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# COMPARATIVE ANALYSIS OF THE SUBJECTIVE WELL-BEING OF THE BALTIC COUNTRIES' INHABITANTS IN THE CONTEXT OF ECONOMIC DEVELOPMENT

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Abstract. Since the Baltic countries have joined the European Union, the value of personal satisfaction with life has fluctuated – decreased or increased – along with GDP per capita until the crisis, i.e. until 2009; afterwards, the nature of this dependency started to change across the countries. The novelty of the current research study is the analysis of the people's SWB dependence upon the economic development indicators in the Baltic countries after their accession to the EU, conducted in the context of the results of previous research studies on the topic. The research aim is to review theoretical research studies on the interrelation of people's SBW and economic development of the country, as well as to analyse the situation in Latvia, Lithuania, and Estonia. The following research methods were applied: the monographic method and regression analysis. The findings of the research study showed that Estonia was the leader among the three Baltic countries in all the economic development indicators considered, whereas Latvia was behind in all the indicators; moreover, the level of personal satisfaction with life was the highest in Estonia, although, as the results of the regression analysis demonstrated the SWB of people in Estonia was the least dependent on the economic development indicators.

**Keywords:** Baltic countries, economic development, GDP per capita, subjective well-being (SWB).

## Introduction

In the second half of the 20<sup>th</sup> century, a tendency emerged in the world to take into consideration a subjective evaluation and attitude to the living conditions of the inhabitants living in the particular area when evaluating development of this territory (Cummins, Eckersley, Pallant, Van Vugt, & Misajon, 2003; Cummins, Woerner, Tomyn, & Gibson-Prosser, 2012; Cummins & Weinberg, 2012; Australian National Development Index; Lonska, 2015; Willi et al., 2012; Hall, Giovannini, Morrone, & Ranuzzi, 2010a; Hall, Tredger, Novelli, & Thomas, 2010b). Consequently, quite a few ratings, surveys and reports were developed

just by ranking the countries according to their inhabitants' subjective evaluation and views; the most often used indicators are satisfaction with life (Stevenson & Wolfers, 2008; Bjørnskov, Gupta, & Pedersen, 2008; Degutis, Urbonavičius, & Gaižutis, 2010; Clark & Senik, 2011) and feeling of happiness (Easterlin, 1974, 1995; Morawetz, 1977; Diener & Biswas-Diener, 2002; Dolan, Peasgood, & White, 2008; Sanfey & Teksoz, 2008; Easterlin & Angelesku, 2012).

Analysing various factors influencing inhabitants' subjective well-being (SWB), the researchers note the economic factor as the first and the most important one creating and influencing an individual's overall economic well-being.

When reviewing the ratings of the Baltic countries (i.e. Latvia, Lithuania and Estonia) related to SWB, it can be noticed that the inhabitants' subjective perception of life in the country is very pessimistic, especially in Latvia and Lithuania. In the present paper, the authors consider and evaluate the influence of economic factors, i.e. purchasing power adjusted GDP per capita, people at risk of poverty or social exclusion, the unemployment rate, and the Gini index on the people's SWB in the three Baltic countries since their accession to the EU in 2004. The aim of the paper is to analyse the relation of the people's SBW to the economic development in Latvia, Lithuania, and Estonia.

Based on analyses of the theoretical studies on the relation of the people's SBW and economic conditions and on the empirical studies of the Eurobarometer and Eurostat data of 2004-2018, the following hypothesis is put forward: since Lithuania's and Latvia's accession to the EU in 2004, the SWB of the population of these countries directly depends on the economic situation, while in Estonia along with the economic factors, there are other non-economic factors affecting the subjective well-being of the population.

The body of the paper is organized as follows: discussion of the world researchers' and scientists' theoretical studies on the topic of the impact of economic conditions on people's SWB is followed by the description of the research methodology. The results of a diachronic comparison (i.e. the indicators' dynamics in the course of time) of relation of the people's SWB to the economic development of Latvia, Lithuania, and Estonia is provided in the last part of the paper.

In this paper, the following research methods were applied: the monographic method for the literature review, secondary analysis of data of previous research studies and statistics to illustrate the research problem as well as to prove the hypothesis. The authors' research is based on the Western economists' research on the subjective well-being of people and economic development of countries, on the empirical data of Eurobarometer studies, as well as on statistical data of Eurostat.

## Literature review

So far, the question "Is money the secret of happiness?" or, as the researchers put it "Will raising the income of all increase the happiness of all?" (Easterlin 1974; Diener & Biswas-Diener, 2002; Layard, 2005; Kahneman & Deaton, 2010; Hagerty & Veenhoven, 2003; Veenhoven & Hagerty, 2006; Bjørnskov et al., 2008; Dolan et al., 2008) is still open: the scientists and researchers from all over the world are getting completely different results when trying to find an answer to the aforesaid question.

The most frequently analysed indicator is the impact of the country's GDP upon the people's subjective well-being. Carrying out their research studies, some scientists have come to the conclusions that:

- There is **no significant connection** between the country's GDP and people's SWB or the observed connection is weak (Easterlin 1974, 1995; Rojas, 2011). R. Easterlin has examined the interrelation between the people's sense of happiness and GDP both broken down by country and from the national perspective over a specific period of time. In both cases, he has discovered insignificant evidence of the link between the country's total income and the average level of happiness. In other words, in the course of time, the interaction between the national revenue (which directly affects the income of the population) and SWB tends to be zero. This phenomenon is well known as The Easterlin Paradox. According to it, an individual's SWB is a very relative concept: as long as the individual is better materially secured than other members of the society, he/she feels happy; as soon the surrounding people reach his/her material prosperity level, he/she is not so happy anymore, i.e. people tend to be not just rich, but rather to be richer than others. R. Easterlin declares: "In all societies, more money for the individual typically means more individual happiness. However, raising the incomes of all does not increase the happiness of all" (Easterlin, 1974). R. Easterlin explains this phenomenon as follows: as income increases, people adjust their material aspirations to the new level of income, thus reducing the potential gain of happiness. People adapt to the income growth by increasing proportionally their aspirations for the material benefits. In particular, alongside the income growth, the financial expectations increase as well, potentially making people to feel less satisfied with their income levels. Increasing dissatisfaction in financial life can become the basis for dissatisfaction with life.
- Only **rapid GDP growth** affects the people's SWB (Bjørnskov et al., 2008). In their studies on the life satisfaction in the EU-15 between

1973 and 2002, Bjørnskov and co-researchers have found that GDP growth alone has not lead to the positive trends in the people's satisfaction with life, though the acceleration of the GDP growth did it. This means that, if people get used both to the new income level and to the fact that this income level continuously increases, their aspirations continue to grow constantly; that explains the surprisingly constant level of life satisfaction in the prosperous economies. Bjørnskov and co-researchers have found that life satisfaction is influenced by the size of the gap between the people's aspirations and their actual achievements. Accelerated GDP growth leads to a positive trend in the people's subjective satisfaction with life, i.e. the people feel more satisfied if their wishes come true. Besides, accelerated GDP growth and rapid increase in public spending compared with the situation in the neighbouring countries lead to positive trends in the people's satisfaction with life – the individuals tend to compare their country's situation with that of the neighbouring countries.

- There is a **bidirectional connection** between the individual's subjective and material prosperity, and the people who are happier start earning more by becoming economically motivated (Diener & Biswas-Diener, 2002; Dolan et al., 2008). Analysing correlations across the economies, E. Diener and R. Biswas-Diener have discovered that the findings of their study do not reflect the common idea that subjective well-being automatically derives from the higher incomes; this link includes inbetween elements showing that such psychological factors as needs, desires, and social roles can play a crucial role in the link "money – subjective well-being". It turns out that in poor economies, income is linked to SWB to a much lesser extent than in rich economies. As regards national analysis, Diener and Biswas-Diener have proved that there is a two-way link between the people's SWB and their income. They have found no regularity that would evidence the income growth has a positive impact on the people's life satisfaction; on the contrary, possibly the income reduction does not affect SWB. Furthermore, they point out that there are situations where people who feel happier compared with others start to earn more, i.e. SWB positively affects the people's material prosperity (Diener & Biswas-Diener, 2002). This phenomenon has also been studied by P. Dolan, T. Peasgood, and M. Wait, using top-down explanation: when feeling happy, people become more economically motivated and start earning more compared with those who are unhappy (Dolan et al., 2008).
- Increase in revenues has the **buffering effect** in relation to life mishaps (Ahuvia & Friedman, 1998). A. Ahuvia and D. Friedman offer an

explanation of **a buffering effect**. They theorize that increasing income does not make people "happier", but rather make people feel protected from various troubles reducing their negative impact.

Nevertheless, most studies prove that a positive correlation between economic conditions and the people's SWB exists (Hagerty & Veenhoven, 2003; Veenhoven & Hagerty, 2006; Stevenson & Wolfers, 2008; Degutis et al., 2010; Clark & Senik, 2011). In particular, it is observed in low-income economies (Dolan et al., 2008; Deaton, 2008). However, in high-income economies, there is a certain income threshold, i.e. the so-called income saturation point at which the people's happiness level does not grow along with the increasing income, while this threshold is not observed in low-income economies (Layard, 2005).

B. Stevenson and J. Wolfers have repeatedly studied the Easterlin's Paradox and emphasize that there is a close link between the level of SWB and income in both rich and poor economies, rejecting the earlier assertion of the material prosperity saturation point, where higher GDP per capita is no longer associated with a higher SWB level (Stevenson & Wolfers, 2008). D. Degutis and his coresearchers also point at the cross-country analysis showing that GDP growth influences the growth of SWB both in relatively prosperous and relatively poor groups of the countries all over the EU-27. Although the national analysis indicates that only 15 countries of the EU-27 have a positive correlation between GDP per capita and life satisfaction (8 of these 15 are the new EU Member States and therefore poorer). It should be noted that there is no clear link between the changes in GDP and the level of SWB; this positive link is observed in all Eastern European countries except Hungary (Degutis et al., 2010).

There is a number of studies providing evidence that higher income goes hand in hand with the higher satisfaction scores (Stevenson & Wolfers, 2008; Clark & Senik, 2011; Deaton, 2008). For example, Stevenson and Wolfers, as well as Deaton cannot identify a significant income threshold between poorer and richer economies. This implies that the economic growth will increase life satisfaction in a similar way in any country, regardless of the actual income level. However, the impact of the absolute income growth on the SWB is rather modest in rich economies, comparing with relative income, which matters a great deal, particularly, in transition and developing economies because of higher income inequality that also negatively affects the SWB level. The income growth leads to higher SWB in all the three country groupings, i.e. high-income, transition, developing countries. However, the effect is very small in high-income countries, substantially larger in transition countries, and even larger in developing countries (Gruen & Klasen, 2013).

There is a lot of evidence that SWB is influenced not only by changes in GDP but by other economic indicators such as income inequality (Morawetz, 1977; Alesina, Di Tella, & Macculloch, 2004; Sanfey & Teksoz, 2008; Gruen &

Klasen, 2013; Hajdu & Hajdu, 2014; Eurofound, 2017), inflation (Di Tella, MacCulloch, & Oswald, 2001), unemployment (Di Tella et al., 2001; Lucas, Clark, Georgellis, & Diener, 2004; Lelkes, 2006) and others as well.

Based on the analysis of the scientific literature, the authors argue that the scientists frequently come to the conclusion that the individuals' SWB is dependent on the economic situation in the country. It should be noted that the scientific studies demonstrate also the impact of non-economic determinants such as health, physical and emotional state, mentality, educational level, marital status, security level, the political situation in the country, etc. on the individuals' SWB. (Howell & Howell, 2008; Degutis & Urbonavicius, 2013; Ng & Diener, 2014). The impact of non-economic determinants on the individuals' SWB were not considered in this research study.

# Research methodology

To analyse relation of economic development to the people's SWB, a specific methodological approach is necessary to select indicators that will be used to characterise the economic development of the countries. It would be methodologically inappropriate to take into account only the GDP indicator, which characterizes only the economic growth and has a number of shortcomings and limitations (Lonska, 2012, 2015; Hanson, 1995; Лызлов, 2009; Eiropas Parlamens, 2011; CASSE, 2009).

The authors have used the methodology of assessment of the economic development of countries provided by the British economist, one of the founders of development economics, D. Seers. He has claimed that GDP is not an unambiguous indicator of national economic development (Seers, 1969). Indeed, it should be noted that D. Seers analyses not only the economic development as such, but also the impact of economic processes on the overall development of the country, i.e. how the economic growth leads to improving the country's overall prosperity. D. Seers notes that the questions to ask about a country's development are as follows: What has been happening to poverty? What has been happening to unemployment? What has been happening to inequality? If all the three of these have declined from high levels, then beyond doubt this has been a period of development for the country concerned. If one or two of these central problems have been growing worse, especially if all the three have, it would be strange to call the result "development", even if per capita income has doubled (Seers, 1969).

Hence, the authors choose the following indicators to characterise the economic development of the countries to be studied: purchasing power adjusted GDP per capita, people at risk of poverty or social exclusion, the unemployment rate, the Gini index. All of these variables are considered as potentially influencing SWB of people in Latvia, Lithuania, and Estonia. However, the SWB

of people in this study is empirically being interpreted using the variable "personal life satisfaction" from the Eurobarometer database.

The mathematical model of impact of the economic development of the Baltic countries on the SWB of people will be constructed by the authors, using the linear regression equation obtained as a result of a regression analysis of the above mentioned variables for the period 2005 - 2017 for Latvia, Lithuania, and Estonia. The dependent variable – personal satisfaction with life (satisfied inhabitants, as a % of total inhabitants); factor variables – purchasing power adjusted GDP per capita (thousands EUR), people at risk of poverty or social exclusion (%), the unemployment rate (%), the Gini index (%), the variable inclusion method – stepwise.

# Research results and discussion

A comparison of trends in personal life satisfaction (satisfied inhabitants, % of total inhabitants) and purchasing power adjusted GDP per capita (EUR) in Latvia, Lithuania, and Estonia during 2005-2018 allows us to get a preliminary idea of how closely the SWB of people is interrelated with one of the economic development indicators of the investigated countries – purchasing power adjusted GDP per capita (see Figures 1, 2, 3).

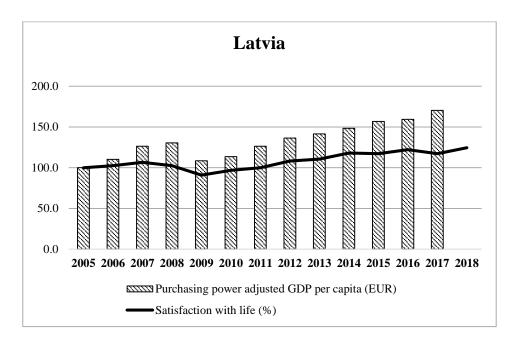


Figure 1 Comparative trends in personal satisfaction with life (satisfied inhabitants, % of total inhabitants) and purchasing power adjusted GDP per capita (EUR) in Latvia, % (2005=100%), 2005-2018 (elaborated by the authors based on the Standard Eurobarometer 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90; Eurostat, 2018c)

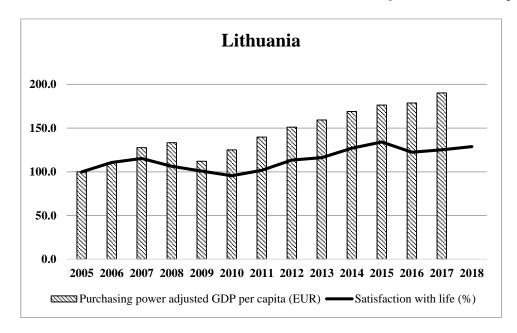


Figure 2 Comparative trends in personal satisfaction with life (satisfied inhabitants, % of total inhabitants) and purchasing power adjusted GDP per capita (EUR) in Lithuania, % (2005=100%), 2005-2018 (elaborated by the authors based on the Standard Eurobarometer 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90; Eurostat, 2018c)

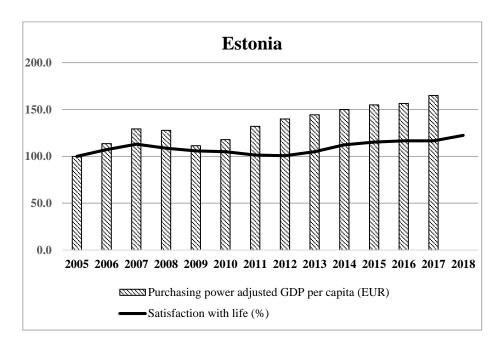


Figure 3 Comparative trends in personal satisfaction with life (satisfied inhabitants, % of total inhabitants) and purchasing power adjusted GDP per capita (EUR) in Estonia, % (2005=100%), 2005-2018 (elaborated by the authors based on the Standard Eurobarometer 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90; Eurostat, 2018c)

Figures 1, 2, and 3 lead the authors to conclude that, in general, the personal satisfaction with life has increased in 2018 compared with 2005. Though, in the period from 2005 to 2018, this indicator has fluctuated – both increased and decreased – in all the three Baltic countries along with the purchasing power adjusted GDP per capita just until the crises of 2009. Afterwards, the situation varied and become more ambiguous. For instance in Latvia, personal satisfaction with life was increasing along with the increase of purchasing power adjusted GDP per capita during the after-crises period until 2016, and dropped sharply in 2017 despite an increase in GDP (see Fig. 1). In Lithuania, personal satisfaction with life was increasing along with the growing purchasing power adjusted GDP per capita after the crisis until 2015, quite sharply dropped in 2016 despite a small increase in GDP, and almost did not react to the continuous growth of GDP in 2017 (see Fig. 2). However, in Estonia, personal satisfaction with life had both drops and increases, with periods of not reacting to the continuous growth of GDP (see Fig. 3).

Since the purchasing power adjusted GDP per capita in all the three Baltic countries have increased by 65-90% in 2017 compared with 2005, the authors tend to believe that, in fact, there exists a certain individual threshold of prosperity – according to British economist R. Layard – it is  $\approx 20~000~\text{USD}$  ( $\approx 17~\text{C}$ 594 EUR at the exchange rate of the Bank of Latvia) per year per capita. By reaching this threshold, the individual's life satisfaction is not anymore related to the income level so much. Though, in the countries with income per capita below this threshold level, the situation is completely different: the people's SWB is directly dependent on providing the necessary living conditions (Layard, 2005). Latvia was this type of country until 2015, Lithuania – until 2012, Estonia – until 2011 (Eurostat, 2018c). Afterwards, the level of purchasing power adjusted GDP per capita in the Baltic countries reached the level over the "Layard's threshold", and personal satisfaction with life stopped following the changes of purchasing power adjusted GDP per capita – perhaps, the income saturation point mentioned by R. Layard in his book "Happiness: Lessons from a New Science" published in 2005 and discussed by the other authors (Kahneman & Deaton, 2010) was reached. Although Kahneman D. and Deaton A., compared with R.Layard, have pointed out a different income saturation point -  $\approx$  75,000 USD per year (Kahneman & Deaton, 2010). It is interesting that, according to the data in Figures 1, 2, and 3, personal satisfaction with life has increased in all the three Baltic countries in 2018, still, the authors have no data on the economic development of Latvia, Lithuania, and Estonia in 2018 yet.

According to D. Seers' methodology adopted in this paper, the national economic development is characterized not only and not even so much by GDP, but also by other indicators; therefore, the authors present a mathematical model of the influence of the economic development of the Baltic countries on the

people's SWB in the form of equation of linear regression obtained as a result of regression analysis as well.

Variables for the regression analysis are designated as follows:

y – personal satisfaction with life, % (dependent variable, i.e. the result);

 $x_1$  – purchasing power adjusted GDP per capita, thousand EUR (independent variable, i.e. the factor);

 $x_2$  – people at risk of poverty or social exclusion, % (independent variable, i.e. the factor);

 $x_3$  – unemployment rate, % (independent variable, i.e. the factor);

 $x_4$  – Gini index, % (independent variable, i.e. the factor).

The equation of linear regression for Latvia for 13 years (from 2005 to 2017) has appeared as follows:

$$y = 33.596 + 2.024x_1 \tag{1}$$

i.e. in Latvia, on average, only the first factor – purchasing power adjusted GDP per capita – had a statistically significant influence on personal satisfaction with life in the period of 2005-2017 (increase in GDP for every 1000 EUR increased personal satisfaction with life by 2.024%).

Excluded, i.e. non-significant, variables are the following:

 $x_2$  – people at risk of poverty or social exclusion (p=0.151);

 $x_3$  – unemployment rate (p=0.914);

 $x_4$  – Gini index (p=0.545).

The linear regression equation for Lithuania for 13 years (2005-2017) appears as follows:

$$y = 42.596 + 1.477x_1 - 0.599x_3 \tag{2}$$

i.e. in Lithuania, on average, the first factor – purchasing power adjusted GDP per capita – had a statistically significant impact on the personal satisfaction with life in 2005-2017 (increase in GDP for every 1000 EUR increased personal satisfaction with life by 1.477%), and the third factor – the unemployment rate (increase in the unemployment rate by 1% led to decrease in personal satisfaction with life by 0.599%).

Excluded, i.e. non-significant, variables are the following:

 $x_2$  – people at risk of poverty or social exclusion (p=0.624);

 $x_4$  – Gini index (p=0.921).

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The linear regression equation for Estonia for 13 years (2005-2017) appears as follows:

$$y = 55.517 + 1.024x_1 \tag{3}$$

i.e. in Estonia, the same way as in Latvia, on average, only the first factor – purchasing power adjusted GDP per capita – had a statistically significant influence on personal satisfaction with life (increase in GDP for every 1000 EUR increased personal satisfaction with life by 1.024%) in 2005-2017.

Excluded, i.e. non-significant, variables are the following:

 $x_2$  – people at risk of poverty or social exclusion (p=0.957);

 $x_3$  – unemployment rate (p=0.859);

 $x_4$  – Gini index (p=0.966).

The comparative results of the regression analysis for Latvia, Lithuania, and Estonia are presented in Table 1.

Table 1 Comparative results of the regression analysis for Latvia, Lithuania, and Estonia, 2005-2017 (data from Formulas 1, 2 and 3)

Country	Personal satisfaction with life without influence of investigated factors,	Influence of purchasing power adjusted GDP per capita on personal satisfaction with life,	
	Parameter A	Parameter B	
Latvia	33.596	2.024	
Lithuania	42.596	1.477	
Estonia	55.517	1.024	

Thus, the results of the regression analysis carried out by the authors show that, first of all, the strongest dependency of personal satisfaction with life on the analysed factors of the economic development is in Latvia, since the personal satisfaction with life without the influence of investigated factors (Parameter A) is the lowest among the three Baltic countries (see Table 1). However, in Estonia, personal satisfaction with life is the least dependent on the factors of economic development.

These results are in line with the earlier researches indicating that, in the economies with high incomes, higher satisfaction with life and a lower correlation between average individual SWB and national incomes can be observed, compared with low income countries (Dolan et al., 2008). It seems that in the Baltic countries, especially in Estonia, the tendencies that are typical of high income economies start emerging.

The second important finding of the regression analysis is the conclusion that despite the widespread criticism of GDP as an indicator of the country's economic development in the scientific literature, it is the factor (and only this, with the exception of a small effect of the unemployment rate in Lithuania) that has the most significant effect on personal satisfaction with life in all the three Baltic countries – a maximum of influence in Latvia and a minimum in Estonia (see Table 1). Thus, the authors conclude that the indicators of economic development in the Baltic countries do not affect the people's SWB, with the exception of one - the purchasing power adjusted GDP per capita. Its average impact on personal satisfaction with life has remained statistically significant and quite strong since the accession of the Baltic States to the European Union, especially in Latvia, despite all the changes occurring in the nature of this relationship in the post-crisis period (see Figures 1, 2, and 3). This result is also consistent with the findings of the earlier research studies showing that changes in GDP have a strong and statistically significant impact on the people's SWB (Di Tella, Macculloch, & Oswald, 2003).

It is interesting that the Gini coefficient is not the factor that affects personal satisfaction with life in the Baltic countries (see Formula 1, 2, and 3). However, the results of the earlier researches show that, even though the European respondents' satisfaction with life is negatively affected by income inequality, this phenomenon is generally not observed among the US respondents (Alesina et al., 2004). In another research study, P. Sanfey and U. Teksoz have used the data of the World Values study and concluded that the income inequality assessed by the Gini coefficient has a negative impact on the sense of happiness of the people, especially in transition economies, i.e. people in the transition economies strive to avoid income inequality (Sanfey & Teksoz, 2008). The sociological research on the income inequality in the Baltic countries has revealed that the income inequality resulting from the neoliberal welfare policy has led to the people's dissatisfaction in the region, thereby preferring a more equal or absolutely equal society (Skuciene, 2018). Moreover, this is observed despite the fact that the values of equality/solidarity and individual responsibility corresponds with the main principles of the neoliberal welfare policy, on the other hand, equality and solidarity are not important values in a society characterized by a preference for freedom and individual efforts (Skuciene, 2018). The authors believe that some inconsistency in the results of the researches on the income inequality in Europe (especially in the so-called "new" EU countries that have joined the European Union in 2004 and afterwards) can be explained by the fact that, in these countries, a stable perception of macroeconomic and other social indicators typical of a market economy have not yet developed: on the one hand, no one wants more of "Soviet equalization" but freedom instead, still on the other hand, income inequality (the inevitable result of freedom and private initiative) is rejected.

Although the researches have consistently demonstrated the high negative impact of individual unemployment on SWB (Di Tella et al., 2001; Di Tella et al., 2003; Lucas et al., 2004; Lelkes, 2006), the regression analysis conducted by the authors has revealed such dependence only in Lithuania, while in Latvia and Estonia the unemployment rate is not a factor that statistically significantly affects personal satisfaction with life (see Formulas 1, 2 and 3).

The following table presents the average values of economic development indicators and personal satisfaction with life in all the three investigated countries for the period from 2005 to 2017.

Table 2 Average values of economic development indicators and personal satisfaction with life in Latvia, Lithuania, and Estonia, 2005 – 2017 (elaborated by the authors based on the Standard Eurobarometer 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90; Eurostat, 2018a, 2018b, 2018c, 2018d)

Indicators	Latvia	Lithuania	Estonia
Purchasing power adjusted GDP per capita, thousands EUR	15.7	17.7	18.8
People at risk of poverty or social exclusion, %	35.8	32.0	23.4
Unemployment rate, %	11.5	10.1	8.6
Gini index, %	36.0	35.0	32.8
Personal satisfaction with life, %	65.3	62.7	74.7

The comparative data presented in Table 2 clearly show that Estonia led among the three Baltic countries in all economic development indicators considered, however, Latvia was behind in all the indicators. Personal satisfaction with life was the highest in Estonia as well, although, as the results of the regression analysis performed by the authors presented in this paper showed, the subjective well-being of Estonian people was the least dependent on economic development indicators. Feasibly, because, among the Baltic countries, these indicators were the highest in Estonia.

### **Conclusions**

As a result of the research study, the authors have come to the following conclusions:

1) in the scientific research on the impact of economic indicators on people's subjective well-being, the national GDP rate is the most frequently analysed indicator, although the influence of income inequality, inflation, unemployment, etc. are studied quite often as well;

- 2) the researchers mostly come to the conclusion that the people's SWB is dependent on the economic situation in the country;
- 3) the researches point out to the impact of non-economic determinants health status, mentality, educational level, marital status, security level, the political situation in the country, etc. on the people's SWB as well;
- 4) in general, in Latvia, Lithuania, and Estonia, the value of the personal satisfaction with life indicator has increased in 2018 compared with 2005; during 2005-2018, in all the three investigated Baltic countries, this indicator has fluctuated decreased or increased along with the purchasing power adjusted GDP per capita until the crisis, i.e. until 2009; afterwards, the nature of dependency of personal satisfaction with life on the GDP per capita started to change across the countries;
- the authors used a methodology for national economic development evaluation provided by one of the founders of Development Economics, D. Seers, who has claimed that GDP is not an unambiguous indicator for assessment of national economic development; to define the economic development of the investigated countries, the authors used the following indicators purchasing power adjusted GDP per capita, people at risk of poverty or social exclusion, the unemployment rate, the Gini index;
- 6) the analysed economic development indicators for the Baltic countries did not affect the subjective well-being of people, with the exception of one indicator purchasing power adjusted GDP per capita; its average impact on personal satisfaction with life has remained statistically significant and strong enough since the accession of the Baltic States to the EU, especially in Latvia.

### References

Ahuvia, A.C., & Friedman, D.C. (1998). Income, consumption, and subjective well-being: Toward a composite macromarketing model. *Journal of Macromarketing*, 18, 153-168.

Alesina, A., Di Tella, R., & Macculloch, R. (2004). Inequality and happiness: are Europeans and Americans different? *Journal of Public Economics*. 88, 2009–2042.

Australian National Development Index. Retrieved from http://www.andi.org.au/

Bjørnskov, C., Gupta, N.D., & Pedersen, P.J. (2008). Analysing trends in subjective well-being in 15 European countries, 1973–2002. *Journal of Happiness Studies*, *9*, 317–330.

CASSE (2009). *GDP and Indicators of Economic Wellbeing*. Center for the Advancement of the Steady State Economy. Retrieved from http://steadystate.org/wp-content/uploads/CASSE\_Brief\_GDP.pdf

Clark, A., & Senik, C. (2011). Will GDP Growth Increase Happiness in Developing Countries? *IZA Discussion Paper No. 5595*. Retrieved from

https://papers.ssrn.com/sol3/papers.cfm?abstract\_id=1796590

- Cummins, R., Eckersley, R., Pallant, J., Van Vugt, J., & Misajon, R. (2003). Developing a National Index of Subjective Wellbeing: The Australian Unity Wellbeing Index. *Social Indicators Research*, 6, 159-190. Retrieved from http://www.uvm.edu/~pdodds/teaching/courses/2009-08UVM-300/docs/others/everything/cummins2003a.pdf
- Cummins, R., & Weinberg, M. (2012). Australian Unity Wellbeing Index "The Wellbeing of Australians The Impact of Marriage on Wellbeing". Survey 28.0, Report 28.0, November 2012. Australian Centre on Quality of Life. Retrieved from http://www.australianunity.com.au/~/media/About%20Us/Publications/Impact%20of%20marriage%20on%20wellbeing.ashx
- Cummins, R., Woerner, J., Tomyn, A., & Gibson-Prosser, A. (2012). Quality of Life in Australia. In Land, K., Michalos, A., Sirgy, M. (eds), *Handbook of Social Indicators and Quality of Life Research*. New York: Springer Dordrecht Heidelberg London.
- Deaton, A. (2008). Income, Health, and Well-Being around the World: Evidence from the Gallup World Poll. *Journal of Economic Perspective*, 2(22), 53–72.
- Degutis, M., Urbonavičius, S., & Gaižutis, A. (2010). Relation between GDP and Life Satisfaction in the European Union. *Ekonomika*, 89(1), 9-21.
- Degutis, M., & Urbonavicius, S. (2013). Determinants of Subjective Wellbeing in Lithuania. *Engineering Economics*, 24(1), 111-118. Retrieved from http://www.inzeko.ktu.lt/index.php/EE/article/viewFile/2024/2469
- Di Tella, R., MacCulloch, R.J., & Oswald, A.J. (2003). The macroeconomics of happiness. *The Review of Economics and Statistics*, 85(4), 809–827.
- Di Tella, R., MacCulloch, R.J., & Oswald, A.J. (2001). Preferences over Inflation and unemployment: Evidence from Surveys of Happiness. *The American Economic Review*, 91(1), 335–341. Retrieved from http://www.people.hbs.edu/rditella/papers/AERHappyInflation.pdf
- Diener, E., & Biswas-Diener, R. (2002). Will Money Increase Subjective Well-Being? A Literature Review and Guide to Needed Research. *Social Indicators Research*, *57*, 119-169.
- Dolan, P., Peasgood, T., & White, M. (2008). Do we really know what makes us happy? A review of the economic literature on the factors associated with subjective well-being. *Journal of Economic Psychology*, 29, 94-122.
- Easterlin, R.A. (1974). Does Economic Growth Improve the Human Lot? Some Empirical Evidence. In: David, P.A., Reder, M. W. (Eds.) *Nations and Households in Economic Growth*. New York: Academic Press, 89-125. Retrieved from http://graphics8.nytimes.com/images/2008/04/16/business/Easterlin1974.pdf
- Easterlin, R.A. (1995). Will raising the incomes of all increase the happiness of all? *Journal of Economic Behavior and Organization*, 27, 35–47.
- Easterlin, R.A., & Angelescu, L. (2012). Modern Economic Growth and Quality of Life: Cross-Sectional and Time Series Evidence. In: Land, K. C. (ed.) *Handbook of Social Indicators and Quality of Life Research*. New York and London: Springer.
- Eiropas Parlamens (2011). *Rezolūcija "KP un ne tikai progresa novērtējums mainīgā pasaulē"*. Retrieved from http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//NONSGML+TA+P7-TA-2011-0264+0+DOC+PDF+V0//LV
- Eurofound (2017). European Quality of Life Survey 2016: Quality of life, quality of public services, and quality of society. Publications Office of the European Union, Luxembourg. Retrieved from

- $https://www.eurofound.europa.eu/sites/default/files/ef\_publication/field\_ef\_document/ef1733en.pdf$
- Eurostat (2018a). *Gini coefficient of equivalised disposable income EU-SILC survey*, code: tessi190 (last update 03.08.2018). Retrieved from https://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&plugin=1&pcode=tessi190&language=en
- Eurostat (2018b). *People at risk of poverty or social exclusion*, code: sdg\_01\_10 (last update 03.08.2018). Retrieved from https://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&plugin=1&pcode=sdg\_01\_10&language=en
- Eurostat (2018c). *Purchasing power adjusted GDP per capita*, product code: sdg\_10\_10 (last update 03.08.2018). Retrieved from https://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&plugin=1&pcode=sdg\_10\_10&language=en
- Eurostat (2018d). *Unemployment rate annual data*, code: tipsun20 (last update 03.08.2018). Retrieved from https://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&language=en&pcode=tipsun20&plugin=1
- Gruen, C., & Klasen, S. (2013). Income, inequality, and subjective well-being: an international and intertemporal perspective using panel data. Jahrbuch für Wirtschaftsgeschichte / *Economic History Yearbook*. Ed. by Ziegler, Dieter. Retrieved from https://goedoc.uni-goettingen.de/bitstream/handle/1/10801/Income%2C%20inequality%2C%20and%20su bjective%20well-being.pdf?sequence=1&isAllowed=y
- Hagerty, M., & Veenhoven, R. (2003). Wealth and Happiness Revisited Growing National Income Does Go With Greater Happiness. *Social Indicators Research*, 64, 1–27.
- Hajdu, T., & Hajdu, G. (2014). Reduction of Income Inequality and Subjective Well-Being in Europe. *Economics Discussion Papers*, 22, Kiel Institute for the World Economy. Retrieved from <a href="http://www.economics-ejournal.org/economics/discussionpapers/2014-22">http://www.economics-ejournal.org/economics/discussionpapers/2014-22</a>
- Hall, J., Giovannini, E., Morrone, A., & Ranuzzi, G. (2010). A Framework to Measure the Progress of Societies. Statistics Directorate. Working paper Nr.34. Retrieved from http://search.oecd.org/officialdocuments/displaydocumentpdf/?cote=std/doc(2010)5&docLanguage=En
- Hall, S., Tredger, E., Novelli, D., & Thomas, P. (2010). *Measuring Progress: Sustainable Development Indicators 2010*. UK Department for Environment, Food and Rural Affairs (defra). Retrieved from https://webarchive.nationalarchives.gov.uk/20140828020347/http://sd.defra.gov.uk/doc uments/SDI2010\_001.pdf
- Hanson, J. (1995). What is Wrong with GDP? The Genuine Progress Indicator: Summary of Data and Methodology, Redefining Progress. Retrieved from http://www.hartford-hwp.com/archives/45/016.html
- Howell, R.T., & Howell, C.J. (2008). The relation of economic status to subjective well-being in developing countries: a meta-analysis. *Psychological Bulletin*, *134*(4), 536-560.
- Kahneman, D., & Deaton, A. (2010). *High Income Improves Evaluation of Life but not Emotional Well-being*. PNAS, 107(38). Retrieved from http://www.pnas.org/content/early/2010/08/27/1011492107
- Layard, R. (2005). *Happiness: Lessons From a New Science*. United States of America: Penguin Books Ltd.
- Lelkes, O. (2006). Tasting Freedom: Happiness, Religion and Economic Transition. *Journal of Economic Behavior and Organization*, 59(2), 173–194.
- Lonska, J. (2012). Iekšzemes kopprodukta rādītāja nozīme teritorijas attīstības novērtēšanā. 7. *Starptautiskās zinātniskās konferences "Sociālās zinātnes reģionālajai attīstībai 2012:*

- Proceedings of the International Scientific Conference. Volume VI, May 24th -25th, 2019. 334-350
  - Finanšu kapitāla ietekme uz reģiona konkurētspēju" materiāli, III daļa Ekonomikas Aktualitātes, 29.–33.
- Lonska, J. (2015). *Teritoriju attīstītības novērtēšana Latvijas reģionos*. Monogrāfija. Rēzekne: Rēzeknes Augstskola.
- Lucas, R.E., Clark, A.E., Georgellis, Y., & Diener, E. (2004). Unemployment alters the set point for life satisfaction. *Psychological Science*, *15*, 8–13.
- Morawetz, D. (1977). Income distribution and self-rated happiness: Some empirical evidence. *The Economic Journal*, 87, 511–522.
- Ng, W., & Diener, E. (2014). What matters to the rich and the poor? Subjective well-being, financial satisfaction, and postmaterialist needs across the world. *Journal of Personality and Social Psychology*, 107(2), 326-338
- Rojas, M. (2011). Happiness, Income, and Beyond. *Applied Research Quality Life*, 6, 265-276. Sanfey, P., & Teksoz, U. (2008). Life in transition: are people happier after a decade and a half? *Paper Prepared for the 30th General Conference of The International Association for Research in Income and Wealth*. Retrieved from <a href="http://www.iariw.org/papers/2008/sanfey.pdf">http://www.iariw.org/papers/2008/sanfey.pdf</a>
- Seers, D. (1969). The Meaning of Development. *IDS Communication 44*, Institute of Development Studies. Retrieved from http://www.ids.ac.uk/files/dmfile/themeaningofdevelopment2.pdf
- Skuciene D. (2018). Income inequality evaluation in the Baltic countries: public opinion, preferences and values. *Sociālo Zinātņu Vēstnesis*, 27(2), 28-41.
- Standard Eurobarometer 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90. *Public opinion in the European Union*. Retrieved from http://ec.europa.eu/commfrontoffice/publicopinion/index.cfm/Survey/index#p=1&instru ments=STANDARD
- Stevenson, B., & Wolfers, J. (2008). Economic Growth and Subjective Well-Being: Reassessing the Easterlin Paradox. *Brooking Papers on Economic Activity*, Spring 2008. Retrieved from https://users.nber.org/~jwolfers/papers/EasterlinParadox.pdf
- Veenhoven, R., & Hagerty, M. (2006). Rising Happiness in Nations 1946-2001: a Reply to Easterlin. *Social Indicators Research*, 79, 421–436.
- Willi, V., Wachti, J., Montmollin, A., Boesch, A., Sauron, A., North, N., Schwab, S., Trageser, J., von Stockar, T., & Zandonella, R. (2012). Sustainable Development Report 2012. Swiss Federal Statistical Office. Retrieved from https://www.bfs.admin.ch/bfsstatic/dam/assets/348457/master
- Лызлов, Д.В. (2009). «Преимущества и недостатки ВВП как показателя социальноэкономического развития страны». Мировая экономика. *Журнал «Российский* внешнеэкономический вестник», 2, 32-40.