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"CONDEMNED TO HAPPINESS"... A COMPARISON IN TERMS OF TAX COMPLIANCE AND HAPPINESS WITHIN THE EUROPEAN UNION

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Abstract. Analysing the tax compliance is a difficult task, considered to have mainly an economic dimension. Happiness, an unconventional factor when explaining economic phenomena can bring however, interesting insights, as well. This paper focuses on the relationship between tax compliance and happiness in EU former communist countries and other 17 EU countries, before the last EU enlargement in 2013. The findings show that the countries with the highest degree of tax compliance have also a large ecological footprint. The happier EU countries are also the countries where tax compliance records the highest level and those that have a history of democratic systems.

JEL Classification: H260, I310

Keywords: tax compliance, happiness, life satisfaction, well-being, ecological footprint.

1. Introduction

"Hundreds of thousands of victims, shattered destinies, generations kept private from the chance of contact with the outside world, collapsed economy and shattered morale: this resumes in few words, the historical heritage left behind by the Romanian communism"[1].

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[1] Condemned to happiness – the Communist experiment from Romania – documentary film, narrated by Vladimir Tismăneanu, which examines the fate of all those to whom communism wanted to change their lives by force. The film talks about a strange form of happiness and it is very moving as the footage used came only from the official images of the Communist propaganda. The parades, speeches, smiles and thunderous applause we see form the image the communism wanted to build about itself and show to the outside public.

Currently, more than twenty years after the fall of the Iron Curtain, we are still trying to discover the historical truth, in order to benefit from political justice and morale. A Romanian essayist, Monica Lovinescu (Lovinescu, 2008) considered that the ethics of non-forgetting must become the ethics of the Romanian democracy. As a consequence, we feel that the ethics of memory, of history should be promoted all around the world as it could lead to the formation/strengthening of the democratic regimes. Years ago, Adam Smith (Smith, 1776) supported the idea according to which poor, unhappy people cannot create a flourishing society: "No society can surely be flourishing and happy, if the greater part of it is poor and miserable."

Throughout memory and history, by not-forgetting, we will analyse the level of non-compliance in connection with the level of happiness, in the former communist countries, throughout a new perspective, that of the economics of happiness. This is an approach combining techniques used by economists and those used by psychologists, in order to assess welfare. This non-conventional perspective addresses the role of non-income factors affecting the well-being of numerous individuals from all around the world. In order to explore happiness, psychologists used surveys of reported well-being, nowadays used by economists as well. Happiness economics focuses on analysing human behaviour, determined by the interaction between rational and non-rational influences (Graham, 2005).

Although economists' reservations kept them from viewing as reliable the interpersonal comparisons of well-being, psychologists considered it a natural endeavour to ask people how they feel, in order to study happiness (Blanchflower, 2008).

According to Blanchflower (2008), happiness can be defined as the degree to which an individual finds the existence, the quality of life, favourable. More so, the answers to life satisfaction and happiness questions correlate with: objective characteristics, the spouse's, the friends' or the family's assessments of a person's happiness, the blood pressure and heart rate, skin resistance measures, duration of authentic or Duchenne smile, the risk of coronary disease and prefrontal brain activity electroencephalogram measures.

In order to measure the happiness from the former communist countries in the EU, we will use the indicator of life satisfaction, as an indicator of happiness, because the answers to the questions to happiness and life satisfaction correlate strongly (Graham, 2005; Blanchflower, 2008).

In those former communist countries, studies register levels of subjective well-being and happiness, significantly lower than in Western Europe. Despite the fall of the Iron Curtain and all the freedom that came with it, the citizens of these countries feel lower levels of happiness. We want to explore whether their unhappiness/lower levels of life satisfaction can be a trigger or tax non-compliance, besides the traditional factors such as income level, job satisfaction, and economic growth.

We will focus on a comparison between the former communist countries members of the EU (Czech Republic, Estonia, Poland, Latvia, Lithuania, Hungary, Slovakia, Slovenia, Romania and Bulgaria) and the rest of the EU countries, in terms of tax compliance and happiness.

The paper has five parts. In the first part, we present the concept of happiness economics and that of tax compliance. Secondly, we describe the aim of this paper, which focuses on the influence of citizens' happiness on tax compliance, as a comparative study between the EU former communist countries and the other 17 EU countries. In order to study this relationship, we propose an index of tax compliance and an index of happiness for the EU countries.

Further on, we compute the main indicators, in order to rank the influence of factors within an econometric analysis. We then show the main results of the linear regression in terms of ranking the influence of the Happy Planet Index with its components (Ecological footprint, Well-being, Life expectancy) on the "Tax compliance index ease of paying taxes". This analysis ends with the concluding remarks.

2. Happiness and tax compliance

Recently, happiness shifted into the focus of many researchers, as it can explain economic phenomena and indicators. The focus on happiness, understood as well-being is not a novelty since Americans mentioned the pursuit of happiness in their Declaration of Independence as an inalienable right - "We hold these truths to be self-evident that all men are created equal that they are endowed by their Creator with certain unalienable Rights, that among these are Life, Liberty and the pursuit of Happiness" (Declaration of Independence, 1776).

Markusen (2003) perceives happiness as a complex, fuzzy concept due to its lack of clarity, hard to be tested or operationalized. Thus, this concept has a series of meanings. One of recent and exciting usages is the economic field.

Numerous economic issues depend on happiness. Therefore, a state's economic growth should not be the only goal for the public authorities. They should pay careful attention to happiness, as well. According to Oswald (2006), happiness should be the target of future generations, besides economic growth. However, happiness is an individual aspect, beyond public authorities' intervention, and maximizing life satisfaction or happiness should not be considered as the only objective.

Frey and Stutzer (2007) find several reasons for which economists grew interest on the happiness issue, which was treated until recently only from a psychological perspective. Primarily, happiness is appealing to economists due to economic policy, in the purpose of establishing a Pareto improvement, difficult to achieve otherwise, without an evaluation of the incurred social costs. Thus, the net effects of individual utilities must be evaluated. A quantitative analysis of the inter-conditioning factors (unemployment and inflation) is essential in designing efficient economic policies. Secondly, happiness's relevance is proven by the fact that it affects the prescribed economic conditions, the governance quality and the importance of the social capital, individual welfare.

Eurobarometer studies gather information on happiness and its determinants. The econometric relation between the quantification of happiness and its determinants is portrayed throughout a happiness function. The Eurobarometer question used in the surveys is: 'In all, are you satisfied, almost satisfied, not very satisfied or very unsatisfied by the life you have?' A four point scale measures the life satisfaction. Given the answers to this question Frey and Stutzer (2007) find that there are three main factors that influence happiness: demographic and personality factors (age, education, gender, health, marital status, nationality); economic factors (unemployment, income and inflation), and political factors (citizens' choice to be involved in politics, level of government decentralization).

Economic factors, namely income, influence happiness substantially as in average, wealthy nations tend to be happier than the poor ones, but this effect diminishes with wealth, according to Frey and Stutzer (2007). This statement contradicts Easterlin's (1974) prior assumptions, according to which, poor people are not necessarily happier than rich people, fact which can be extended also to the level of societies. This argument known as the Easterlin's paradox states that an increase of wealth does not always increase happiness.

Later studies find also that the level of wealth of a nation is explicable throughout the level of happiness, in general and more precisely, throughout the level of economic happiness. There is a logarithmic dependency between happiness, and the level of wealth since the same percent of GNP increase determines the same increase of happiness, both in wealthy and poor countries (Hagerty and Veenhoven, 2003). Ng and Ho (2006) confirm the connection between happiness and wealth. Therefore, if feeling worried and miserable, about their lives and their loved ones' lives, feeling endangered, with insecure jobs and an uncertain future, restricted freedoms and maltreated, with improper medical care, people tend to be less happy.

Norberg (2005) depicts the dependency between wealth and happiness referring to the East-European countries affected by the communist regime, where people were less happy than in the West and even unhappier than the citizens of countries as poor as theirs. In this paper, we will focus on demonstrating that these citizens of former communist countries tend be less happy and less tax compliant than the other members of the EU.

Frey and Stutzer (2007) agree that there is a linkage between income per capita and people's standard of subjective well-being. Thus, citizens of wealthy countries are in average happier than the ones in poorer countries, and more tax compliant. An unpredictable factor is that although income per capita has risen in the last decades, the average level of happiness maintained itself constant or has even dropped.

In conclusion, there are other factors, which affect happiness besides income, as countries with higher income per capita tend to have more democratic and stable systems than the poor ones. Another possible trigger of happiness is the democratic system from which the citizens benefit of. However, based on inter-nation analysis, Frey and Stutzer (2007) point out that according to the global available data, there is a correlation between income and happiness, but the effects of this relationship are weak and dropping. As a consequence, they suggest introducing more significant factors into the analysis of happiness, factors meant can explain the differences between national level well-fare.

A different study, performed by Kenny (1999) underlines the inverse relationship between income per capita and the level of well-fare, of happiness. Given this inverse relationship, satisfied people have higher incomes because they are more likely to work harder, to be more creative and resourceful, all these factors leading to higher incomes.

Happiness has risen, and the reason of this increase is relevant according to Inglehart, Foa, Peterson and Welzel (2008). These authors consider that certain societies are predisposed to feel happiness, more than others, especially the ones allowing people free choice in life options. Moreover, "economic factors have a strong influence on subjective well-being in low income countries". In ex-communist countries, such as Romania, the liberalization, which occurred in the last years, brought “economic collapse, rising happiness, but declining life satisfaction”. In former communist countries, the decline of subjective well-being was a triggering factor of the fall of the communist system.

According to World Values Survey (World Values Survey), the level of happiness is influenced by the economic development and it has increased from 1981 to 2007. However, a surprisingly substantial decline of the level of happiness among societies was recorded among the population of Russia and the former communist countries. Economic development, the democratization and the development of the tolerance level have contributed to this slow growth of happiness, as people have felt an increase of the freedom of choice as well. We want to complete this argument and state that the happiness of a nation is responsible also for the level of tax compliance.

Research on happiness, by Frey and Stutzer, (2007) finds also that: age affects happiness in terms of a U-shaped function. Young and older people are happier than middle-aged ones. The least happy are those whose age is between thirty and thirty-five years. Women are less happy than men. Couples with or without children are happier than singles. Higher educated people have higher levels of welfare. A precarious state of health can affect happiness.

Current life satisfaction level, but also from the past can affect proportionally tax compliance. Household income negatively affects tax compliance. For Frey and Stutzer (2007), the happiness and the utility are not the same, but the happiness can reflect people’s level of satisfaction and it can be used as a proxy for utility.

Happiness research adds new perspectives on the tax compliance issue. Until recently, the tax compliance issue has been analysed mostly from a narrow perspective, which could not provide relevant information on the taxpayer’s psycho – socio – behavioural profile, reason for which new lines of tax studies must appear. Therefore, we find that it is appealing to depict also happiness’s influences on taxpayers, in general, and on tax compliance, in particular.

There are several reasons why people decide to comply, and accordingly to these reasons a taxpayers’ behavioural profile can be built. Vogel (1974) considers that people comply from a variety of distinct reasons. In his work, he adapted the concepts introduced by Kelman, to the issue of tax compliance. Initially, Kelman (1965) proposed a tripartite typology of compliance:

- Compliant taxpayers pay their taxes, by obligation and fear of the punitive effects;
- Identification – the compliant taxpayers, who follow the beliefs, the social norms, and respect the behaviour of the others;
- Internalization – internalizing compliant taxpayers exhibits internal consistency between beliefs and behaviour.

Emotions play a decisive role in maintaining routines and rules, creating a certain stability by complying with justice, fairness and adequacy, reason for which they rule peoples’ lives. Thus, peoples’ behaviour is affected by many rules, factors, and by the distinct pattern of each taxpayer. The taxpayer at his turn is influenced by a number of different factors, besides the obvious ones, valid to a certain point.

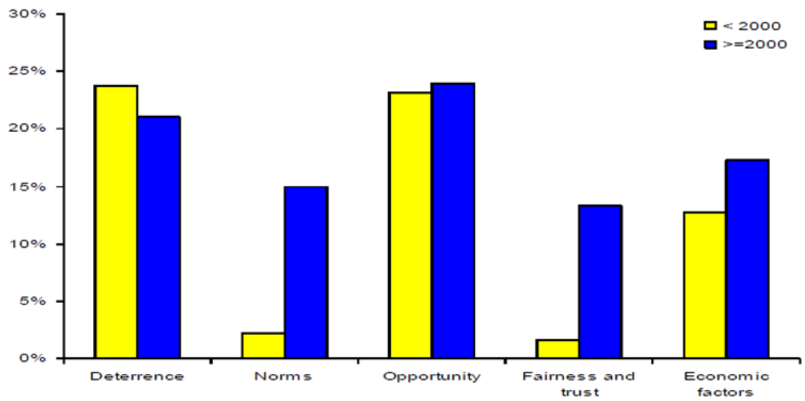
Until recently, tax compliance research seldom believed there is a link between economic factors that influence tax compliance and the taxpayer’s behaviour. The issue of tax compliance was influenced mainly by economic factors, which lead to economic growth and are automatically responsible for the improvement or worsening of tax compliance levels.

OECD (2010) classifies the factors and determinants of tax compliance behaviour into the following categories:

- Deterrence (e.g. increasing the number of tax audits, increase of penalties for tax noncompliance, levying a higher risk of being caught in case of tax laws violation, etc.).
- Personal and social norms;
- Opportunity for rigorous compliance (perceived compliance costs are low legislation is clear, clear and easy to be understand by taxpayers) and noncompliance (the ability to circumvent or tax evade);
- Fairness and trust in public authorities in general and tax authorities in particular, but also in other taxpayers;
- Economic factors, e.g. general economic factors, business factors, total tax rate, cost of compliance.

The scientific interest granted to the determinants and influencing factors of tax compliance is proven by several studies. One of them, which used the index Web of science, states that during 1990-2000, and in the period which followed, the Internet searches containing keywords that relate to factors and determinants of tax compliance looks like in the figure below.

Fig. 1 – Factors and determinants of tax compliance identified in Internet searches (OECD, 2010)



According to Figure 1, by 2000, the deterring factors and opportunities are the main determinants of tax compliance, included in the economic factors category. However, lately, the emphasis lies more on norms, fairness and trust, motivational or situational factors. Besides motivation strategies (based on rewards or punishments), social norms affect human behaviour.

They also affect the social groups, where individuals choose to enter into a social contract, and thus into a tax contract, meant to fund the social one. The effects of tax incentives on compliance are likely to be positive, improving collection, as opposed to sanctions. The motivational effect differentiates fiscal result. Thus, positive motivations will often have better effects than negative ones.

Therefore, in order to understand the global economic phenomena better, one must understand the social contexts and motivations of the people who made possible the occurrence of those events. Focusing on the behaviour of an individual with all its shades could lead to a better understanding of economic issues, well beyond the narrow understanding of the Homo Economicus.

There is nowadays, a ‘hedonistic paradox’, according to which, Homo Economicus, solely in search of personal happiness will not find it, unless one helps others, as there is a strong and positive correlation between tax morale and happiness. A study performed by Lubian and Zarri (2011) brought interesting contributions, in explaining the higher levels of tax compliance than the ones predicted by the standard theory, through tax morale: virtuous taxpayers record higher levels of happiness than less virtuous ones. In concentrating on the relationship between tax compliance and tax morale the same authors argue that the apparently paradoxical high level of compliance can be explained by the high degree of subjective well-being felt by virtuous people, who comply with their tax duties because they find the act of paying taxes rewarding (Lubian, Zarri, 2011).

In a study, Etzioni (2016) includes moral assessments into the concept of objective well-being. The people, who feel this objective well-being live in a society, which has a lower environmental footprint and they pay their taxes, due to their intrinsically motivation, which triggers positive hedonistic effects and justness.

The tax compliance, as an ethical endeavour, is explicable through the mere nature of moral, human being, who develop a moral preference for paying taxes, as they feel pleasure by reporting honest, otherwise feeling pained, if acting unethically (Gintis et al., 2008).

According to a study performed on German participants (Akay et al. 2012), the moral drive is not the only factor triggering happiness, but also the level of paid taxes: thus, paying more taxes determines German people to be happier. Paying higher taxes is a reason for German people to be more satisfied with their lives, due to the public goods and services made available to them. Altruism and shame would be also factors triggering compliance.

Tax compliance has different motivations altogether, and lately, economists started to investigate variables like the effect of life satisfaction on human behaviour (Stutzer, Frey, 2012). Given the various triggering factors of tax compliance, in this paper, we analyse the influence of happiness (through the life satisfaction indicator) on tax compliance in the former communist countries from the EU.

3. Data and methodology

Our paper focuses on the relationship between citizens’ happiness and the tax compliance, as a comparative study between the EU former communist countries and the other 17 EU countries. In order to study this relationship, we need to use an index of tax compliance and an index of happiness for the EU countries.

A reliable index of tax compliance is difficult to build. Tax compliance is more stimulated by measures to facilitate tax payments rather than punitive measures, like fines or delay penalties (Kirchler et al. 2007). Therefore, we consider that an easier way to pay taxes is a strong stimulating factor of tax compliance, and we will use it as a combined indicator. An ease of paying taxes index is constructed by PwC, World

Bank and IFC and ranked by three main issues: the level of total tax rates, the number of fiscal payments and the number of hours per year necessary to pay taxes (PwC Paying Taxes Reports). We will build an index of tax compliance, with the help of the PwC's ranking of the EU countries, in terms of ease of paying taxes (PwC Paying Taxes Report, 2013), which covers the year 2011[2].

Unlike the tax compliance index, which does not yet exist - paradoxically perhaps, a happiness index already exists, and it was developed by NEF – the New Economics Foundation.

Given the strong correlation we found in the literature between happiness and life satisfaction, we chose the Happy Planet Index, as an index of happiness. In the opinion of its authors, The Happy Planet Index (HPI) is a measure of progress, of sustainable well-being for all, and it shows the nations efforts in achieving sustainable, long and happy lives. The Happy Planet Index is composed of world data on experienced well-being, life expectancy, and Ecological Footprint. This index shows the countries' efficiency in producing the conditions, which enable their inhabitants to lead a long, happy life, and also maintain the conditions for future generations, according to the following formula:

$$HPI \approx \frac{Experienced\ well\_being \times Life\ expectancy}{Ecological\ Footprint} \quad (1)$$

Practically, the HPI measures efficiency, calculating the number of Happy Life Years (life expectancy adjusted for experienced well-being) achieved per unit of resource used.

The research methodology consists of grouping the EU countries according to their position in the proposed 'Tax compliance index - ease of paying taxes' together with the Happy Planet Index with its components: experienced well-being, life expectancy, and Ecological Footprint. Based on this grouping, we will analyse the positioning of the ten EU former communist countries compared to the other EU 17 countries. We built the grouping of the EU countries on the basis of a normalization of values for each index and component of the HPI, according to the following relation:

$$z_i = \frac{x_i - \bar{x}}{\sigma} \quad (2)$$

Where: z_i - are the normalized values;

x_i - are the values of indexes and HPI components for each country;

$\bar{x}$ - is the EU 27 average of indexes and HPI components;

σ - is the EU 27 standard deviation of indexes and HPI components.

Also, the grouping and ranking of the EU countries is based on identifying the correlations between the normalized values of the Happy Planet Index with its components and the normalized values of the *Tax compliance index – ease of paying taxes*, by using a cross countries linear regression. In the following figures, the countries coloured in blue are the EU 17 countries and the countries coloured in red are the ten former communist EU countries.

[2] We used the 2011 PWC report, as the newest available HPI report dates from 2012.

4. Findings

The *Correlation Coefficient*, the *Significance F* of the Fisher test and the *Regression Coefficients* of the linear function are the main indicators, used to rank the influence of factors within the econometric analysis. The main results of the linear regression in terms of ranking the influence of the Happy Planet Index with its components on *Tax compliance index - ease of paying taxes* are presented in the Table 1.

As it can be seen from Table 1, the strongest correlation between the *Tax compliance index - ease of paying taxes* and a component of the Happy Planet Index is registered, in the case of Ecological Footprint. The Ecological Footprint developed by the Global Footprint Network (Ewing et al, 2010), consists of the land needed to sustain the consumption patterns of a country, the renewable resources used by people, the areas occupied by infrastructure, and required to absorb CO_2 emissions, 'embedded' land and emissions from imports. Thus, a high Ecological Footprint means high energy consumption and high carbon emissions, elements which are characteristic for developed countries. Many such countries live beyond their own bio capacity and are consistently depending on others, for their resources. On the contrary, a low Ecological Footprint means countries with levels of consume, supportable by their own bio capacity.

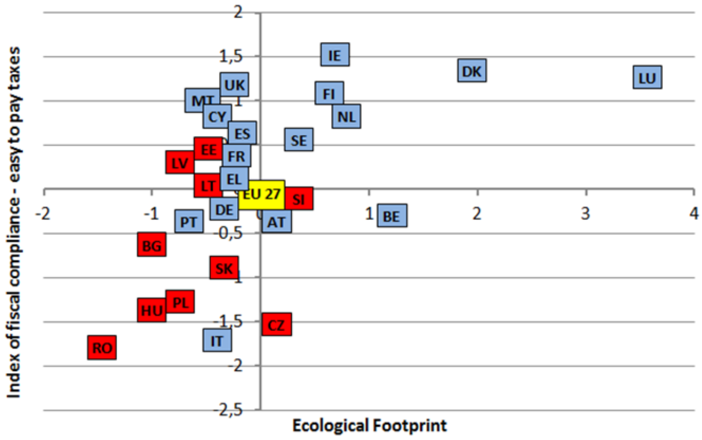
Table 1 - The main results of the linear regression

No.	Happy Planet Index and components	Econometric parameters	Tax compliance index - ease of paying taxes
1.	Ecological Footprint	*Correlation Coef.*	*0.548*
		Significance F	*0.0030*
		Regression Coef.	*0.5489*
2.	Well-being	*Correlation Coef.*	*0.531*
		Significance F	*0.0043*
		Regression Coef.	*0.5311*
3.	Life expectancy	*Correlation Coef.*	*0.412*
		Significance F	*0.0323*
		Regression Coef.	*0.4127*
4.	Happy Planet Index	*Correlation Coef.*	*-0.002*
		Significance F	*0.9892*
		Regression Coef.	*-0.0027*

This result is consistent with the study of Etzioni (2016), which found people to experience a higher level of objective well-being in societies with lower environmental footprints, where they pay their taxes, due to moral reasons. The fact that between the Happy Planet Index and *Tax compliance index - ease of paying taxes* there is practically no correlation can be explained, due to the contradictory action of the three components building the Happy Planet Index. However, we continued our analysis given the fact that the two components building the numerator of the Happy Planet Index, namely, Well-being and Life Expectancy, the ones depicting Happy Life Years, show a strong correlation between the quality of life and tax compliance, confirming our initial assumptions, that of happiness triggering tax compliance.

The grouping of EU countries regarding the normalized values of the Ecological Footprint and normalized values of *Tax compliance index - ease of paying taxes* is presented in the Figure 2.

Fig. 2 - Grouping of EU countries regarding Ecological Footprint and Tax compliance index – ease of paying taxes



As it can be observed, EU 27 is positioned at the origin of the graph, representing the average value of normalized values (relation 2) for EU countries, for both the Tax compliance Index and the Ecological Footprint. As shown previously, countries in blue are the EU 17 countries and the countries in red, the ten former communist EU countries.

In the upper left quadrant we find the countries with the best situation: high level of tax compliance and small ecological footprint. This category includes five countries from EU 17 (the UK, Malta, Cyprus, Spain, France and Greece) and three former communist countries (only the Baltic States Estonia, Latvia and Lithuania). We can see that only eight of the EU 27 countries are included in the best category. Also notable is the fact that the countries in this category are closely grouped, with respect to the Ecological Footprint.

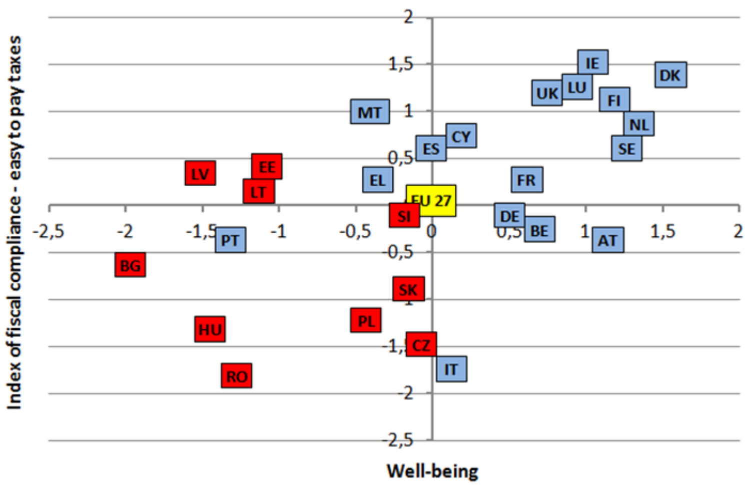
In the upper right quadrant we detect the countries with high levels of tax compliance, but with large ecological footprint. In this category, we have only six EU 17 countries (Ireland, Denmark, Luxembourg, Finland, Netherlands and Sweden), which are highly dispersed. We note the extreme position of Luxembourg, followed by Denmark, countries which have an enormous environmental footprint compared to the EU average, fact which raises the issue of the long term sustainability of these countries. It seems that developed countries having a small geographic area face significant issues regarding the ecological footprint.

In the lower left quadrant we discover the countries with low levels of tax compliance – ease of paying taxes below the EU 27, and with a small ecological footprint. This quadrant includes three countries from EU 17 (Germany, Portugal, and Italy) and half of former communist countries (Bulgaria, Slovakia, Poland, Hungary and Romania). The position of Germany is close to the EU 27 average. We may see an extremely critical position of Italy in terms of tax compliance (the last among EU 17 countries and one of the last among EU 27, given by the high percent of total taxes of 68.3% reported to the 42.8% average of EU - PwC Paying Taxes Report, 2013). It is followed only by Romania, which has the lowest level of tax compliance from the EU given by the large number of 41 payments per year reported to the 12.8 average payments in the EU (PwC Paying Taxes Report, 2013). However, Romania compensates the last position in the tax compliance ranking with the best position in the EU 27 regarding the ecological footprint.

The worst situation in terms of tax compliance and ecological footprint have the countries situated in the lower right quadrant, countries which have low levels of tax compliance and ecological footprint compared to the EU average. This category includes only four countries, two from EU 17 (Belgium and Austria) and two former communist countries (Slovenia and Czech Republic). It should be noted, however, that Slovenia and Austria are remarkably close to the EU average; therefore, their situation is not as precarious. Issues for this category occur especially in Belgium, country, which has a large ecological footprint, and for the Czech Republic with low levels of tax compliance.

Furthermore, the grouping of EU countries regarding the normalized values of the Well-being factor and normalized values of the *Tax compliance index – ease of paying taxes* is presented in the Figure 3.

Fig. 3 - Grouping of EU countries regarding Well-being factor and Tax compliance index – ease of paying taxes



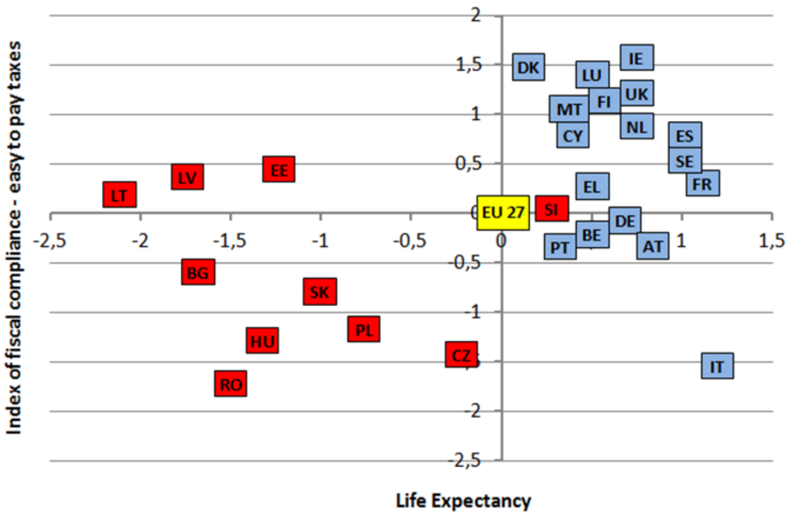
We can see from the beginning that the analysed countries are more clearly separated within the grouping in Figure 3 compared to Figure 2. Most of the EU17 countries are positioned in the upper right quadrant (the best category with high values for both tax compliance and well-being), while most of the former communist countries are positioned in the lower left quadrant (the worst category with low values for both the well-being factor and the tax compliance one). The best positioning of the well-being factor is for Denmark, and the worst positioning is for Bulgaria.

However, there are some exceptions, which can be found also in the present analysis. In the lower right quadrant are countries that although have a high well-being factor, have a low level of tax compliance, situated beneath the EU average (Italy). Regarding the former communist countries, we found a superior positioning of the Baltic countries whereas tax compliance is concerned, even if the well-being factor is below the EU average.

We noticed that all former communist countries have lower levels of the well-being factor, situated under the EU average. They are accompanied by several EU17 countries like Greece, Malta and Portugal. A number of countries (Spain, Slovenia, Slovakia, Czech Republic and Italy) have values of the Well-being factor close to the average of the EU27 well-being factor.

The grouping of the EU countries regarding the normalized values of Life expectancy and the normalized values of the *Tax compliance index – ease of paying taxes* is presented in the Figure 4.

Fig. 4 - Grouping of EU countries regarding Life Expectancy and Tax compliance index - ease of paying taxes

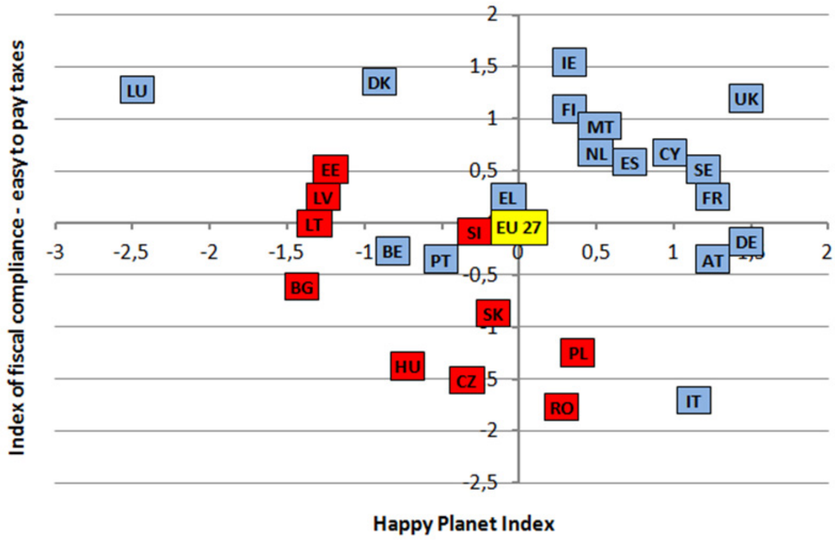


We can observe that, in Figure 4, the Life Expectancy component made the clearest separation between the two groups of countries that compose the EU 27. From the former communist countries, only Slovenia joins EU 17 countries from the upper right quadrant, to a minimum level, however. To the contrary, no EU 17 country has lower levels of Life Expectancy below the EU 27 Life Expectancy average. This chart is expressing in the best manner the significant gap between EU 17 countries and former communist countries, which joined more recently the EU, in terms of quality of life.

We note the case of Italy, which is the country with the highest level of Life Expectancy (81.9 years) from the EU. However, the level of tax compliance is one of the lowest in the EU, just above Romania. The last country from the Life Expectancy ranking is Lithuania with 72.2 years, well below the EU 27 average (78.4 years).

Finally, the grouping of EU countries regarding the normalized values of Happy Planet Index and the normalized values of the *Tax compliance index - ease of paying taxes* is presented below in Figure 5.

Fig. 5 Grouping of EU countries regarding Happy Planet Index and Tax compliance index - ease of paying taxes



As it is shown in the Figure 5 and the main results of the linear regression from Table 1, practically there is no correlation between the Happy Planet Index and the *Tax compliance index - ease of paying taxes*. The EU countries are spread out all over the graph. The explanation comes from how the Happy Planet Index is built (see relation 1). The two components of the indicator quality of life (Well-being and Life Expectancy) show a strong correlation between quality of life and tax compliance. Citizens from developed countries who have a decent quality of life (in our case, EU 17) find it easier to pay taxes than citizens of less developed countries with poor quality of life (in our case, former communist countries).

In contrast, the ecological footprint is a factor that favours less developed countries, which usually have a small ecological footprint. The ecological footprint is a denominator in the formula for calculating the ratio of the Happy Planet Index, and the negative impact of the environmental footprint compensates the positive effect of the life quality indicators. The result is a weak correlation between the Happy Planet Index and the degree of tax compliance.

Although there is no correlation between the two indexes, however, an analysis is required on the grouping of EU countries in those four quadrants. According to the Happy Planet Index, fourteen countries place themselves above the EU 27 average. From these fourteen countries, most of them (twelve countries) are from the EU 17, and only two of them are from the former communist countries. These two former communist countries, Romania and Poland, are found on the right side, mainly due to the remarkably small ecological footprint. Thirteen countries are below the EU 27 average, out of which, the most of them (8 countries) are from the former communist countries and only five are from the EU 17. Three countries from EU 17 (Luxembourg, Denmark and Belgium) are positioned at the left of the EU 27 average because of their significant ecological footprint.

5. Conclusions

In conclusion, we found that in terms of grouping the countries according to the Ecological Footprint and the *Tax compliance index - ease of paying taxes*, the countries with the highest degree of tax compliance have also a large ecological footprint. This shows that the ecological footprint is a significant issue in developed countries, as a sign of companies' huge impact on the environment. Especially, developed countries having a small geographic area as Luxembourg, Denmark and Belgium have significant issues regarding the ecological footprint. We emphasize that Romania is the country with the lowest level of tax compliance, and, in the same time, with the smallest ecological footprint in the EU.

Well-being and Life Expectancy are the factors that clearly separate EU17 countries from the former communist countries. Practically, a single small former communist country (Slovenia) has a life quality, situated little above the EU27 average, while, in other EU countries it is below the EU27 average. Several EU17 countries are below the EU 27 average, e.g. Greece, Malta and Portugal, regarding the Well-being factor. In terms of Life expectancy, however, there is no EU17 country below the EU27 average. We encounter the best positioning regarding life quality for Denmark (regarding the Well-being factor) and Italy (regarding the Life Expectancy), and the worst for Bulgaria (regarding the Well-being factor) and Lithuania (regarding the Life Expectancy). Most countries with high life quality factors also have a high level of tax compliance, fact which shows a significant correlation between these variables.

Although between the Happy Planet Index and *Tax compliance index - ease of paying taxes* there is practically no correlation, the fact can be explained due to the contradictory action of the three components building the Happy Planet Index. However, the two components building the numerator of the Happy Planet Index, namely, Well-being and Life Expectancy, the ones depicting Happy Life Years, show a strong correlation between the quality of life and tax compliance, confirming our initial assumptions. Moreover, if we are to analyse the IZA study (Akay et al. 2012), happiness and tax compliance are interconnected, influencing one another. At the level of the German nation, the more taxes the happier they are, given the prospect of quality public goods and services available to them.

Obviously, there is a higher quality of life in well developed countries, as opposed to the quality of life from less developed countries. In contrast, the ecological footprint is the factor that disadvantages the developed countries, which usually have a significant ecological footprint, due to the land infrastructure occupancy, and the area required to absorb CO_2 emissions. Being a denominator in the formula calculating the ratio of Happy Planet Index, the negative impact of ecological footprint compensates the positive effect of life quality indicators, and, finally, there is no correlation between indexes.

Therefore, further on, we intend to insist on this correlation between the quality of life and tax compliance because the level of economic gains influences the lifestyle and the level of well-being (Inglehart, 1997). From our analysis, we saw that there is a strong correlation between the quality of life, measured throughout Well-being and Life Expectancy, and tax compliance. In conclusion, the quality of life is a triggering factor of tax compliance. Nations, with higher levels of well-being are also the nations inclined to pay their taxes. As a consequence, it is no surprise that the analysed former communist countries have a precarious quality of life, low economic gains, and low levels of tax compliance, since there is not even the prospect of quality pubic goods and services here.

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