of the most important elements that can impact location related differences is human capital accounted for in terms of wages paid by foreign investors. In terms of human capital, the location hypothesis attempts to argue that countries with low relative wages are a preferred destination for FDI. However, what matters, is not just the wage but also the quality and productivity of workforce that foreign investors rank very high.
Another important element for foreign investors as to selecting a specific location is the cost of the reallocation and adjustment of resources. When these costs are high, they lower the possibilities to attract foreign investors (though some researchers argue that reallocation and adjustment costs are very small and not decisive factor). Such conclusions were reached by Porto and Hoekman, (2010) and Francois et al (2011), but there have been some notable exceptions too (e.g. Cosar, 2011). Exceptions are found also in a model developed by Susan Stone, Patricia Sourdin and Clarisse Legendre (2013) postulating that “while it is widely accepted that there are adjustment costs associated with reallocation of resources, in most models these costs are assumed to be very small, more recent evidence is casting doubt on this assumption” (p.2).

In terms of human capital, the location hypothesis also emphasizes the degree of unionization by workers’ representatives in the host country, because is assumed that unionized and centralized trade unions have higher bargaining power thereby pushing future wages higher. Nowadays, involvement of MNCs in FDI would prefer flexible and non-unionized labor markets in preference to centralized and unionized. This hypothesis is supported by Leahy and Montagna (2000), who show “that in absence of taxes and other subsidies, the MNC is less likely to locate in the host country under decentralized than under centralized wage setting regime, despite the fact that latter typically yields higher wages” (p.245).

4.2.2. The internalization theory and hypothesis.
The first attempts to explain the internalization theory in a national context was made by Coase (1937), then developed by Buckley and Casson (1976; 1983) and Hennart (1982). Narrowed focus only in national context was improved when Hymer (1976) developed the theory also in an international context. Sometimes this theory is claimed to represent a general theory of FDI and other theories are a subset of the general theory of internalization hypothesis. According to this theory, certain costs can be saved by internalization of some processes. Denisia (2010) argues that internalization theory also “provides an explanation of growth of MNCs and gives insights into the reasons for foreign direct investment” (p.55).

The main hypothesis of this theory is that FDI arises from the efforts by companies to replace market transactions with internal transactions. In the context of FDI, Denisia (2010) identified two major determinants that are crucial when explaining this theory. These determinants are: a) removal of competition; and b) advantages which some companies possess in particular activity (p.56). Through these determinants, internalization theory demonstrates that MNCs “are organizing their internal activities so as to develop specific advantages, which then to be exploited” (Denisia 2010, p.56).

Due to market imperfections, this theory is superior in explaining firm-specific advantages and demonstrates that companies are conditionally involved in FDI. According to the theory, companies will undertake FDI only if the benefits of exploiting firm-specific advantages are higher than the relative costs of the operations abroad.

Eden and Miller (2004) argue that the theory should take into consideration information costs too. They discussed information costs for foreign companies with respect to local companies, currency risk, and different government treatment thereby adjustments costs when investments are made abroad. The theory recognizes the fact that FDI is a firm level strategy decision rather than a capital market financial decision.
The importance of this theory in terms of human capital is the emphasis on R&D that companies must involve in order to survive in new markets hence development and spillover effects on human capital.

4.2.3. The eclectic theory or the OLI paradigm hypothesis.

This theory was proposed and developed by John H. Dunning (1977, 1979, 1988 & 2008). The main idea of eclectic theory is integration of internalization theory, industrial organization theory and location theory into one general framework. According to Dunning (2008), “the eclectic paradigm seeks to offer a general framework for determining the extent and patterns of both foreign owned productions undertaken by country’s own companies, and that of domestic production owned and controlled by foreign investors” (p.95).

Eclectic theory is referred to as the “OLI paradigm,” which attempts to explain the international flows and FDI in terms of what is the motive rather than what should be the level and the structure of foreign investment. The OLI paradigm includes both macroeconomic location advantages and microeconomic ownership advantages, as they are incomplete if taken separately (Straker, 2006). In addition, the OLI paradigm confirms and develops previous assumptions that apart from the structure of resources and market size, “government policy can also determine the location of FDI in a host country, also taking into account human nature as a motivation of MNCs for FDI” (Vasyechko 2012, p.130). In other words, it addresses itself primarily to positive rather than normative issues. According to Dunning (2008) “it prescribes a conceptual framework for explaining ‘what is’ rather than ‘what should be’, the level and structure of the foreign value activities of enterprises” (p.95). Eclectic theory and its framework is based on three advantages: Ownership (O); Location (L) and Internalization (I).

According to eclectic theory, “ownership (O) advantage” explains the “why” or motivation, of MNCs activities. Dunning (2008) postulates that “ownership advantages are defined as the degree to which a firm possesses sustainable ownership-specific advantages over other firms in the market. Some examples of these advantages are: innovative capacity, access to financial resources, and organizational and marketing systems” (p.96). This includes all the specific, often intangible assets, which a company can either create (through managerial and organizational skills and knowledge,) or purchase (e.g. brand names, patents, etc) compared to local competitors that do not posses.

Another important advantage of eclectic theory is “location (L) advantage” that explains the "where," or location of the companies and which are specific to the country. Examples of such specifics are: labor force (availability and quality), natural resources and societal structure (political structure and legal systems) as explained above under the heading of location theory and hypothesis. The logical consequence will be that company will supply the foreign market from home country base, but location advantage such as distributions of inputs makes it profitable for a company to exploit its assets overseas.

Finally, internalization (I) advantage explains the "how," or the manner, of MNCs activities. Internalization” is the degree of ownership and control. At one end of the spectrum is no control or ownership. Transactions are made at arm's length or through the market. At the other end of the spectrum is full control. The firm “internalizes” the market transactions by owning or controlling the other firm and the transactions are not arm’s-length” (Dunning 2008, p.327-330). The more ownership specific advantages a company has compared to competitors the higher is the incentive to internalize their use. Details of this specific advantage are discussed and explained under the heading of internalization theory and hypothesis.
4.2.4. The international product life cycle theory and hypothesis.

The international product life cycle theory started to take hold after World War II in viewing the international production as a sequential process. The theory was developed by Raymond Vernon (1966) who combined micro theory of the product cycle with trade theory. Vernon believes that there are “four stages of production cycle: innovation, growth, maturity and decline” (Denisia 2010, p.55).

In this respect Vernon (1966) explained his arguments by stating “that in the early stages of the life of a product, production is undertaken in the home country because of the need of producers to have easy access to inputs and to maintain swift communication with suppliers and competitors. At this stage, the product is highly differentiated and its demand fairly inelastic” (p.195). Producers later begin to export the product to advanced countries, which have demand and supply characteristics similar to those of home country. Petrochilos (1979) and Denisia (2010) find such hypotheses useful and central for interpretation of FDI too though recognize the fact that such hypothesis are referential particularly for products and services that are highly technological and related with income elasticity of demand.

Moreover, according to this theory and hypothesis, the importance of human capital is essential in the decision to establish production in the host country. Vernon (1979) postulated “that in the advanced stages of standardization, labor costs will become a critical consideration in production, hence less developed countries with low-cost labor will now offer a competitive advantage as a production location” (p.6).

Three stages of the products are central in explanation of this theory: 1) the initial production that takes place from innovating companies at home close to the customers and companies can charge high prices because the demand for the new products is inelastic; 2) the maturity of products hence “export of the product to countries having the next-highest level of income as demand emerges in these developed countries; and 3) complete standardization of the product and its production process, which is no longer an exclusive possession of the innovating company hence FDI in developing or less developed countries with lower level of incomes, in order to save costs and explore possible cost advantages. Such hypothesis are evident today where we can find many well-known innovative products switching from the country of innovation, in the beginning acting as the net exporter, but later as net importer (for example Apple products).

As we analyze these stages in terms of cost advantages, FDI and human capital becomes important considerations especially when products and services reach the stage of maturity and standardization. In this case, FDI is considered to be a defensive move of companies in order to maintain competitive position against local and foreign investors.

Conclusions

This paper provided a review of theoretical and empirical literature of FDI in general, FDI types and theories and the relationship with human capital. The literature review reveals a diversity of thoughts regarding the nature of the relationship between FDI and human capital. Theory and empirical studies are inconclusive as per direct impacts of FDI in developed countries, but when it comes to transition
and undeveloped economies, and Kosovo, there is more agreement on the positive effects of FDI in economic development and human capital.

In terms of types of FDI, the impact of FDI on human capital is more highlighted and studied in greenfield FDI type (especially the benefit of decreasing the unemployment in the host country) because this mode of investments usually creates new jobs and increases the productivity. Greenfield investments are a most welcomed foreign investment for host countries. The same can not be said for other two types of FDI: mergers & acquisitions (M&A) as well as joint ventures.

The examination of literature review, found that in most of the perfect market theories and hypothesis the role of human capital is less studied compared to imperfect market theories and hypotheses. In imperfect market theories, human capital is identified as an important determinant for capital flow and FDI attraction.

The importance of human capital in economic development is widely accepted nowadays. Human capital matters in attracting FDI inflows and can speed up the transfer of know-how from foreign investor to host country. FDI has a positive spillover effect and productivity of workforce in the host country. However, theory gives a significant influence of FDI on human capital, education, skill accumulation and other non-economic human development factors.

Bearing in mind that Kosovo is heavily populated with young people but faces high unemployment, it is very important to make strong bridges between the education system and FDI attraction. Kosovo needs a minimum of basic schooling for all adult workers to show that the country has a sound investment climate. In today’s dynamic business environment, the linkage between the theory of schooling and practice at business is very central. The type of human capital necessary to attract FDI visibly depends on the type of FDI host countries seek.

References

Foreign Direct Investment (FDI) Types and Theories: The Significance of Human Capital

Agritourism potential as a perspective in Kosovo

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Abstract. Tourism development is a broadly diversified activity from the rest of economic sectors. While in the economy a competition between the sectors is a key to better selection and specialization, tourism in general has some exceptions arising from the state support due to the importance this sector has in promoting the country abroad, through promotion, subsidies and programs, including intrastate programs and from the European Union. The main reason behind such a support lies on the needs of people for holidays, relax, health and food. The Republic of Kosovo has an area of 10.887 km² and a population of 1.8 million, where tourism development is seen as a need for the people at home as well as foreigners who visit Kosovo. The strategy of tourism development should come as a result of interaction between many factors, among others, agribusiness and standardization of goods and services in Kosovo which, if developed at a satisfactory level, can generate new jobs and economic growth. Although tourism potential in Kosovo as a small country does not offer many choices, it has got some exclusive preconditions that are available in the mountains of Sharr, Curst Mountains, historical sites such as the city of Prizren, the Vushtrri Castle and many archaeological sites of different historical periods, are some of many examples for pushing the support in this respect. To find out where does Kosovo stand in this process and perspective, the aim of this paper is to critically assess the interaction between tourism and agriculture products as potential for agritourism, and address some recommendations as which would be a better alternative of its development.

JEL: F53, O24, Q18.

Keywords: Republic of Kosovo, agritourism, subsidies, BE, heritage.

Introduction

Agritourism is that branch of tourism revolving around agricultural activities. It may range from visiting the farms, picking up fruits and vegetables, food production, getting familiar by the visitors on certain farming techniques, walking, leisure, entertainment, and holidays in hotels or restaurants. As such, agritourism is becoming an industry on the rise in many parts of the world. One of the earlier and still ongoing forms of agritourism is organizing the events as host festivals to attract the visitors and potential buyers into rural areas to get familiar with local communities. The visits benefit local famers or businesses and the visitors, especially if agritourism tends to be unique or different on its own. Different foods, plants, vegetables, natural environment, local customs and traditions, cuisine, and historical differences between the communities provide an opportunity for the development of this
branch of tourism. Interesting, this sector is attracting more attention and commitment in advanced industrialized nations. The main resources of agritourism development are: i) assess potential success and challenges; ii) best management practices; iii) risk management and liability; iv) zoning and health considerations; vi) marketing; vii) associations and networks; and viii) online resources. Apart from the strategies at national level, the sector is rapidly growing in interest in various regions within one country who prepare their own strategies at local level, something which even the national strategies often go on in exploring by districts. This happens due to the specificities each region has or is better known for. For example, as agritourism attracted the attention across North America, a study by a Canadian tourism agency identified it in the Ontario region as one of the seven priority projects. Similar regional strategies were prepared in the USA, to make the regions or states economically more viable, encourage agriculture to diversify their enterprises, make their products more value added and competitive, especially in the states of natural diversity such as Utah.

Promoting and supporting agritourism development is made for the purpose of fostering rural development, but not in the manner to which urban construction has grown to large cities and conurbations, but mainly to preserve the environment, and from it to do business. This potential is witnessed in many developing countries, thus they have become aware of its development. The government of Kosovo is also focused on the perspective of agritourism and has prepared respective strategies to foster it.

Methodology and sources

The primary source of material for this paper are the Government strategies for development, especially those related to tourism development, which are taken for analysis. A number of statistics are gathered as secondary data from official publications in Kosovo to find out the trend and the state of tourism in general, then various data are selected for agritourism. All three are analyzed to get an overview on the potentials for agritourism development.

Agrotourism versus other types of tourism in Kosovo

In the aftermath of 1999 war Kosovo was at the center of many international organizations and visitors. Initially, a United Nations Interim Administration (UNMIK) was established with a mission to restore peace and provide assistance for reconstruction and development. Along with it, a number of individuals apart from their curiosity to get more familiar of the war torn society, begun to explore Kosovo into more details, in particular her cultural heritage and landscape.

What Kosovo is known for regarding tourism in general? First, ethnic composition where majority of her people under 2 million is Albanian, and including minorities such as Serbs, Bosniaks, Turks, Egyptians and Romani, each of them having distinct ethnic and religious characteristics. Second, religious heritage. The overwhelming majority of Albanians are Muslims with fewer than 2% of them being Roman Catholics. Bosnians, Turks, Egyptians and Romani are also Muslim. The Serbs who are the largest minority, are Eastern Orthodox. Third, derived from the second, cultural heritage involving architecture, cuisine, unique traditions, and landscape. Although a small area, Kosovo is relatively rich in cultural heritage dating back as far as 3,500 BC. One of such proofs is the discovery of the Goddess on the Throne in the outskirts of Pristina capital city in 1956. The heritage of ancient Illyrian civilization has been discovered all over Kosovo, namely of the Dardani tribe. Of particular importance were some archaeological excavations in the 21st century, especially the artifacts containing engravings from sacred geometry from the Bronze Age, such as the Flower of Life, Tree of Life, Illyricum Sacrum (Star of David), crescent moon with five-pointed star. These and associated discoveries have been explored from academic and policy point of view for archaeotourism development, though a study by Mulaj found that Kosovo does not have, among others, an organized research apparatus and expertise to make it work, and recommended that foreign scholars and foundations should further research the matter in Kosovo. The Medieval heritage is rich and diversified, beginning with Byzantine, Slavic, Ottoman and Albanian culture. A part of that heritage has been destroyed or vandalized in the course of historical events. During the reign of communism, a number of religious objects such as churches, mosques and synagogues have been destroyed. During the 1999 conflict, the Serbs burned hundreds of mosques. In the March 2004 riots, Albanian mobs set ablaze dozens of Serb orthodox churches. The diversity when it evolved in ethnic and/or religious hatred, drew the international attention that Kosovo’s cultural heritage must be protected.

The number of visitors to Kosovo has been constantly growing over the last three years. There 11,458 foreign tourists visiting Kosovo in the last quarter 2013, a number which has almost doubled to 22,887 in the third quarter 2015. Along with it, the number of days/nights spent in Kosovo also grew substantially from 18,854 to 33,317 over the same periods.

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The plotted numbers in Figure 1 suggest that visiting Kosovo has been on a rise since 2008, then for some two years experienced a decline, most likely due to a financial crisis. The trend continued to increase since the early 2012. As Kosovo is divided into seven main regions, it is useful to see the figures broken down as in the table below.

Table 1: Number of visitors to Kosovo by regions from 2008 to 2014

<table>
<thead>
<tr>
<th>Regions</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gjakova</td>
<td>2,263</td>
<td>2,240</td>
<td>2,031</td>
<td>1,640</td>
<td>1,597</td>
<td>1,517</td>
<td>2,062</td>
</tr>
<tr>
<td>Gjilan</td>
<td>3,152</td>
<td>3,210</td>
<td>1,976</td>
<td>2,251</td>
<td>1,937</td>
<td>1,718</td>
<td>1,552</td>
</tr>
<tr>
<td>Mitrovica</td>
<td>1,873</td>
<td>2,471</td>
<td>2,894</td>
<td>2,646</td>
<td>2,875</td>
<td>2,915</td>
<td>2,631</td>
</tr>
<tr>
<td>Peja</td>
<td>4,924</td>
<td>8,288</td>
<td>8,337</td>
<td>6,633</td>
<td>7,593</td>
<td>6,630</td>
<td>11,534</td>
</tr>
<tr>
<td>Prizren</td>
<td>3,632</td>
<td>4,639</td>
<td>4,663</td>
<td>5,434</td>
<td>6,212</td>
<td>8,109</td>
<td>8,615</td>
</tr>
<tr>
<td>Pristina</td>
<td>27,076</td>
<td>57,569</td>
<td>49,172</td>
<td>46,636</td>
<td>68,537</td>
<td>68,687</td>
<td>77,167</td>
</tr>
<tr>
<td>Ferizaj</td>
<td>1,374</td>
<td>10,532</td>
<td>9,972</td>
<td>7,153</td>
<td>10,012</td>
<td>5,878</td>
<td>4,229</td>
</tr>
<tr>
<td>Total</td>
<td>44,294</td>
<td>88,949</td>
<td>79,045</td>
<td>72,393</td>
<td>98,763</td>
<td>95,454</td>
<td>107,790</td>
</tr>
</tbody>
</table>


These were only the numbers registered in the hotels where the visitors stayed. The actual number of visitors who might have resided in rented premises or left within a day, was significantly higher. The
number is driven in part by the fact that Kosovo has no visa regime for any foreign citizen, while Kosovo citizens remain the only ones in Europe who are not yet liberalized the visas by the European Union. The difference in numbers by the region is worth explaining a little. Pristina is the capital and the largest city, after which, by the number of inhabitants, follows Prizren. However, Peja as the third largest city attracted more than 30% visitors than Prizren in 2014. The most frequent visits were made to cultural sites and rural areas, namely in the mountains, in which Peja, Prizren and Ferizaj are most known. In other words, their attraction in part came from the interest of visitors in agritourism.

Peja lying to the West of Kosovo has got some attractive agritourism resources such as natural beauties along the Rugova mountains that is home to two major rivers: the White Drin (also the largest river in Kosovo) and Lumbardhi. Both rivers contain the fish of sweet waters. The district of Rugova consists of 13 scattered villages who have access to the city of Peja through the main road leading up to the border with Montenegro. The villages are traditionally known for cattle breeding and producing organic food of animal and agricultural origin. The region has primary attracted Kosovo businessmen who have begun constructing leisure villas, restaurants and small hotels. Family farms are seeing their benefits by offering traditional cuisine to the visitors who went there on daily basis for walking, collecting forest fruits, hitchhiking and skiing. Public spas can be found in many parts of Kosovo, the most known of which (Ilixha) is located in the Peja region. It is home to a thermal spring water and has acted for decades as a health rehabilitation. The range of Curst Mountains (Bjeshket e Nemuna) run from Prizren through Peja to Istog and Serbia. Mokra Gora lies partially in western Kosovo and partially in southwestern Serbia.

A similar agritourism has emerged in Prizren and Ferizaj region. Prizren is bordered from the southeast by the Sharr mountains, with similar features of agritourism like Peja. The “Sharr cheese” is a special type of cheese, which, in addition to being available from household farmers, is also industrially mass produced and branded by a company located in the city of Prizren. To the northeast of the city, lies Prevala mountain, a beautiful natural park which recently has become a matter of controversy as many Kosovo politicians have constructed their villas there, much of them with suspicious money. Public opinion and civil society are complaining that this way of uncontrolled construction is not only damaging the site, but also limiting the prospects of agritourism. From Prevala the way leads to Brezovica skiing center in Ferizaj region. It is one of the most known skiing resorts in the Balkans. Great potentials for agritourism are also found in the Mitrovica region, though here, as the lower number of visitors suggest, still cannot be exploited at a satisfactory level. The primary cause are ethnic disputes between the Serbs who control the northern, and Albanians in the southern part of the city and region.

While some resources and potentials exists to boost agritourism, the sector itself is not without challenges. In 2016, the foot and mouth disease spread in Kosovo (also in the neighboring countries), affecting many cattle. As a consequence, the livestock begun to decrease. Once favored traditional meat products, the consumers now are a little cautious by asking and being sure that the meat they eat is not from affected animals by foot and mouth disease. The Government undertook the needed measures by vaccination and the disease appears gradually to be neutralized.
Agritourism potential as a perspective in Kosovo

Strategies of agrotourism development

The Government of the Republic of Kosovo has been preparing reports, strategies and undertaking some measures to promote tourism development in general and agrotourism in particular. Tourism in 2004 accounted for around 10% of Kosovo’s GDP. A joint report by the Ministry of Trade and Industry and the Ministry of Environment and Spatial Planning of the Republic of Kosovo in 2004, identified three levels that may affect the demand for tourism in Kosovo. Level one, Kosovo’s offer for tourism than begins from local, regional, national and international demand. Level two, touristic offer with a focus on regional context or in comparison with Kosovo’s neighbors (Albania, Montenegro, Macedonia, and Serbia). Level three, touristic offer with the aim to attract one day or transit visits in and through Kosovo in the form of excursions. In justifying these levels, the report informs about the potentials and available resources in different regions of Kosovo.\(^{23}\) We referred to some of these available resources in previous section. A further detailed profile in the sector of tourism was produced in 2014 by the Ministry of Trade and Industry, which was based on a survey of the companies dealing with tourism activities.\(^{24}\)

The development of tourism as well as of agrotourism is further explored in the Government’s national strategy for sustainable development 2016-2021. Among others, the strategy envisages to regulate the land parcels or undertake a reform to make local farmers more competitive. The average land parcel in private ownership in rural areas is estimated to be 0.3 hectares, and this has been identified as one of the barriers to economies of scale. It is estimated that if local communities and farmers are capable of providing good products (e.g. wine, spirit, and organic food) who meet the needed standards and may even be better than many others would have to offer, they are not capable in providing these goods in sufficient quantities and be more widespread in local and international market. The Government plans to introduce a land reform to merge several smaller parcels into fewer larger ones.\(^{25}\)

Like in many countries, regional strategies for agrotourism are also prepared in Kosovo. The main ones focused on the development of tourism and agrotourism as branch in western Kosovo.\(^{26}\) Another one, still for western Kosovo, focused on a much smaller area, for Istog municipality which falls in the Peja region, heavily focused on agrotourism.\(^{27}\) There are many more reports, strategies, documents, at national and local government as well individual business plans aiming to promote agrotourism development which this paper has no space to analyze most of them. What appears as more important after all, is that Kosovo has become aware that agrotourism is a sector of activity with probably better perspective for development than the rest. The main remark to the strategies is that, while they acknowledge and well inform about available sites and resources, they fail to address the problem of


\(^{27}\) For more details about the strategy in question, see Ministry of Trade of Trade and Industry (2015b), “Istog: Agriculture and Tourism Development Concept and Project Ideas”, Pristina: Ministry of Trade of Trade and Industry of the Republic of Kosovo.
degrading the environment through illegal cutting trees (deforestation) and unplanned construction by corrupted politicians.

**Discussion and conclusion**

The prospects of agrotourism development in a small country like Kosovo may be relatively small, but when this is combined with archaeotourism and related cultural heritage, then it has a potential of further growth. The central and local governments have shown their commitment in promoting the development by a considerable number of strategies and documents, some of which with the support of foreign donors. While the promise and prospects on site exist, it remains to be seen how much resources would be committed to boost agritourism. A well prepared strategy and a clear plan of action does not mean that the things towards the development will evolve as planned. The strategies are generally short of addressing some serious problems such environmental pollution and degradation, especially by the politicians and the officials who work in the ministries that actually prepare the strategies for agritourism. Furthermore, with general social, economic and political situation in Kosovo being fragile that needs substantial improvement, it would not be so rational to consider all the listed potentials for agritourism to work. Poverty in rural areas on one hand, and usurpation by the politicians of the best available places for their own personal benefits as residences, limits the room for better perspective of agritourism. This problem can addressed through a separate strategy analyzing the risk factors, including unexpected risks such as foot and mouth disease among the cattle. It would be better if these risk factors find their reference in the strategies for agritourism, and recommending measures how to deal with and resolve them.

**References**

Agritourism potential as a perspective in Kosovo

Assessing quality and use of economic data: case of Kosovo

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Abstract: Quality of economic data is of key importance in real assessment of economic situation in a country. Among the challenges in Kosovo in terms of economic statistics is their quality and consistency. Study will examine the quantity and quality of economic data with particular emphasis on macroeconomic data. International statistical standards of the International Monetary Fund, European Central Bank / Eurostat are used as reference for comparison regarding the quantity and quality of economic data. For the study purposes, the economic data will be divided into sectors according to international standards. Official statistics producers will be used as data inputs as specified in the respective law in Kosovo. Data quality are reliability, transparency, accuracy are criteria to be used. Statistics revision policy or procedure as well as time-series and accessibility will be part of the study also. UBT STATS established in June 2013 deals with the collection, organization and publication of statistical data and emerged as a need of having a structured database consistent with international practices. An overview will be devoted to UBT STATS also as center for statistics, modelling, and economic forecasting.

Keywords: data quality; macroeconomic statistics; international statistical standards; data consistency; transparency; data gaps.

1. Introduction

Data quality is multidimensional concept starting from data collection, compilation, validation, publication. As contrary to the developing economies where statistical infrastructure is in place and functions according to the specified system, in case like Kosovo, developing a statistical framework is still issue in process.

In first part special focus is devoted to the theoretical background in terms of frameworks for data quality. Credible international standards are used, mainly those of International Monetary Fund and Eurostat. After describing the theoretical background, the assessment to the Kosovo statistics is made using UBT STATS framework, broadly consistent with the international standards. With the main focus on comparability and consistency, data in this study are grouped according to specific sector using international statistical standards, namely, government statistics, consumer price index, etc. Data are sourced from certain publishing institutions, further processed by UBT STATS.
2. Assessing the data quality – theoretical background

Data quality framework is a system for assessing data quality by developing certain standards and criteria. Countries use individual evaluation standards to assess data quality but also at international level such as International Monetary Fund, European Central Bank, Eurostat and other relevant institutions standards. The main focus of the theoretical aspect of the evaluation will be given to international standards and principles at the same time representing standards to be applied simultaneously to the relevant member states and that in certain cases represents structural criteria for membership. In terms of individual empirical papers also, most of them addresses issues such as data consistency, data quality, data reliability, etc.

At institutions level, International Monetary Fund has created separate standards in this regard. A data quality assessment framework is created including so many elements starting from top level (dimensions) down to the level of specific indicators. Based on International Monetary Fund standards (IMF Data Quality Assessment Framework – IMF DQAF 2003), data quality assessment is decomposed into: (i) prerequisites of quality, (ii) assurances of integrity, (iii) methodological soundness, (iv) accuracy and reliability, (v) serviceability, and (vi) accessibility.

Quality assessment framework (IMF DQAF 2003) in terms of prerequisites of quality starts with legal and institutional environment by specifying the responsibility for collecting, processing, and disseminating the statistics. In most of the countries it is specified by respective law on official statistics. In case of Kosovo, according to the Law on Official Statistics, there are three producers of official statistics, namely: Statistical Agency of Kosovo, Central Bank of the Republic of Kosovo, and Ministry of Finance, as well as other bodies as authorized from by Statistical Agency of Kosovo. Resources and relevance represents second and third element within the prerequisites of quality.

Professionalism, transparency as well as ethical standards represents main cornerstones regarding the integrity assurance. Professionalism in this regard is decomposed further into professional principles through sound statistical policies and practices, statistical techniques (models), dissemination, and what is very important proper interpretation and avoiding the misuse of statistics.

After the legal setup and assurance of integrity, methodological soundness prevails. First and most important element in terms of methodology is consistency of concepts and definitions in line with international accepted statistical frameworks. In other case, if there is difference in definitions of particular statistics in relation to international standards, data are not comparable to other countries and might cause improper interpretation of real situation. The particular importance is given also to the scope of statistics and proper sectorization in terms of institutional sectors of economy and as well as instruments. More developed financial systems are, more complex is to proper sectorize institutional sectors and instruments, as well as to measure it. Basis for recording is another element that fall within the methodology, like market pricing, accrual basis accounting, gross/net issue, are some of the times to be taken into consideration.

Accuracy and reliability measured through source data, sound statistical techniques, and sound validation of the data are key elements regarding the accuracy and reliability of the data. As producer of official statistics, assuring comprehensive and timelines in obtaining the data is key precondition. Assessing the source data in periodical and ad-hoc basis is inevitable process. Sample process, coverage, sampling and non-sampling errors should be assessed. Applying certain statistical techniques when it comes to data collected from sample (physical persons) is part of the statistical task. Apart from the data validation, statistical revision is common. Since the main goal of statistics is to represent the reality, statistical revision should be made. Developing statistical revision policy or guideline and having it published it makes the entire process more transparent and justifies the data revision. Worth mentioning one case that statistical revision is regular process, for example, every year due to the
audited financial statements from the external auditor, might be changes in the companies’ balance sheet and income statement that should be reflected in produced and published statistics. This should be covered in statistical revision policy.

As IMF specifically states, statistics with adequate periodicity and timeliness, are consistent and follow a predictable revisions policy that in fact represents the serviceability of the data. IMF specifies also dissemination standards, namely, periodicity and timeliness. Accessibility representing last dimension within the overall framework of data quality deals with presentation in a clear and understandable manner, forms of dissemination are adequate, and statistics are made available on an impartial basis. Key point in this picture is documentation of processes and making it accessible to external parties. By documentation of processes is meant documentation on concepts, scope, classifications, basis of recording, data sources, and statistical techniques is available, and differences from internationally accepted standards, guidelines, or good practices are annotated.

In terms of sectoral breakdown, according to the International Monetary Fund it includes seven statistical sectors, such as: national accounts statistics, consumer prices index, producer prices index, government finance statistics and public sector debt statistics, monetary statistics, balance of payments statistics and international investments position statistics.

Handbook on Data Quality Assessment Methods and Tools of Eurostat (Eurostat 2005d) aims at facilitating implementation of data quality assessment in the European System of Statistics by providing a detailed description of the data quality assessment methods. The Eurostat specifies quality indicators to be followed by the European System of Statistics across member countries that includes six such indicators, as follows: (i) relevance, (ii) accuracy, (iii) timelines and punctuality, (iv) accessibility and clarity, (v) comparability, and (vi) coherence.

Eurostat and European System of Statistics in 2011 published European Statistics Code of Practice for the national and community statistical authorities. It covers responsibilities for statistical authorities and quality standards. Nevertheless, in terms of authorities it specifies relevant issues are professional independence, mandate for data collection, adequacy of resources, quality commitment, statistical confidentiality, and impartiality and objectivity. In terms of quality standards it specifies principles as: professional independence, mandate for data collection, adequacy of resources, quality commitment, statistical confidentiality, impartiality and objectivity.

Except it is addressed at institutional level, there are also several authors approaching the data quality issues. Van den Berg et al. (1999) within the framework of the data quality uses Life Cycle Assessment as long term approach that is based on components such as: reliability and validity. In general, most of authorities addresses issues of quality, timelines, accuracy, reliability, etc. Zhu et al. (2014) concludes that looking ahead, data quality research will continue to grow and evolve. In addition to solving existing problems, the community will face new challenges. Research is needed to develop techniques for managing and improving the quality of data in these new forms.

3. Quality assessment framework for Kosovo – UBT STATS approach

As depicted in the previous section, there are several frameworks and criteria used for quality assessment of data. However, worth mentioning that IMF’s but also Eurostat and other frameworks are addressing broadly same issues starting from legal basis up to the dissemination elements. Kosovo is internationally classified as developing economy based on main economic indicators (GDP per capita, etc.) and quality of data is a debating issue. UBT STATS that functions as a statistical center within
Assessing quality and use of economic data: case of Kosovo

the UBT that among others tasks deals with the data quality issue developed its framework based on international statistical standards.

In order to have better view of the UBT STATS approach for data quality assessment, in the table below will be shown international standards along with the approach used for assessing the data quality for Kosovo statistics.

Table 1. Data quality assessment frameworks

<table>
<thead>
<tr>
<th>IMF (Data Quality Assessment Framework)</th>
<th>Eurostat (Handbook on Data Quality Assessment Methods and Tools of Eurostat)</th>
<th>Eurostat and ESS (European Statistics Code of Practice)</th>
<th>UBT STATS</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Prerequisites of quality;</td>
<td>• Relevance;</td>
<td>• Professional independence;</td>
<td>• Legal basis;</td>
</tr>
<tr>
<td>• Assurances of integrity;</td>
<td>• Accuracy;</td>
<td>• Mandate for data collection;</td>
<td>• Quantity and quality;</td>
</tr>
<tr>
<td>• Methodological soundness;</td>
<td>• Timeliness and punctuality;</td>
<td>• Adequacy of resources;</td>
<td>• Timelines;</td>
</tr>
<tr>
<td>• Accuracy and reliability;</td>
<td>• Accessibility and clarity;</td>
<td>• Quality commitment;</td>
<td>• Relevance;</td>
</tr>
<tr>
<td>• Serviceability;</td>
<td>• Comparability;</td>
<td>• Statistical confidentiality;</td>
<td>• Revision policy;</td>
</tr>
<tr>
<td>• Accessibility.</td>
<td>• Coherence.</td>
<td>• Impartiality and objectivity.</td>
<td>• Accessibility;</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Data organization;</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Consistency;</td>
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<td></td>
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<td></td>
<td>• Time series.</td>
</tr>
</tbody>
</table>

There are 12 statistical modules covered so far by UBT STATS, namely: national accounts statistics, government finance statistics, labor market statistics, labor force survey, enterprise survey, consumer price index, import price index, production price index, energy statistics, ho\other statistics, and health statistics. So, there will be matric presentation using the above mentioned framework into the statistics modules as presented above. In order to have better view of the quality assessment of the data done by UBT STATS, the radar presentation will be used. Five level grades are used, starting from 1 to 5, where grade 5 represents best grade.
Graph 1. UBT STATS data quality assessment

<table>
<thead>
<tr>
<th>National accounts statistics</th>
<th>Government finance statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Timeseries</td>
<td>Timeseries</td>
</tr>
<tr>
<td>Overall assessment</td>
<td>Overall assessment</td>
</tr>
<tr>
<td>5.0</td>
<td>5.0</td>
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<td>Legal basis</td>
<td>Legal basis</td>
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<td>Consistency</td>
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<td>4.0</td>
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<td>Data organisation</td>
<td>Data organisation</td>
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<td>2.0</td>
</tr>
<tr>
<td>Accessibility</td>
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Assessing quality and use of economic data: case of Kosovo

Import price index

Production price index

Energy statistics

Hotelier statistics

Education statistics

Health statistics
To this end, as presented in the graphs, most of the issues in terms of data quality are: no time series, lack of consistency, absence of revision policy, frequent revision of the data, frequent change in the presentation format, no time series available, lack of information or no information for methodological changes, frequent changes in the presentation format, delays in reporting, absence of publication calendar, totaling issues, data permutation, numbers repetition issues across several periods, accessibility issues, etc. In order to have comprehensive view of all processed modules, below is shown aggregated presentation using simple average by components.

**Graph 2. UBT STATS data quality assessment – overall assessment**

The results are based on the three years research activity and assessment done by UBT STATS. As shown in the assessment made above, there are lot of issues that UBT STATS addresses in this regard. However, if we would like to rearrange by weight there are three components that needs urgent steps from competent authorities, such as: (i) data organization, (ii) times series, and (iii) consistency.
4. UBT STATS – short overview and its activities

UBT STATS operates as a center of competence for Statistics, Analysis and Forecasting. UBT STATS main value is in the organization of information in the form that they are more structured, easily understandable, and comparable in time and make possible their use for purposes of research purposes.

The planned activities for the period 2016/2017:

Promotion of outputs through the publication on websites. Preparing periodic reports by compiling reports on the latest developments in specific areas which will be published regularly on the website of UBT and in any electronic written press. Reports will be focused on specific topics including professional commentaries by UBT STATS.

Individual data processing of institutions. Institutions that are used as source of data only publish data at the aggregate level and not for institutions. Missing information in the Kosovo market are those on individual institutions.

Development of research with the public. Considering available resources, UBT STATS plans to utilize students to do various research through surveys. They may include all fields but the focus will be based on actual themes that emerge. A case study may be expectations on the movement of prices, which compiled often as the survey in other countries regarding expectations on the development of prices.

Incorporating research conducted by students on specific topics. Using data from internal research by students of UBT is a very good source of information we plan to incorporate on UBT STATS. This refers to subjects which have as part of their curriculum conducting research as part of the final assessment.

Incorporating information from conferences and similar. Besides many useful information from students’ research, it is planned also to incorporate information from conferences organized by UBT.

Development of new modules and periodic update of information. In order to make possible the preparation of periodic reports, regular updating of information is necessary. The update is an activity that consumes time and resources also because of disorganized inputs.

Consolidation of tables and variables. In certain modules there are many tables repeated and have almost the same story. Already after the first phase of data collection has been completed, remains to be done consolidation of them so each of them to have its own story. Consolidation means elimination of unnecessary and useless items.

References


APPLICATION OF DIJKSTRA ALGORITHM TO DEFINE THE LOWER PRICE IN THE DISTRIBUTION NETWORK OF SUPPLYING

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Abstract. In this paper-work beside the review of theories of graphs, Dijkstra algorithm for finding the shortest way, here we can present the application of Dijkstra algorithm how to find the lowest price of the supplying for a costumer in the network distributions, presented with an example. Considering that from manufacturer to the last costumer the price variates, we ask: from whom distributions we can supply the same product and pay the lower price but the quality will be same?

Keywords: Graph, weight, algorithm, distributor, minimal price.

1. Introduction

1.1. The meaning of price. Distribution and the types of distribution

The price present quantity of money which are given to pay the product. The price is an element of the marketing mix which <<produce incomes>> the other elements <<produce costs>>. Sales price could be defined based in the purchase price, (oriented in the cost). But to define the sales price must be considered many factors, and considerate these as inner factors: cost, 4P (product, the price, promotion place), demand and market, competition, mediator, the state etc. Recently 4P, now is explained like 5P, as the fifth component of the marketing mix are the people. But in this paper-work we can present the distribution way according from the lower price to the last consumer.

Considering that the distribution is a element of the marketing mix and has the obligation:
- To create a contact with the consumer;
- To sale the product and
- To observe the product from factory to the consummator (Logistic)

But the way of the distribution could be done in many ways, it means that there exist many ways of distributions.
Level 1 KD
Producer – consumer
0- Level I KD
  Producer – retail seller - consumer
1- Level I KD
  Producer – majority seller – retail seller - consumer
  Level I KD
  In the paper-work we will present examples of the level two of the distribution.

1.2. Reasons for the application of the ways of distribution

If we analyze which are the reasons that why in practice are used the ways of the distributions they are many but we can count the most important of them: Many producer have missing of fond. The sale to the final consumer obligate the producers to mediate also for additional. the producer who can create their own distribution network in many cases considerate that more favorable is that those money should be invested in their main activity (production), the usage of the mediator may reduce the expenses of distribution ( price of lower supplying we will explain further in the paper-work using theory of graph – Dijkstra alegorithm).

Considering the reasons of the distribution we can define some of the important functions which are: exploring, transferring, taking a risk, promotion, contact adaptation, negotiation.

But which of the following ways of the distribution will be followed, depends on many factors:
- Properties of the factory, properties of the competition, properties of the product, properties of the consumer etc..

1.3. Knowledge of the graph

Definition: We define graph as doubles G=(V(G),E(G)), where V(G) the finite set none empty and the elements of this set are called the vertex and E(G) is a finite set of unordered different doubles of elements V(G) which’s are called side.

V(G) – Are called the set of vertex,
E(G) – Are called the set of the side.
Graph $G$ consists the set $V(G) = \{A, B, C, D, E\}$ and set $E(G) = \{AC, AE, CD, BE\}$. Side of the form $(Ai, Ai)$ is called loop. The graph where the set $E$ of the side is an empty set is empty graph. We say that the vertices $v$ and $w$ of the graph $G$ are adjacent if there exists the side $vw$ which unites that vertex. In this case vertices $v$ and $w$ are incidents with that side (belong to that side). Related, two different sides $e$ and $f$ are adjacent if they have common vertex. The scale of the vertex $v$ of the graph $G$ is number of the incidents side with $v$. Symbolically we mark it with $\text{deg } v$. With definition, the loop in $v$ contributes 2 times (but not once) in the scale $v$, therefore we considered $\text{deg } v=2$. Vertex with the scale 0 is isolate vertex and the vertex with scale 1 is the end of the vertex.

Oriented graph is odd where each side is oriented from the beginning to the end point. Whereas in the none oriented graph the sides are two-way.

Path is defined as the chain of the sides among themselves which are connected for example.
Let there be graph $G_1=(V_1,E_1)$ and $G_2=(V_2,E_2)$, where $V_1 \cap V_2 = \emptyset$. $G_1 \cup G_2 = (V_1 \cup V_2, E_1 \cup E_2)$ is defined as the union of the graph $G_1$ and $G_2$.

**Example 1.** If for graph $G_1$ we have $V_1=\{a,b\}$ and $E_1=\{ab\}$, while for graph $G_2$ we have $V_2=\{x,y,z\}$ and $E_2=\{xy,yz,xz\}$.

Connected graph is defined if there is not a possibility to explain it like a union of two graphs, otherwise is defined not connected.

Graph $H=(V(H),E(H))$ is defined as subgraph of the graph $G=(V(G),(E(G))$, if $V(H) \subseteq V(G)$ and $E(H) \subseteq E(G)$.

For example the graph $G_1$ is subgraph of graph $G_2$.

### 1.4. The graph with weight

**Definition.** *Graph with weight* $G^w$ is $G$, the side of this are accompanied with any none negative real number, so the exist the function of weight $W : E(G) \rightarrow \mathbb{R}^*_0$.

w(e) is the weight of the side $e \in E(G)$.
For the subgraph $H$ of the graph $G^W$, the number $W(H) = \sum_{e \in E(H)} w(e)$ is defined as the total weight of the subgraph $H$.

Otherwise, if $H$ is a path $(u,v)$ in $G^W$, where $u, v \in V(G^W)$, then the number

$$d(u,v) = \min\{W(P) \mid P \text{ is a path from vertex } u \text{ to the vertex } v\}$$

is defined as the minimal distance with weight under the vertex $u$ and $v$.

### 1.5. Problem of the shortest path. Dijkstra algorithm

Let $G$ be the connected graph with the function weight $W : E(G) \rightarrow \mathbb{R}^+$. We need to find $d(u,v)$ i.e. minimal weight under the vertex $u$ and $v$ to the graph $G$. This problem is solved by Dijkstra algorithm. With agreement we take $w(uv) = \infty$, if $uv \notin E(G)$.

**Dijkstra Algorithm**

Dijkstra Algorithm is very important to find the shortest path. While using the algorithm we mark $l(v)$ the “current” distance from $u_0$ to $v$. This value is the upper bound of the distance from $u_0$ to $v$ which will decrease along the algorithm. Dijkstra Algorithm is:

**Step 1:** For $l(u_0) = 0, l(v) = \infty$, for each $u_0 \neq v \in V(G)$. Therefore, $S_0 = \{u_0\}$ for $i=0$.

**Step 2.** Calculate $l(v) = \min\{l(u), l(u_i) + w(u_i,v)\}$, for each $v \in \overline{S_i}$. Then calculate

$$\min_{v \in \overline{S_i}} \{l(v)\} = d(u_0, u_{i+1})$$

Where $u_{i+1}$ is vertex of $\overline{S_i}$ where we find this minimum. In this way we take $S_{i+1} = S_i \cup \{u_{i+1}\}$.

**Step 3:** If we have $i=|V|-1$, then the algorithm ends and if $i<|V|-1$, then we take $i$ for $i+1$ and we return to the second step.

**Example 2.** Let $G^W$ be a graph. To calculate the minimal distance between vertex $u_0$ and $u_5$.

![Fig.2 Graph G^W](image)

**Solution:** Initial conditions $l(u_0) = 0, l(u_1) = l(u_2) = l(u_3) = l(u_4) = l(u_5) = \infty$.

We take $S_0 = \{u_0\}$. Then we calculate $l(u_1) = \min\{\infty, l(u_0) + w(u_0,u_1)\} = \min\{\infty, 0+1\} = 1$.

And in analog way we have $l(u_2) = 2, l(u_3) = \infty, l(u_4) = \infty, l(u_5) = \infty$. 

We remark that \( l(u_1) = d(u_0, u_1) = 1 \). Then we take \( S_1 = \{u_0, u_1\} \).

Then, we calculate \( l(u_2) = \min\{2, l(u_1) + w(u_1, u_2)\} = \min\{1, 1 + 3\} = 2 \) and in the same way we have \( l(u_3) = 2, l(u_4) = \infty, l(u_5) = \infty \). In this way we have \( l(u_2) = d(u_0, u_2) = 2 \). For \( S_2 = \{u_0, u_1, u_2\} \).

Then, calculate, \( l(u_3) = \min\{2, l(u_2) + w(u_2, u_3)\} = \min\{2, 2 + \infty\} = 2 \) and in the same way we have \( l(u_4) = 5, l(u_5) = \infty \). Now we have \( l(u_3) = d(u_0, u_3) = 2 \). We take \( S_3 = \{u_0, u_1, u_2, u_3\} \).

Then calculate \( l(u_4) = \min\{5, l(u_3) + w(u_3, u_4)\} = \min\{5, 2 + 2\} = 4 \) and in the same way we have \( l(u_5) = 7 \). Now \( l(u_4) = d(u_0, u_4) = 4 \). We place \( S_4 = \{u_0, u_1, u_2, u_3, u_4\} \).

We conclude that, \( l(u_5) = \min\{7, l(u_4) + w(u_4, u_5)\} = \min\{7, 4 + 2\} = 6 \). So, \( l(u_5) = d(u_0, u_5) = 6 \).

**Example 3. (Application of Dijkstra algorithm to decide the lowest price).** The factory \( A \) presents in the market the product with price 50€ for units. The list of the distributors to this product is given like in the figure. Each distributor calculates additional costs for each unit of the product to include its margin and this affects to the price with \( p\% \) (respectively like in the figure). Is needed to be found the minimal price with which the distributor will supply the \( I \) costumer, so the way which gives the lowest price.

![Diagram](https://via.placeholder.com/150)

**Solution:**

This problem could be solved with Dijkstra algorithm.

0) Initial conditions
\[
  l(A) = p_0 = 50, \quad l(B) = l(C) = l(D) = l(E) = l(F) = l(G) = l(H) = l(I) = \infty
\]

We take \( S_0 = \{A\} \).

1) Then calculate:
\[
  l(B) = \min\{\infty, l(A) + w(AB)\} = \min\{\infty, 50 + 5\} = 55, \quad \text{where} \quad w(AB) = 50 \cdot \frac{10}{100} = 5;
\]
APPLICATION OF DIJKSTRA ALEGORITHM TO DEFINE THE LOWER PRICE IN THE DISTRIBUTION NETWORK OF SUPPLING

\[ l(C) = \min \{\infty, l(A) + w(AC)\} = \min \{\infty, 50 + 4\} = 54, \text{ where } w(AC) = 50 \cdot \frac{8}{100} = 4; \]
\[ l(D) = \min \{\infty, l(A) + w(AD)\} = \min \{\infty, 50 + 5.5\} = 55.5, \text{ where } w(AC) = 50 \cdot \frac{11}{100} = 5.5. \]

And in this way, we have \( l(E) = l(F) = l(G) = l(H) = l(I) = \infty. \)
We remark that \( l(C) = p_C = 54. \) We take \( S_1 = \{A, C\}. \)

2) We fix \( l(C) = p_C = 54. \) Following, we calculate:

\[ l(E) = \min \{l(E), l(C) + w(CE)\} = \min \{\infty, 54 + 4.86\} = 58.86, \text{ where } w(CE) = 54 \cdot \frac{9}{100} = 4.86; \]
\[ l(F) = \min \{l(F), l(C) + w(CF)\} = \min \{\infty, 54 + 7.02\} = 61.02, \text{ where } w(CF) = 54 \cdot \frac{13}{100} = 7.02; \]
\[ l(G) = \min \{l(G), l(C) + w(CG)\} = \min \{\infty, 54 + 6.48\} = 60.48, \text{ where } w(CG) = 54 \cdot \frac{12}{100} = 6.48. \]

And in the same way we have \( l(H) = l(I) = \infty. \) So, we fix \( l(E) = p_E = 58.86 \) and we take \( S_2 = \{A, C, E\}. \)

Remark: If we calculate \( l(E) \) through \( B, \) then
\[ l(E) = \min \{l(E), l(B) + w(BE)\} = \min \{\infty, 55 + 6.6\} = 61.6, \text{ where } w(BE) = 55 \cdot \frac{12}{100} = 6.6. \]

3) We fix \( l(E) = p_E = 58.86. \) Now, we calculate
\[ l(I) = \min \{l(I), l(E) + w(EI)\} = \min \{\infty, 58.86 + 4.7088\} = 63.5688, \text{ where } w(EI) = 58.86 \cdot \frac{8}{100} = 4.7088 \text{ and} \]
\[ l(F) = \min \{l(F), l(E) + w(EF)\} = \min \{61.02, 58.86 + 8.829\} = 61.02, \text{ where } w(EF) = 58.86 \cdot \frac{15}{100} = 8.829. \]

Now we fix \( l(I) = p_I = 63.5688 \) and we take \( S_3 = \{A, C, E, I\}. \) So
References:

3. Pimploi Tirastittam, Phutthiwat Waiyawuththanapoom, Public Transport Planning System by Dijkstra Algorithm: Case Study Bangkok Metropolitan Area, 2014
4. NEIL H. BORDEN, The Concept of the Marketing Mix, 1984
Abstract. The models based on assets, dividends, cash flow and returns are identical, however, in the real world, a perfect environment does not exist, thus the results of the models applied throughout the assessment of the companies are different. Therefore, in such an environment, the data used during the capital assessment represent the assessment of the future values and their measurement is important during the predictions.

The aim of the study is to explain the concept of 'market real value' of the companies and the methodological instrumentarium for their assessment, with a special focus on the factors that influence the company's capital value.

Within the scope of the methodological instrumentarium for the assessment of the companies based on the dynamic assessment methods it will be discussed how the financial and contable risks are incorporated in the company's capital value. The methods applied in the study case will be the method of the discount cash flow (DCF), which will be further materialized in three scenarios: basic, optimistic and pesimistic.

For each scenario, the relevant factors that determine the elements of cash flow are researched. Each scenario predicts a complete analysis of the company's economy, of its demand and performance. It is formed by the "basket" of all hypothesis put together and it represents a new hypothetical situation in which the company finds itself.

Keywords: capital, market real value, assets, dividend, risk.

1. Introduction

A company’s real value is a condition for a precise presentation of the company’s state, in front of investors and creditors. The power to meet the needs, the nature, growth and development of the companies is also conditioned by this, as well as the contribution of the companies to the development of the national economy, by applying models for estimating the value of their capital.

The subject of discussion in this paper is the hypothesis of a “fair market price” of companies and the methodological instrumentarium for their valuation, that is, the real valuation by the market, or analysis of the companies that are listed on the stock market with a methodological valuation and what are the factors that have an impact, because of which we have a deviation of the market and the book value, i.e the real versus the market stock price.
A special overview has been made to the factors that condition the value of a company’s capital. In that context, business risk analysis and their quantification and incorporation in the capital’s value, has a crucial meaning. This paper contains detailed explanations of the ways to predict risks, risk assessment, to which degree can the same risk assessment models be implemented in both developed and developing economies, including our country and the problems that occur, all of which is in order to estimate the price of the capital, the risk exposure and risk management in the business environment. Within the methodological instrumentarium for company assessment, according to the dynamic assessment methods, it is shown how risks are incorporated into the capital’s value in the companies.

2. Overview of the valuation models

In the economic literature there are a few methods to valuate companies, which are used by analysts and investors. In a perfect world, models based on means, dividends, cash flows and earnings are identical, but in reality this highly stylized surrounding doesn’t exist and the results from the models can differ. The data used in the valuation models represent an estimate of the expected future values and their measurement is as important as their ability for prediction.

One group of methods are based on accounting principles, knowing that “accounting contains the elements of a complete information system, that synchronizes the basic elements that compose this information system, establishes their organization, creates the methodology, determines the means and chooses and uses needed data and information”. The second group is based on the theory of investments. The first group of methods relies on the valuation models based on means (net assets) by accounting principles, whereas the second one is made of methods which are based on establishing the current value of the expected future proceeds. Alongside these methods, there are plenty of other combined methods that have been developed. The following are some of the more famous company valuation methods:

- market way: valuation by market stock value
- method of discounted cash flow
- company valuation method by the value of the net-substance calculated from its current value of expected gains
- method of capitalization of normalized gain
- method of corrected accounting value of the capital
- method of establishing discounted value of expected gross-earnings
- method of establishing liquidation value of the company
- combined methods for establishing the value of a company, by which the value is achieved as an average value of the net-substance value and the discounted value of the expected net-earnings
- method of extra-profit
- combined method for valuation of the companies, achieved as a sum of the net-substance value and the goodwill value.
- method of valuation based on comparing indicators with similar companies – method of comparing companies and other methods.

Below, we will research a third category, that has the characteristics of the first two, abnormal earnings or the Edwards-Bell-Ohlson (EBO) model.
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The valuation models based on means, give value to the company, based on the current market value of each individual rate of the means. The obligations are deducted in order to get to the value of the owner’s equity (capital), “equity” of the company.

\[ \text{Value} = \text{means} - \text{obligations} \]  

(1)

In DCF models, the time value “t” is determined like a current value of future cash flows:

\[ \text{Value}_t = \sum_{i} \frac{CF_{t+i}}{(1+r)^t} \]  

(2)

Where \( CF_{t+i} \) represents expected cash flows „i” in a period of time „t” and „r” is the discount factor (demanded rate of company’s yield). DCF models can vary depending on the appropriate measurement of the cash flow CF, defined differently as a flow of future dividends, earnings or free cash flows. The uncertainties in these models include:

- difficulties in valuation of the final horizon
- the nature of the cash flows and earnings and difficulty in evaluation, whether the published amounts are permanent (will persist in the future) or transitory (will not repeat).
- valuation of the means, earnings and cash flows, which could be influenced by the choice of accounting policies or discretionary policies of management.

3. Valuation modes of discounted cash flows

Parameters that made up the DCF model:

\[ \text{Value} = \sum \frac{CF_{t+i}}{(1+r)^t} \]

They are connected to the risk (demanded income rate) and the income itself (CF-cash flow). These models originated in the finance litterature that use three alternative CF measurements: dividends, accounting gains and free cash flows. As the DCF models of valuation based on means are equivalent, under the assumption that perfect markets exist, the dividends, earnings and measurements of free cash flows have to show that they carry equivalent results. Their implementation is not that simple.

There is a difficulty in defining cash flows that are used in these models. They are defined differently, depending if the valuation goal is the company’s capital (shown as R) or the value of the debt of the company plus the capital (V).

The models need future cash flows as input. How are the cash flows determined with using current data, are the current and past dividends, earnings or cash flows the best indicators of that flow?

4. Valuation of the company by using the DCF method

The valuation method of the company, according to the amount od the discounted cahs flow, i.e DCF method is the most typically used investment method. Unlike the concept of gain, the cash flow includes the cash net-inflows that are made in the company and are left on disposal to the investor.
The same as in the case of the method of valuation of the company according to gains, in this approach, the goal is to determine the value of the company’s own capital. But, the difference is in the determination effect – which is the cash flow instead of gain.

In the approach in the evaluation of the company’s own capital, its value will be achieved if from the current value of the cash flow we deduct the long-term company debt. The cash flow, like a base for valuation of the joint venture (company), is made of the following elements:
- Net-gain before tax and tax payment (EBIT)
  1. depreciation
  2. growth of net-turnover capital (investments in turnover means)
  3. investments in fixed means.

In the projections, we use the scenario analysis. Three scenarios are prepared – optimistic, pessimistic and most probable (base).

In order to perform a scenario-analysis, one needs to study the relevant factors that determine the elements of the cash flow of inflows and outflows.

Each scenario assumes a complete analysis of the company’s environment, the demand and its performances in different assumed working conditions, the sensitivity in certain changes in the key variables. Each scenario is formed from “a basket” of assumptions taken together at the same time. Each scenario represents a new hypothetical situation in which the company might find itself. The assumed situations derive from an analysis of different situations in which the company can find itself in the future according to its available potential, the competition, the financial power of the company etc. In that way we conduct different scenarios. As a result of each scenario, we project the balance of success and condition, as well as an overview of the cash flow and then, we form an overview of the discounted cash flow.

From each scenario, derives an estimated value of the company. We can chose a value according to one of the scenarios, but it can also form a value according to a pondering, arithmetic average of all three scenarios, wherein ponders would be the coefficients of probability which we could determine as our own view. This view derives from the analysis of the strong and weak points in each scenario.

In fact, through separate scenarios we determine the limits of the company’s value – the highest and the lowest. In the end, we examine the sensitivity of the acquired values, as well as the influence of the change of the key variables – the length of the projection period, the discount rate, changes in the prices of the expenses etc. With their examination we can clear up the concept of company value.

The estimate of the company’s value becomes a valuable information for the management, shareholders and all other interested parties – present and potential. In case of a sale of the company, the estimate of the buyer and seller gives solid arguments and information to negotiate and came to a “fair price” that could be acceptable for transaction by both parties.

In this part, we evaluate the shareholders’ capital of five companies that are ranked on the Macedonian stock market, by the method of discounted cash flows. The companies in question are: Alkaloid AD, Replek AD, Komercijalna Banka AD, Granit AD and ZK Pelagonija.

In Attachment 1, we have stated the models for determining the capital value of Alkaloid AD, Replek AD, Komercijalna Banka AD, Granit AD and ZK Pelagonija. Each scenario is formed from a “basket” of assumptions taken at the same time and together, and it represents a new hypothetical situations in which the company can find itself. The assumed situations derive from analysis of different situations in which the company can find itself in the future, according to its available potential, the competition, the financial power of the company etc. Since all companies function under the same surroundings and
APPLICATION OF DIJKSTRA ALGORITHM TO DEFINE THE LOWER PRICE IN THE DISTRIBUTION NETWORK OF SUPPLING

in the same time frame, the assumptions are the same in all three scenarios. It should be taken in consideration that all companies are not from the same field or size.

The assumptions in the base scenario are as follows: a 2% increase in income, consequently – 1.5% increase in expenses. The discount rate in the specific case will be 9%, since we don’t have the β coefficient as a factor for determining the WACC, we got the discount factor as interest rate of long-term loans (credits) which is 7% and on that rate, a 2% activity risk has been added (attachment 1).

Based on the abovementioned assumptions of the base scenario, the capital value of Alkaloid AD, Replek AD, Komercijalna Banka AD, Granit AD and ZK Pelagonija, stated in euros by the average exchange rate of the euro, 1€ = 61.3 den, is given in chart 1.

In the optimistic scenario, the assumptions are as follows: 5% increase in the sale’s income and 2% increase of the expenses, the other indicators remain the same as in the base scenario, with the capital value of the companies given in chart 3.23.

In the pessimistic scenario, we have based the assumptions on less than favorable conditions, meaning: 1% increase in income, 1.5% increase in expenses. With assumptions like these the capital value decreases, in this specific case, it is shown in chart 1.

<table>
<thead>
<tr>
<th>Companies</th>
<th>Capital Value Base scenario</th>
<th>Capital Value Optimistic scenario</th>
<th>Capital Value Pessimistic scenario</th>
</tr>
</thead>
<tbody>
<tr>
<td>Komercijalna bananka AD</td>
<td>135,914,651</td>
<td>155,461,445</td>
<td>114,889,062</td>
</tr>
<tr>
<td>GD Granit</td>
<td>172,209,791</td>
<td>175,332,381</td>
<td>41,577,175</td>
</tr>
<tr>
<td>Replek AD</td>
<td>43,044,816</td>
<td>46,220,522</td>
<td>34,947,307</td>
</tr>
<tr>
<td>ZK Pelagonija</td>
<td>38,945,429</td>
<td>59,625,517</td>
<td>28,116,651</td>
</tr>
<tr>
<td>Alkaloid AD</td>
<td>33,711,701</td>
<td>54,030,046</td>
<td>32,781,036</td>
</tr>
</tbody>
</table>

Source: Personal calculations by given assumptions

Based on this valuation model, the capital of Komercijalna Banka AD in chart 3.23 is valued higher then the construction company Granit AD, followed by Replek AD etc.

Conclusion

The actuality of this problem derives from the connection between the risk, income and the influence of the business and the general surroundings on the companies, and consequently on their market value. The discussion about the models of valuation based on means includes reexamining of the influence of the dividend policy, owner’s transactions, procurements, changes in currency and the accounting methods of the net-means. These reviews reinforce the view that the economic and accounting factors should be taken in consideration when using financial data. Establishing market value on long-term means like: building facilities, machines and equipment, is a difficulty when using valuation based on means for more companies, where the ratio between (corrected) accounting value and market price is under the influence of this mistake during measurement.
References:


4. Financial Statement of the company

1.Hajrizi, Edmond
