The Assessment of Influence of Functional Government Expenditure on Subjective Wellbeing in EU

In this paper, researchers analyze the influence of functional government spending on satisfaction with life in EU countries. The main problem arises from the theoretical conflict between the traditional view of welfare economists, which states that the government is responsible for maximization of social welfare through reallocation of resources against studies proving that government spending has negative effects on social welfare, as the government is not effective in resource reallocation. Research under this topic discloses contradicting results on the effect of functional government expenditures on wellbeing, which leaves a place for more in-depth researches on this topic. Does government spending have any effect on one’s wellbeing? Does increase in functional spending increase the level of wellbeing? Are there any limitations on government spending? The research compares data of 26 EU countries using graphical and linear regression analysis to answer these questions and to see if there are any turning points, which would show that changes in government spending may have a contrary effect on wellbeing.

Keywords: subjective wellbeing, happiness, government functional spending, welfare economics.


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Justinas KISIELIAUSKAS – PhD, lecturer at Vytautas Magnus University, Faculty of Economics and Management. Address: Daukanto st. 28, LT-44246 Kaunas, Lithuania; phone: 00 370 689 41 341; e-mail: justinas.kisieliauskas@vdu.lt

Jurgis Gabrielius RUDGALVIS – BSc student at Vytautas Magnus University, Faculty of Economics and Management. Address: Daukanto st. 28, LT-44246 Kaunas, Lithuania; e-mail: jurgis-gabrielius.rudgalvis@fc.vdu.lt
Introduction

Governments have an effect on society in many ways and welfare economists see it as a system, which is responsible for maximization of social welfare through reallocation of resources that is provided by the society. However, the effect on welfare created by policymakers and their decisions on how to reallocate resources is not clear for the society, as there is no model that would quantify the effect. In order to understand how fiscal decisions of government affect satisfaction with life, this paper examines the effect that each expenditure category has on satisfaction with life, which represents subjective wellbeing of a country. It is believed that government through social welfare model is responsible for the creation of the best possible environment for people development and their wellbeing. This research deals with questions: is government spending effective in the context of wellbeing of society; if yes, then how strong the effect is; does government spending have maximum utility level at which it stops having an effect on wellbeing and increase in spending is inefficient.

The main divergence comes from theoretical considerations on this topic. The traditional view of welfare economics is based on works of Pareto, Hicks and Kaldor, who introduced the social utility function and saw governments as a system, which relocates resources and tries to maximize social utility. On the other hand, there are public theory researches showing that ineffective management and increasing government expenditures has a negative impact on social welfare (Bjornskov et al., 2007). As inefficiency of this study is that people are undervaluing the effect of government spending on their personal wellbeing. These phenomena developed from the human willingness to link their wellbeing with a personal environment, while not paying attention to common conditions. The fact that detailed studies on the effect that government expenditures have on subjective wellbeing are contradictory is also a reason to try to understand this effect in a more detailed way. This raises the scientific problem of research: what is the relationship between government expenditure and subjective wellbeing of society and what are the measures to evaluate it?

The relationship between government spending and wellbeing of society has to be examined in order to understand how fiscal government decisions influence wellbeing. Findings should justify or not today’s fiscal decisions and foster future formations of government welfare policies.

The object of this research – the influence of functional government expenditure on subjective wellbeing.

The main purpose of this research is to assess the influence of government expenditure on subjective wellbeing. Tasks of the research:

1. To analyze theoretical and empirical considerations about government expenditure influence on subjective wellbeing of society;
2. To evaluate the influence of government expenditure on wellbeing of society;
3. To analyze and reveal how government expenditure affects wellbeing of society.

Methods: the research is based on graphical and econometric analysis of data.
Theoretical Background of Research

The influence of government expenditure in the country was mainly studied through the macroeconomical point of view. However, welfare economists see government as being obligated to maximize social welfare through creation of better environment for personal wellbeing growth, suggesting that social welfare should be one of the main criteria to which governments should pay attention when making decisions as well as government spending being one of the most important keys in boosting economy and social welfare growth. According to welfare economics, increase in public spending should lead to growth of satisfaction with life, but in the past years government spending grew from 25% of GDP in 1950’s to 35% in 2013’s in the United States, and in Europe it almost doubled at the same time while indicators of satisfaction of life stayed at almost the same level. This fosters considerations that the relation between government expenditure and wellbeing of people is ambiguous and public spending may run under diminishing utility theory. While the link of government expenditures on economic factors of the country have been studied for a long time, its effect on subjective wellbeing is not definite. The main purpose of this study is to look for government expenditure effect on social welfare and to get a better understanding how it can be maximized.

On the one side, welfare economists see competitive markets as the best system for maximizing social welfare that produces efficient outcomes through reallocation of resources. While intervention of government helps to control market failures and create social equality in order to maximize levels of public wellbeing. Interventions are justified in the name of creating common wellbeing by ensuring safety, equality, private equity and security of inhabitants. Moreover, the government encourages social and economic development through public goods and capital investment (Hjerpe, 2003). The assumption that competitive markets produce efficient outcomes and those outcomes can be supported as competitive market equilibrium gives decision makers an ability to use social welfare function for choosing outcome with the biggest utility in governing the country. It was accepted that social welfare function contains not only economic measures but takes into account other measures, such as economic freedom and levels of wellbeing. Similar researches includes very different measures and sizing such as life expectancy and death rate of newborns (Scully, 2001), level of unemployment, inflation, GDP per capita, level of education (Di Tella, MacCulloch, 2006; Di Tella et al., 2003), consumption, trust of the government and openness of the country (Bjornskov, 2007) to help better understand how this link works.

On the other hand, numerous researches (La Porta et al., 1999; Holmberg et al., 2009) provide arguments on how governments can be inefficient due to the poor quality of governance. The effectiveness of government is a great issue, numerous studies were released showing how government spending increased in the past years without generating any positive effect and revealed cases of corruption, lobbying and self-interested politicians. These cases show that increased size of governments results in ineffective policies (Mueller, 2003), as believed that should have a negative impact on the levels of subjective wellbeing as well. This creates the negative public opinion on effective
management of public spending, due to bureaucrats that increase their personal welfare or ineffective policies as well as policies emerging from different political views following one after another and resulting in being noxious for social welfare (Niskanen, 1971).

Together with previously mentioned studies on government effectiveness, researches that analyze how functional government expenditures are affecting wellbeing results with a variety of findings. For example, Björnskov et al. (2007) after analysis made in developed countries, stated that satisfaction with life decreases with higher government expenditure. A cross-country study of Ram (2009) indicated that increased government spending does not lower wellbeing in nation’s population. Findings of Kotakorpi and Laamanen (2010) show that health expenditures in Finland have a positive influence on wellbeing. Scully (2001) found out that quality of life and life expectancy correlation is positive. Kacapyr (2008) have not found any statistically significant link between government expenditures and quality of life as well as Veenhoven’s (2000) statement that social security expenditures do not correlate with wellbeing. There are numerous other factors, for example, income that is having an effect on the satisfaction with life as well (Pukeliene, Kisieliauskas, 2013). These studies show that countries have a different perception of wellbeing and that criteria’s have different weight in social welfare function or maybe even different for each country separately that reveals the biggest difficulty, the problem that there are not any objective ways to compare and assess these differences between the countries.

To add, there are no concrete measures that represent inhabitants’ satisfaction with life or happiness either, which would lead to maximization of the subjective wellbeing of society and a complete view of how people feel about the country they live in (Graham, 2005). Subjective wellbeing for a long time was thought to be impossible to measure and compare, but after Veenhoven (2016) proposed his insights on World Database of Happiness data, with a high level of respondents that through self-assessment questions evaluate their level of satisfaction. These combined results represent the level of satisfaction with life of the country inhabitants. In this way, World Database of Happiness has collected data of multiple questionnaires on the levels of subjective wellbeing. Satisfaction with life, as one of the measures to reflect subjective wellbeing is gathered verbally, through asking people directly the question: “On the whole, how satisfied are you with your life in general?” Results are evaluated on a 1 to 4 scale. In this scale 1 represents “not at all satisfied” and 4 – “very satisfied”. To sum up, different opinions on governments and their ability to reallocate resources efficiently, a different view on how functional government spending affects wellbeing as well as different results on this topic and people inability to understand decisive factors of subjective wellbeing shows that this topic is not explored enough and more researches have to be made. In this paper, mostly fundamental facts are being studied in order to get a broader view of how government expenditures are affecting inhabitants’ satisfaction with life for future studies and more data for creation of universal social welfare function.

Main reason of this paper rises from welfare economists’ view on the governments’ obligation to maximize social welfare and opposing researches, where some have proven that growth in government spending is giving positive influence to
personal wellbeing, and on the other hand, numerous scholars have found governments work already being inefficient and crossing effective limits of spending. Bureaucracy, an immoderate number of changing policies, self-interested politicians, unqualified and growing government have made a negative public opinion on government’s, showing how ineffectively people money are being used. Having a positive impact on welfare but not being efficient means that politicians are wasting resources just to support themselves, and while there is not enough knowledge about how government expenditure are affecting welfare it is easy to manipulate with policies which may not always be the most effective ones. Together with an assumption that government expenditure is one of the main factors determining wellbeing, research analyzing how this link works in Europe, where government spending in past years has increased the most, must be made.

Data and Methods

This research will be made using following characteristics:

**Context:** Influence of government expenditure subjective wellbeing of country’s inhabitants reflected by satisfaction with life is being analyzed in the context of 26 European Union member states. Croatia is eliminated due to lack of data. Luxembourg is eliminated because of data’s statistical deviation.

**Period:** the data is studied in a period of 10 years (from 2003 until 2012).

**Sources:** functional government expenditure data was gathered from Eurostat. Satisfaction with life data was collected from World Database of Happiness.

**Variables:** Satisfaction with life is measured through verbal self-assessment question: “How happy are you with the life you live?” Where 4 means very satisfied, 3 – fairly satisfied, 2 – not very satisfied, 1 – not at all satisfied. Variables are measured in ordinal scale and reflect satisfaction with life of society.

Government expenditure consists of 10 different functions: general public services, defense, public order and safety, economic affairs, environment protection, housing and community amenities, health, recreation, culture and religion, education and social protection. All expenditure is expressed as a percentage of GDP.

In order to structure the research hypothesis is raised:

**Hypothesis H₁:** functional government spending has influence on subjective wellbeing of society.

**Logical explanation:** control of the fiscal policy being the main function of government as well as the theoretical view that through reallocation of resources it tries to reach the maximum level of social welfare creates a reason for the research on how functional government expenditures are affecting subjective wellbeing. Taking into account information on how social welfare is created this important link has to be studied. This paper focuses on government functional expenditures that are having an influence on the levels of subjective wellbeing.

**Methods of analysis:**

To find the relationship between functional government expenditure and data of overall satisfaction with life the regression analysis on panel data was applied. Using linear regression, we try to focus on the conditional probability distribution of happiness when given government expenditure.
In order to prove or deny hypothesis, research is being made on the relationship between government spending and satisfaction with life. For this reason, regression, comparative and graphical analysis was carried out. Data is analyzed using SPSS 21 software package and GRETL statistical analysis program.

Panel regression is being used to value the statistical relationship between two variables where one variable is dependent and another independent. To perform regression analysis linear regression equation is created:

\[ Y_{it} = \beta_0 + \beta_1 x_{it} + \ldots + \varepsilon_{it} \]  

\[ Y_{it} = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \beta_4 x_4 + \beta_5 x_5 + \beta_6 x_6 + \beta_7 x_7 + \beta_8 x_8 + \beta_9 x_9 + \beta_{10} x_{10} + \varepsilon_{it} \]  

where: \( Y \) is the dependent variable, i.e., satisfaction with life, \( x_{it} \) is the independent variable representing different functional spending of government, \( x_1 \) – general public services, \( x_2 \) – defense, \( x_3 \) – public order and safety, \( x_4 \) – economic affairs, \( x_5 \) – environment protection, \( x_6 \) – housing and community amenities, \( x_7 \) – health, \( x_8 \) – recreation, culture and religion, \( x_9 \) – education, \( x_{10} \) – social protection, \( \beta_0 \) and \( \beta_{1,2,\ldots,10} \) are coefficients showing affection of different expenditure to subjective wellbeing, \( i \) and \( t \) are indices for countries and time. The error \( \varepsilon_{it} \) is important because assumptions about it determine whether we speak of fixed or random effects.

When linear regression equation is created, it is necessary to verify the hypothesis of significance. Hypothesis \( H_0: \beta_1 = 0 \) and the alternative \( H_1: \beta_1 \neq 0 \) is examined. If \( H_0 \) is confirmed, on the basis of the equation \( y = \beta_0 + \beta x \), the inference is made that average value of \( y \) is equal to \( \beta_0 \) for each value of \( x \) and independent variable \( x \) does have an influence on the dependent variable (there is a significant relationship between variables). The hypothesis is verified in accordance to p-value measuring level of significance. The value of p is the probability of validity in zero hypotheses. Usually this probability is equal to 5 percent (value p = 0.05).

Statistical importance of the model will be assessed using the coefficient of determination (\( R^2 \)) – measuring how much in percentage dependent variable \( Y \) can be explained by independent variables in the interval of \([0;1]\). The higher value corresponds to a better model. In cases where \( R^2 < 0.20 \), model is considered insufficient (Čekanavičius, Murauskas, 2001).

Graphical analysis is used for analysis looking if there is a limit of government expenditure after which it stops having a positive effect on wellbeing or starts creating a negative effect on it. After scattered data reflects functional government expenditures and satisfaction, the cubic function which according to the coefficient of determination is the best in order to reflect the causal relationship to see if there is a maximum limit of government expenditures.

**Empirical Research and Results**

Seeking for heterogeneous countries study to provide more rationality, countries were divided into four different categories, using two indicators. A measure of government expenditure ratio to its GDP and an average GDP per capita where data is in international PPP prices. As a result, countries are clustered into four different groups: cluster 1 – high GDP per capita and big
government size, cluster 2 – low GDP per capita and small government size, cluster 3 – low GDP per capita and big government size and cluster 4 – high GDP per capita and small government size. Distribution of countries is provided in Figure 1.

For critical cluster meanings, we are taking average meanings of government size and GDP per capita in EU 26, which respectively are 45.3% of GDP and 23243 euros per capita. Results of the cluster are showed in Table 1.

![Figure 1. Average G/GDP ratio and GDP per capita data in EU 26](image)

*Source: author’s illustration made using data from Eurostat and World Database of Happiness*

**Table 1**

<table>
<thead>
<tr>
<th>Cluster 1</th>
<th>Cluster 2</th>
<th>Cluster 3</th>
<th>Cluster 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Denmark</td>
<td>Cyprus</td>
<td>Hungary</td>
<td>Poland</td>
</tr>
<tr>
<td>Sweden</td>
<td>Ireland</td>
<td>Greece</td>
<td>Czech Republic</td>
</tr>
<tr>
<td>France</td>
<td>Spain</td>
<td>Portugal</td>
<td>Malta</td>
</tr>
<tr>
<td>Finland</td>
<td>Slovenia</td>
<td>Latvia</td>
<td></td>
</tr>
<tr>
<td>Austria</td>
<td></td>
<td>Slovak</td>
<td></td>
</tr>
<tr>
<td>Italy</td>
<td></td>
<td>Lithuania</td>
<td></td>
</tr>
<tr>
<td>Netherlands</td>
<td></td>
<td>Estonia</td>
<td></td>
</tr>
<tr>
<td>United Kingdom</td>
<td></td>
<td>Bulgaria</td>
<td></td>
</tr>
<tr>
<td>Germany</td>
<td></td>
<td>Romania</td>
<td></td>
</tr>
<tr>
<td>Belgium</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Source: made by authors using Eurostat data*
In order to assess how functional government spending affects wellbeing regression analysis is used on panel data of government spending and satisfaction with life. It is expected, that it will lead to the determination of what influence different functional expenditures have on subjective wellbeing, which is satisfaction with life data. Different results of similar researches are showing that different areas of government spending may have positive, negative or is not affecting satisfaction with life at all. Using regression analysis on four clusters derived before in EU 26 context is believed to help get more precise information about this coherence.

**Hypothesis H\(_1\):** functional government spending have influence on subjective wellbeing of society.

The first cluster contains countries with high GDP per capita and government spending size. This is the largest cluster having most cultural differences inside, which includes countries: Denmark, Sweden, France, Finland, Austria, Italy, United Kingdom, Germany and Belgium. All measures of regression analysis results are presented in Table 2 and 3.

Regression analysis results of satisfaction with life dependency on different functional government spending are presented in Table 2. Determination coefficient found in the model of cluster 1 is equal to \(R^2 = 0.583\), which refers to a sufficiently strong link between variables. A mathematical model of regression of the first cluster is:

\[
Y = 5.070 - 0.023x_1 + 0.053x_2 - 1.213x_3 - 0.037x_4 + 0.31x_5 + 0.403x_6 + 0.288x_7 + 0.161x_8 + 0.326x_9 - 0.04x_{10} + \epsilon \quad (3)
\]

Results of analysis reveal that biggest negative influence on satisfaction with life has expenditures on public order and

<table>
<thead>
<tr>
<th>Sigma</th>
<th>Cluster 1</th>
<th>Cluster 2</th>
<th>Cluster 3</th>
<th>Cluster 4</th>
<th>AllCountries</th>
<th>All Countries*</th>
</tr>
</thead>
<tbody>
<tr>
<td>General public services</td>
<td>0.332</td>
<td>0.798</td>
<td>0.18</td>
<td>0.012</td>
<td>0.332</td>
<td>–</td>
</tr>
<tr>
<td>Defense</td>
<td>0.547</td>
<td>0.306</td>
<td>0.006</td>
<td>0.212</td>
<td>0.547</td>
<td>–</td>
</tr>
<tr>
<td>Public order and safety</td>
<td>0</td>
<td>0.314</td>
<td>0.012</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Economic affairs</td>
<td>0.149</td>
<td>0.821</td>
<td>0.487</td>
<td>0.771</td>
<td>0.149</td>
<td>–</td>
</tr>
<tr>
<td>Environment protection</td>
<td>0.023</td>
<td>0.606</td>
<td>0</td>
<td>0.431</td>
<td>0.023</td>
<td>–</td>
</tr>
<tr>
<td>Housing and community amenities</td>
<td>0</td>
<td>0.529</td>
<td>0.565</td>
<td>0.144</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Health</td>
<td>0</td>
<td>0.852</td>
<td>0.734</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Recreation, culture and religion</td>
<td>0.219</td>
<td>0.976</td>
<td>0.042</td>
<td>0</td>
<td>0.219</td>
<td>0.092</td>
</tr>
<tr>
<td>Education</td>
<td>0</td>
<td>0.102</td>
<td>0.549</td>
<td>0.079</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Social protection</td>
<td>0.032</td>
<td>0.161</td>
<td>0.496</td>
<td>0.099</td>
<td>0.032</td>
<td>0.001</td>
</tr>
</tbody>
</table>

* four statistically insignificant categories – general public services, defense, economic affairs, and environment protection – were excluded

Source: made by author using SPSS 16
safety (β = −1.213). Statistically significant and positive effect is created with expenditures on housing and community amenities (β = 0.403), education (β = 0.326), environment protection (β = 0.31) and health (β = 0.288). Six categories of government expenditures had a statistically significant effect and two of them resulted in having a negative influence on wellbeing.

However, results of the analysis show that all functions of government expenditure have statistically insignificant results. Although, expenditures on education (β = 0.489) and social protection (β = −0.105) are close to be statistically significant. Unfortunately, this cluster consists only of three countries, which are different culturally, politically, historically and in many other ways. While determination coefficient is one of the highest in all clusters there are not any significant results, this phenomenon gives reasons to think that cultural, economic and other differences have very different impact on countries inhabitants. Authors of the paper suggest that countries from this cluster have to be studied individually or when including more measures in clustering process to reveal more precise results.

The third cluster consists of countries with relatively low GDP per capita, but a high level of government spending expressed through a percentage of GDP.

### Table 3

<table>
<thead>
<tr>
<th>β</th>
<th>Cluster 1</th>
<th>Cluster 2</th>
<th>Cluster 3</th>
<th>Cluster 4</th>
<th>All Countries</th>
<th>All Countries*</th>
</tr>
</thead>
<tbody>
<tr>
<td>General public services</td>
<td>−0.023</td>
<td>0.029</td>
<td>−0.14</td>
<td>0.153</td>
<td>−0.023</td>
<td>−</td>
</tr>
<tr>
<td>Defense</td>
<td>0.053</td>
<td>−0.464</td>
<td>0.488</td>
<td>−0.155</td>
<td>0.053</td>
<td>−</td>
</tr>
<tr>
<td>Public order and safety</td>
<td>−1.213</td>
<td>−0.664</td>
<td>−2.315</td>
<td>−1.058</td>
<td>−1.213</td>
<td>−1.174</td>
</tr>
<tr>
<td>Economic affairs</td>
<td>−0.037</td>
<td>−0.003</td>
<td>−0.073</td>
<td>0.01</td>
<td>−0.037</td>
<td>−</td>
</tr>
<tr>
<td>Environment protection</td>
<td>0.31</td>
<td>0.765</td>
<td>3.847</td>
<td>0.119</td>
<td>0.31</td>
<td>−</td>
</tr>
<tr>
<td>Housing and community amenities</td>
<td>0.403</td>
<td>−0.173</td>
<td>0.28</td>
<td>0.192</td>
<td>0.403</td>
<td>0.391</td>
</tr>
<tr>
<td>Health</td>
<td>0.288</td>
<td>−0.045</td>
<td>−0.052</td>
<td>0.191</td>
<td>0.288</td>
<td>0.338</td>
</tr>
<tr>
<td>Recreation, culture and religion</td>
<td>0.161</td>
<td>0.011</td>
<td>0.587</td>
<td>0.523</td>
<td>0.161</td>
<td>0.209</td>
</tr>
<tr>
<td>Education</td>
<td>0.326</td>
<td>0.489</td>
<td>0.118</td>
<td>0.105</td>
<td>0.326</td>
<td>0.311</td>
</tr>
<tr>
<td>Social protection</td>
<td>−0.04</td>
<td>−0.105</td>
<td>−0.038</td>
<td>−0.042</td>
<td>−0.04</td>
<td>−0.055</td>
</tr>
</tbody>
</table>

* four statistically insignificant categories – general public services, defense, economic affairs, and environment protection – were excluded

Source: made by author using SPSS 16
It includes Hungary, Greece, Portugal and Slovenia. This cluster regression model resulted in having strongest determination coefficient \( (R^2 = 0.877) \). Regression model equation of the third cluster is:

\[
Y = 7.354 - 0.140x_1 + 0.488x_2 - 2.315x_3 - 0.073x_4 + 3.847x_5 + 0.280x_6 - 0.052x_7 + 0.587x_8 + 0.118x_9 - 0.038x_{10} + \varepsilon \tag{5}
\]

Regression analysis of the third cluster revealed similar results to the first cluster, while determination coefficient is stronger, there were less statistically significant results. Statistically significant and negative effect on welfare had expenditures for public order \( (\beta = -2.315) \). Meanwhile, the positive effect on social welfare had expenditures on defense \( (\beta = 0.488) \) and recreation, culture and religion. Environment protection resulted with high influence on wellbeing, which partly reflected in the analysis carried out on all countries together. Excluding environment protection as an error, only four categories of government spending were statistically significant from which one was negative, in addition, expenditures on public order and safety and recreation, culture and religion resulted in having influence on wellbeing.

The fourth cluster with countries, which in this context have relatively low GDP per capita and low government spending level, consists of Poland, Czech Republic, Malta, Latvia, Slovakia, Lithuania, Estonia, Bulgaria and Romania. Most of the countries are considered post-Soviet countries and latest ones to join EU. It means that they not only share similar economy level but also have cultural, political and other similarities.

Application of regression analysis model resulted showing that this cluster determination coefficient is relatively strong \( (R^2 = 0.744) \). The equation of regression model of this cluster is:

\[
Y = 5.33 + 0.153x_1 - 0.155x_2 - 1.058x_3 + 0.010x_4 + 0.119x_5 + 0.192x_6 + 0.191x_7 + 0.523x_8 + 0.105x_9 - 0.042x_{10} + \varepsilon \tag{6}
\]

Regression analysis of the fourth cluster results in a strong connection between expenditure and wellbeing. As in most clusters expenditures for public safety and order had statistically significant and negative effect on wellbeing \( (\beta = -1.058) \) as well as expenditures for social protection \( (\beta = -0.042) \). Positive effect was created through expenditures for recreation, culture and religion \( (\beta = 0.523) \), health \( (\beta = 0.191) \), environment protection \( (\beta = 0.31) \) and general public services \( (\beta = 0.153) \). In this cluster, six different functions had statistically significant impact on welfare, while two functions were very close to being positive as well.

To conclude, the second cluster showed no relation between the functional expenditure of government and wellbeing. This is interpreted as having a low number of countries analyzed as well as heterogeneity of them in many ways. A similar problem was encountered in the third cluster although here two areas in functional government expenditures were found as being significant and having influence on subjective wellbeing as in other clusters. Statistically, highest correlation comes from first and fourth clusters, where results as well are similar. Public order and safety, health, education and social protection expenditures had a significant influence on wellbeing in both clusters proving that public expenditures have an effect on social welfare and wellbeing. Therefore, the
impact that governing and management of public spending has on social welfare has to be examined in more depth. These expenditures, together with expenditures on housing and community amenities and recreation, culture and religion, which were found significant only in one of these clusters are the ones, which should have the biggest impact on wellbeing as per other researches and common sense.

To test the validity of clustering and to see if results are different in different context regression analysis was used on data from all countries. Determination coefficient of analysis was equal to 0.583, which means that happiness is explained by almost 60% when analyzing functions of government expenditure. The equation of the regression model is:

$$Y = 5.07 - 0.023x_1 + 0.053x_2 - 1.213x_3 - 0.037x_4 + 0.310x_5 + 0.403x_6 + 0.288x_7 + 0.161x_8 + 0.326x_9 - 0.040x_{10} + \varepsilon \quad (7)$$

One of the most important thing is that in this model all functions have statistically significant impact on satisfaction with life. Results are comparatively similar to the results acquainted from clusters and when analyzing all countries together. Negative influence is being found through expenditures on public order and safety, also with expenditures on social protection. While positive influence is being generated through expenditures on housing and community amenities ($\beta = 0.391$), health ($\beta = 0.338$), recreation, culture and religion ($\beta = 0.209$) and education ($\beta = 0.311$).

After cluster synthesis was carried out, we can observe that in different clusters we have common patterns on how different functions of expenditures are affecting wellbeing. Now analysis allows working on hypothesis formed in the beginning of research.

Conclusions

Traditional welfare economists see creation of a better environment for inhabitants’ personal wellbeing growth as well as maximization of social welfare as an obligation of government and governors, which through reallocation of resources have a great effect on ones’ wellbeing. Control of functional spending as well as laws, taxes and etc. provides governments power to boost economy, reduce social inequality, protect inhabitants and private
equity and most important to maximize social welfare. On the other hand, scholars are proving that in most of the western countries governments and politicians are ineffective in maximizing social welfare, because of big size, inconsistent policies, low quality, lobbying and self-interest.

Researches, which analyze the link between functional government spending and happiness or wellbeing, do not get the same conclusions. Mostly because of different data sources, as there are not any indicators which can truly represent happiness or level of wellbeing in the country as well as to allow a comparison of different countries and nations which understand and value happiness through different criteria. It is hard to compare the effect of functional spending when they do not carry the same multiplier for subjective wellbeing, under this assumption, countries were clustered into four groups by measures of GDP per capita and government expenditure expressed as a percentage of GDP. This is believed to be a better reflection of the situation of functional government spending influence on social satisfaction, because of countries being economically closer to each other therein cluster, as for example all post countries resulted being in fourth cluster.

The influence of government expenditure on happiness was analyzed in the context of 26 European Union member states in the period of 2003–2012. Croatia and Luxembourg were rejected due to the lack of statistics.

Hypothesis H1: “functional government spending have an influence on subjective wellbeing of society”, was partly accepted. Four out of ten functional spending including expenditures on housing and community amenities, health, recreation, culture and religion, and education had a positive effect on satisfaction with life in at least two clusters. Expenditures on public order and safety and social protection resulted having a negative effect on satisfaction with life. The highest effect on subjective wellbeing, when analyzing the improved model, had expenditures on public order and safety with a negative meaning of $\beta = -1.174$, while all functional expenditures with a positive effect on wellbeing resulted in similar $\beta$ meanings between 0.2 and 0.4, the lowest effect is created from expenditures on social protection $\beta = -0.055$.

The second cluster did not result in any statistically significant influence of public expenditures on wellbeing because of a small number of countries. The third cluster had only a few statistically important meanings, because of the fact that countries in the cluster were culturally very different. As the biggest problem of this research was that only functional government expenditures influence was studied. For future researches, it is necessary to include as many factors as possible when trying to understand the creation of wellbeing in nation.

To conclude, functional expenditures has a significant impact on subjective wellbeing, however, different countries result in different dependency on different categories of expenditure. These differences indicate that government spending is not the only factor when determining subjective wellbeing, and there is a need for profound research that would include various factors and examine how different functions of government spending impacts social welfare and wellbeing of nations’ inhabitants. As well as to understand what are the effective levels of spending and governing and how to control them in a way that social utility would be maximized.
References


