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Determinants of Life Satisfaction in the Czech Republic and their Development over Time

Bachelor thesis

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Declaration of Authorship

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Prague, April 26, 2018

Signature

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Abstract

This work examines the reported life satisfaction in the Czech Republic over the period between 1991 and 2016. The relationships between various individual characteristics and reported life satisfaction are analysed using the ordinary least squares and the results are compared across time. This work extends the existing literature not only by providing a more up-to-date analysis of the correlates of life satisfaction in the Czech Republic but also by analysing them in a wider time horizon. Some relationships were found rather stable over the considered period (for example, those associated with health, satisfaction with institutions or with political beliefs). Even though higher education and higher income were not strictly associated with higher satisfaction, the differences in satisfaction of individuals belonging to the lower and upper deciles of income are significant throughout the whole period. On the other hand, some associations have changed substantially over time (e.g. those related to being a student). Contrary to the existing literature on the period of transition, life satisfaction in the Czech Republic appears to be U-shaped in age during the whole considered period including the 90s. However, the turning points and the exact shape of the relationship changed over time.

Keywords life satisfaction, Czech Republic, determinants of life satisfaction, development

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Abstrakt

Tato práce zkoumá životní spokojenost v České republice v letech 1991 až 2016. Vztahy mezi vybranými individuálními charakteristikami a spokojeností jsou analyzovány pomocí metody nejmenších čtverců a výsledky jsou následně porovnány v čase. Tato práce doplňuje existující literaturu tím, že poskytuje aktuální analýzu a že se životní spokojeností zabývá v širším časovém horizontu. Některé vztahy byly shledány poměrně stálé během zkoumaného období (například ty spojené se zdravím, spokojeností s institucemi nebo politickým přesvědčením). Přestože vyšší vzdělání a vyšší plat nebyly vždy doprovázeny vyšší spojeností, rozdíly mezi nižšími a vyššími decily platu byly významné po celou dobu. Na druhou stranu se některé asociace v čase výrazně měnily (například asociace mezi spokojeností a statutem studenta). V rozporu s existující literaturou zabývající se devadesátými léty se vztah mezi spokojeností a věkem zdá být v případě České republiky konvexní po celou zkoumanou dobu. Nicméně zlomové body a přesný tvar vztahu se měnil v čase.

Klíčová slova životní spokojenost, Česká republika, determinanty životní spokojenosti, vývoj

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Acronyms

ESS European Social Survey

EVS European Values Survey

GDP Gross Domestic Product

WVS World Values Survey

Bachelor Thesis Proposal

Author	Anna Pavlovová
Supervisor	doc. PhDr. Julie Chytilová Ph.D.
Proposed topic	Determinants of Happiness in the Czech Republic and their Development over Time

Research question and motivation In recent years, a rising tendency to concentrate on happiness and well-being of citizens can be noticed among economists, international organizations and even politicians. To mention one concrete example, in July 2011 United Nations asked countries to measure happiness of their citizens and use it as one of the guidelines for their policy making. Over the past few years, there has been countless contributions conducted in the field of economics of happiness analysing which factors (and in which way) influence the feeling of happiness or satisfaction. The aim of this thesis is not only to analyse the effects of certain factors on subjective happiness in the Czech Republic, but to analyse whether there have occurred any changes in those impacts on subjective perceiving of happiness over time. The main focus is going to be turned to possible evolution of those effects in the period from 2000 to 2014 or 2016. Some of the phenomena to be analysed is for example whether the effect of unemployment on subjective happiness was the same before and after the crisis in 2008 or whether it changed– including comparison with countries which were hit by the crisis more severely than the Czech Republic. Another would be analysing whether other certain factors have persistently same effect on happiness over time or whether their effect changes.

Contribution Compared to many prior works, the subject of this study is neither going to be the effect of post-communisms transition, nor the effect of income or spending – as there have already been several extensive works conducted regarding those topics (e.g. by Miroslava Mičáková in "Economics of Happiness – the Case of Post-communist countries", 2012)The goal of this thesis is to discover whether there have been any developments of these effects. This could be further used to decide whether it would be possible to predict these changes and use these predictions for

moderating potential distress or increasing happiness of citizens by conducting policy accordingly.

Methodology Basic econometric analysis (such as OLS or logistic regressions, ...) are to be used on data collected via European Social Survey (for years 2002,2004, 2008, 2010, 2012, 2014 and potentially 2016), European Values Study (1999 and 2008) and via World Values survey.

Outline Introduction; Economics of Happiness: What We Already Know about Determinants of Happiness; Generally on Happiness and its Determinants in the Czech Republic between 2000 and 2014(2016); Comparing Effects on Happiness over Time; Conclusion

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Chapter 1

Introduction

In recent decades a rising tendency to concentrate on happiness and life satisfaction of citizens can be noticed among economists, international organizations and even politicians. Happiness or life satisfaction has become one of the indicators of social progress and potential guidelines for policy making.[1] Despite its limitations it has supplemented (in some cases maybe even substituted) GDP per capita as a measure of well-being, standard of living and social progress of a country. To mention one concrete example, in July 2011 the United Nations asked countries to measure happiness of their citizens and use it as one of the guidelines for their policy making alongside with the standard measures like GDP per capita. Since then, every year the World Happiness Report is published under the auspices of the Sustainable Development Solutions Network with the support of the United Nations. Countless contributions conducted in the field of economics of happiness had been made even prior to this announcement and the literature is still growing extensively.

The data on life satisfaction in the Czech Republic has been analysed several times. In most cases the aim was not to asses the situation in the Czech Republic specifically but rather to find the potential differences in life satisfaction and its determinants between post-communist countries and western capitalist countries (Easterlin, 2009; Guriev & Zhuravskaya, 2009; Inglehart *et al.*, 2008; Sanfey & Teksoz, 2007). In several studies the data for the individual post-communist countries were merged and the potential differences among countries were not examined. There are some studies that analysed the life satisfaction separately for selected countries and compared the results among them. Usually the so called Visegrad countries were chosen for the analysis.

[1] In this thesis the terms happiness, life satisfaction and subjective well-being are not used distinctively.

One of such studies is a publication by Večerník & Myslíková (2014). However, even these studies are usually not completely up-to-date as more recent data have been released since.

The aim of this thesis is to conduct an analysis regarding subjective life satisfaction and its correlates concentrating specifically on the Czech Republic. Data for the period between 1991 and 2016 are used. The main contribution of the thesis is that it provides not only a more up to date analysis of the situation in the Czech Republic but also examines whether the relationships estimated jointly for the transitional countries appear to hold also specifically in the Czech Republic. Lastly, the time horizon of the analysis extends the already existing literature and enables to examine whether the estimated association between certain factors and reported satisfaction changed over time.

The structure of the thesis is as follows: Chapter 2 provides a brief overview of the already existing literature. First part of this chapter (Section 2.1) outlines the findings on life satisfaction and income that demonstrate that income is probably not a sufficient measure of well-being. The Section 2.2 summarizes selected studies in which the satisfaction in the Czech Republic was at least partially addressed. Chapter 3 is devoted to the description of the data and methodology used, including their limitations. The subsequent chapter (Chapter 4) presents the findings and results of the analysis. In the last chapter (Chapter 5) the whole research conducted in this thesis is summarized and potential future research is suggested.

Chapter 2

Literature Review

2.1 Economics of well-being: income and life satisfaction

In the second half of the previous century the tendency to concentrate on other measures of well-being than income rose. As a consequence the research regarding subjective life satisfaction and happiness became not only a matter of philosophy or psychology but also economics.

One of the first contemporary works bringing the analysis of happiness in to the spotlight of economists is believed to be a paper published by Richard Easterlin in 1974. This publication belongs to the most important milestones of the life satisfaction analysis. The findings presented in this paper are commonly referred to as the "Easterlin paradox". Easterlin (1974) concludes that within a country a higher personal income is associated with a higher level of individual happiness. On the other hand, countries with a higher income per capita were not found on average happier compared to lower income countries. Moreover, time series data for the USA used in this study imply that an increase in country's aggregate income over time is not strictly associated with an increase in reported satisfaction of its citizens. The finding that life satisfaction may not be simply positively correlated with income and that higher GDP per capita does not have to lead to higher life satisfaction in the long run only proved that there was a need for further analysis of well-being. Income and GDP per capita on their own were no longer sufficient measures of welfare and country's progress.

The literature on the topic has been growing extensively and researchers tried to explain the complex interaction between income and life satisfaction

using several theories. For example, Easterlin (1974; 1995) and Boyce & Wood (2011) suggest that people form the perception of the quality of their lives by comparing their situation to a standard, which they form based on the situation and conditions in the society around them. This standard differs among countries and is likely to change with economic progress. Hence, it is rather the personal relative income than absolute income that influences the perception of life satisfaction. This would explain why wealthier countries do not experience higher levels of average happiness compared to poorer countries. It is due to the fact that people in richer countries compare themselves to higher standard than people in less rich countries. On the other hand, as within a country the society and culture is likely to be more coherent, the benchmark for comparison is likely to be to a certain extent similar for individuals in the same country. Hence, richer inhabitants of a particular country are on average happier than their poorer fellow citizens as they are in relative terms better off (Easterlin, 1995).

Easterlin (2001) himself later combined findings from psychology and sociology and used the theory of aspiration to explain the interaction between life satisfaction and income. According to this theory, individuals form their aspirations based not only on other people in the society around them but also on their current and past situation (Easterlin, 2001; McBride, 2001). The further an individual is from his aspiration the less happy he is. The aspirations change and adjust through lifetime according to the current situation of the individual (e.g. rise in income is associated with rise in aspiration) and even respond to the current situation in the country. Hence, rising GDP may not result in rising life satisfaction. Easterlin (2001) proposes that for poorer individuals it is not only harder to achieve some basic aspiration due to the lack of resources but even when they achieve it they are likely to increase their standards (or aspiration). On the other hand, for richer individuals it is easier to achieve their aspirations and therefore to be happier. As they are already materially more than provided, their aspirations are not likely to increase to an extant that would decrease their life satisfaction significantly.

This theory not only explains why in a certain point in time in a certain area wealthier individuals experience higher life satisfaction but also why over a life cycle the individual life satisfaction does not increase with income and why wealthier countries are not happier (Easterlin, 2001). The concept of constant life satisfaction in the long run for countries as well as individuals has been commonly assumed in the past. More recent studies suggest in certain cases

the opposite (overview of findings regarding the stability of subjective well-being provide for example Yap *et al.* (2014)). Inglehart *et al.* (2008) provide proof for possible development of life satisfaction, namely its increase due to improving life conditions and increasing freedom in numerous countries.

More recently economists have been trying to explain the relationship between income and self-reported well-being by taking individual personality and characteristics into consideration. Boyce & Wood (2011) highlight that marginal utility of income is individual specific and is likely to be highly dependent on personality. Moreover, some certain aspects of personality appear to have different impact on marginal utility of income for women compared to men. Specifically, conscientious individuals are suggested to experience higher increase in satisfaction from the same increase in income compared to less conscientious individuals. On the other hand, the marginal effect of income for introvert, neurotic or open-to-experiences women is suggested to by relatively lower. On the other hand, Proto & Rustichini (2015) suggest that from the five considered personality traits - openness, conscientiousness, extraversion, agreeableness and neuroticism; only neuroticism is found to alter the marginal utility of income.

As the literature and findings on this topic are extensive and the results are not always coherent, only few selected publications bringing interesting insight are mentioned. The aim is to illustrate the complexity of determining an effect of a certain factor on subjective well-being. From all the possible determinants of subjective well-being, income was chosen because it has been and probably will be of high interest for economists. Also one of the aims of this thesis is to cursorily examine the relationship between income and life satisfaction in the Czech Republic.

There are several publications addressing subjective well-being and its determinants in a scope more closely related to the Czech Republic. The following section of literature review is devoted to their overview.

2.2 Life Satisfaction in the Czech Republic

First studies including the Czech Republic occurred no sooner than during the first decade of the 21st century. One possible reason is the lack of the data from periods prior to the 1990s caused not only by the rule of communism in the Czech Republic but also by the fact that subjective well-being was not generally a very common subject of research prior to this period. Several publi-

cations analyse the self-reported life satisfaction in the Czech Republic mainly in the context of post-communistic countries and the impact of transition on subjective well-being.

Regarding the aggregate reported life satisfaction, Večerník & Myslíková (2014) as well as Easterlin (2009), Guriev & Zhuravskaya (2009) and Sanfey & Teksoz (2007) agree that in many countries a decrease in life satisfaction accompanied the transition in the mid-90s. This decrease was later followed by a slower increase in subjective well-being around the turn of the century. Hence, the development over time is in most transition countries considered V-shaped. Data imply that the Czech Republic did not experience the initial decline in satisfaction in the first half of the 90s (Večerník & Myslíková, 2014; Deaton, 2008).

The initial development in life satisfaction in the transitional countries shortly after the revolution may seem surprising. It would be quite intuitive to imagine that a change of regime initiated or supported in many places by dissatisfied citizens would not result in a further decrease in subjective well-being. With the new regime inhabitants could enjoy increase in freedom of choices in almost every aspect of life. According to the findings of Inglehart *et al.* (2008) and Welsch (2003), an increase in freedom results in rising happiness; and in many countries around the world explains up to 30 % of an increase of happiness over time (Inglehart *et al.*, 2008). Higher freedom of choices goes hand in hand with democratization, which was several times estimated to be associated with increasing subjective well-being (Bruno S. & Alois, 2000; Inglehart & Klingemann, 2000). Contrary to these findings, the life satisfaction in transitional countries did not increase after the revolution (Guriev & Zhuravskaya, 2009; Easterlin, 2009).

There are several possible reasons. Firstly, the change of the regime meant a sudden shift from planned economy to a market economy which brought many important structural changes. As a result, during the early years of the transition countries underwent a substantial fall in aggregate output (Campos & Coricelli, 2002; Easterlin, 2009). This decrease in output may have been partially responsible for the initial drop in experienced utility (Guriev & Zhuravskaya, 2009). Secondly, the initial fall in satisfaction could be partially attributed to a change in aspiration level that occurred due to better accessibility of information from western capitalistic countries (Guriev & Zhuravskaya, 2009). This confrontation resulted in realization of the differences between post-communist countries and western capitalist countries leading to lower life

satisfaction (Easterlin, 2001; McBride, 2001).

Substantially higher unemployment is another aspect connected to the change to market economy and the decline in aggregate output (Bornhorst & Commander, 2006). Under the planned economy there were almost zero unemployment rates. With the change of the regime and the introduction of market economy, many people suddenly no longer had a job. Some due to the fact that their jobs simply disappeared. More importantly, many because their qualifications and experience acquired under the rule of communism were no longer suitable for the new labour market (Easterlin, 2009; Deaton, 2008). It is not only intuitive that unemployment is associated with distress and lower life satisfaction but it has been proven several times that this effect is significant, of substantial magnitude and persists to a certain extend over time even after re-employment (Powdthavee, 2012; Lucas *et al.*, 2004; Clark *et al.*, 2008).

It was not only the initial decline in subjective well-being that was analysed, but also the fact that almost two decades after the revolution reported satisfaction in post-communist countries was found significantly lower compared to western capitalistic countries (Inglehart *et al.*, 2008; Guriev & Zhuravskaya, 2009; Sanfey & Teksoz, 2007; Deaton, 2008). This phenomenon of systematically lower self-reported life satisfaction in post-communistic countries is sometimes referred to as the "iron curtain of unhappiness" (Lelkes, 2006). Researchers tried to explain the difference in satisfaction. Therefore, the associations of certain factors and reported satisfaction in the transitional countries were examined. Based on the presented results, several differences between the transitional and non-transitional countries were proposed.

One of the factors commonly examined in the context of life satisfaction is age. In case of the post communist countries the dissatisfaction appears to be increasing in age (Guriev & Zhuravskaya, 2009; Sanfey & Teksoz, 2007; Deaton, 2008; Večerník & Myslíková, 2014). This is one of the aspects in which transition countries differ from the non-transition ones (Sanfey & Teksoz, 2007; Večerník & Myslíková, 2014), where the relationship between life satisfaction and age is often estimated to be U-shaped (Frijters & Beatton, 2012; Blanchflower & Oswald, 2008; Baird *et al.*, 2010). Hence, the difference in satisfaction between transition and non-transition countries is increasing in age.

Guriev & Zhuravskaya (2009) and Sanfey & Teksoz (2007) specify the relationship even further and suggest that if the effect of age is cleared from other individual characteristics influencing life satisfaction the estimated relationship between satisfaction and age is U-shaped even in transitional countries. The

turning point from which life satisfaction is no longer decreasing but starts to be increasing in age is by Guriev & Zhuravskaya (2009) calculated to be 60. This is significantly higher compared to 40 years for non-transitional countries at that time (Guriev & Zhuravskaya, 2009). Sanfey & Teksoz (2007) estimate the turning point for transitional countries to be closer to the one of non-transitional countries. Specifically, they suggest that on average it occurs in the early-50s and shortly before the age of 45 for transitional and non-transitional countries, respectively. The following increase in life satisfaction with age is estimated to be less rapid in case of transition countries compared to non-transition ones (Sanfey & Teksoz, 2007).

Several other factors other than age where estimated to have different effect on satisfaction in transition and non-transition countries. One of them is inequality. Namely, higher income inequality correlates with lower levels of satisfaction in transition countries and with higher levels in non-transition ones (Guriev & Zhuravskaya, 2009; Sanfey & Teksoz, 2007). Possible difference in satisfaction among women and men were take in to consideration, too. Again the results imply that transitional and non-transitional countries differ in this aspect. Sanfey & Teksoz (2007) concluded that there is no significant difference among genders in transitional countries, while in case of non-transitional countries females are estimated to be on average more satisfied.

Večerník & Myslíková (2014) compare the impacts of several macroeconomic determinants (such as GDP per capita and unemployment) and individual characteristics (e.g. gender, marital status and health) between transitional and non-transitional countries in the middle Europe and conclude that their effects differ among the considered countries as well as in time.

Several authors also suggest the conditions under which the gap in life satisfaction between transitional and non-transitional countries will eventually close. Guriev & Zhuravskaya (2009) believe that the over-all increase in life satisfaction will continue under the condition of further economic growth as it will provide people with higher income and better provision of public goods. This might result in higher subjective well-being. The second argument they use is that over time the number of people experiencing difficulties under the new regime due to personal capital deterioration will diminish as they will eventually age and leave the labour force. As a result, there is likely to be higher amount of more satisfied and lower amount of dissatisfied citizens.

Sanfey & Teksoz (2007) add that rising GDP per capita is highly positively correlated with satisfaction in post-communist countries and points out that

the evolution of democratic institutions and governance appears to be even more important for rising perceived well-being in those countries. They believe that under sustainable economic growth and development of institutions, the satisfaction difference between transition and non-transition countries will eventually disappear, which is coherent with the belief of Deaton (2008). Sanfey & Teksoz (2007) support the claim by evidence that among the ex-communist countries those that managed to proceed further with transition (meaning that their GDP is comparable to similar non-transitional countries and their institutions are more developed and trustworthy) experience higher levels of satisfaction compared to countries where the process of transition has not yet progressed that far. The available data suggest that people in transition countries were still yet not really satisfied with the state of the institutions at the time of the publication of their study. This led the authors to the conclusion that the difference in satisfaction with institutions and governance in transition and non-transition countries might be an important factor causing the overall life satisfaction in ex-communist countries to be lower.

Večerník & Myslíková (2014) use data from 1991, 1999 and 2008 and conclude that among the considered transitioning countries, higher GDP was positively associated with higher experienced satisfaction only in years 1991 and 1999 and not in the year of 2008. On the other hand, individual characteristics were found more significant as time proceeded. It is possible that further economic growth may not be necessary for increasing life satisfaction in the transitional countries and it will definitely not be sufficient.

Regarding the aggregate level of well-being in the Czech Republic, Fialová & Štika (2015) compare the well-being in the Czech Republic with the remaining Visegrad countries (Slovakia, Poland and Hungary) and the remaining neighbours of the Czech Republic (Austria and Germany), not only focusing on self-reported life satisfaction. To provide for more aggregate picture of the relative over-all well-being in the Czech Republic, several different measures (such as Human Development Index, subjective Life Satisfaction indicator and OECD measure Your Better Life Index) are used for the analysis. The conclusion is that the Czech Republic is near the average of the considered countries using most of the measures. Moreover, it appears that the more dimensions included in a specific measure of well-being, the better is the ranking. The authors suggest that this might be due to the fact that the relative importance of income is reduced when other aspects are considered. As incomes in the Czech Republic are relatively low, they are likely to substantially decrease the

values of the indexes used for comparison.

To the best of my knowledge there has not been an up-to-date publication addressing the determinants of life satisfaction and their development over time regarding the Czech Republic. The thesis aims to bridge this gap. The intention is also to compare the obtained results with the results drawn generally for the transitional countries by the already existing literature.

Chapter 3

Data and Methodology

3.1 Data

Primarily data collected by the European Social Survey are used for the analysis. Self-reported life satisfaction of individuals alongside individual characteristics which are suitable for the intended analysis (such as gender, marital status, employment and education) are included in this data set. There are also several socio-political variables that can be used as additional control variables (such as trust in legal system and government).

The European Social Survey (ESS) takes place every two years since 2002. In every country a responsible institution is in charge of questioning representative random sample of the population of all individuals living in a private household above the age of 15 regardless of their citizenship. The institution is in charge of conducting the survey in a manner that corresponds with the requirements set be the ESS institutions. In the Czech Republic the responsible institution is the Institute of Sociology of the Czech Academy of Science. More information (including more details on sampling) can be found on the web page of ESS, where also the data are publicly available.[1]

To measure life satisfaction, answers to the following question from the ESS are used: "All things considered, how satisfied are you with your life as a whole nowadays? Please answer using this card, where 0 means extremely dissatisfied and 10 means extremely satisfied." The reported life satisfaction is therefore a number on a 11-level scale from 0 to 10, where 0 represents "Extremely dissatisfied" and 10 represents "Extremely satisfied". This question is included in this form in every wave of this survey. This provides a measure comparable

[1] `http://www.europeansocialsurvey.org/`

across time and reduces the possibility of additional bias caused by different survey question or methodology (Smith & Exton, 2013).

The Czech Republic has participated in every wave of the European Social Survey except for the third wave which was conducted in 2006. This means that data from the following years are available for the analysis: 2002, 2004, 2008, 2010, 2012, 2014 and 2016. The sample size in case of the Czech Republic exceeds 2,000 respondents in every wave, except for the year 2002, where only 1,360 inhabitants participated. The number of respondents in every corresponding year can be found in Table A.1. However, due to missing data mostly in case of control variables, the sample size is usually substantially reduced. The exact number of observations used is stated in the results of every model.

To extend the time horizon of the analysis, two other data sources are used. First source is the European Values Survey (EVS), which provides data for the years 1991 and 1999. The second data source is the World Values Survey (WVS) in which the Czech Republic took part in 1995. The question regarding life satisfaction in the WVS and EVS is stated in a very similar way as in the ESS, unlike the 11-level scale used in the ESS the scale in case of WVS and EVS consists of 10 levels only: from 1 (= "Extremely dissatisfied") to 10 (= "Extremely satisfied"). In order to be able to compare the average levels of reported satisfaction with the ESS data, the variable is rescaled.

The 10-level scale is transformed as follows: first all the values are decreased by one. In such a transformed scale 0 stands for "Extremely dissatisfied" as in ESS. The maximum is 9 meaning "Extremely satisfied". Further a new 10-level scale is defined as follows: 0 as "Extremely dissatisfied", the further levels are defined 10/9 apart, resulting in the maximum possible value to be 10 (meaning "Extremely satisfied") as in case of the ESS. Then to every level of the original WVS and EVS scale a value in the new scale is assigned maintaining the order. 0 is assgined to 0, 1 is assigned to 10/9, two is assigned to 20/9, up until 9 which is assigned to 10. The transformation of the original scale in to the new one can be seen in Table A.2 in Appendix.

Even after the rescaling there are several draw-backs of using this data. One of them is that even a slightly different wording and different scale may incentives respondents to select different answer than if asked otherwise (Smith & Exton, 2013). This implies that the data are not completely comparable with the ESS ones. Therefore, the rescaled variable are only used for comparison of the aggregate level of happiness across time. In case of the analysis of determinants, datasets are not merged and every available year is estimated

separately using its original scale.

There are also some more general limitations regarding the used data. The main one is that the data are cross-sections pooled over time and not panel data. The unobserved individual characteristics can not be controlled for using fixed effect estimation. Bias of the estimates is therefore very likely and the results should not be interpreted as causal effects (Ferrer-i-Carbonell & Frijters, 2004) .

For time comparison of the development of reported life satisfaction and the development of selected macro-economic variables (namely unemployment and growth of GDP per capita) data provided by the World Bank are used.[2]

All the used variables with the exact question in the questionnaire and their possible answers can be found in the Appendix B.

3.2 Methodology

The analysis is divided in to two parts. In the first part the overall reported satisfaction is briefly analysed mainly using descriptive statistics. The focus is placed on the distribution of life satisfaction as well as on the development of aggregate reported life satisfaction over time. In the second part, data on specific individuals are considered and the relationship between certain individual characteristics and the reported satisfaction is analysed for every available year. The results are then compared across time. In the following paragraphs the used method of estimation and its limitations are described in more detail.

Following the weighting guide provided by the European Social Survey, if convenient the post-stratification weights provided by the ESS are used to reduce potential sampling bias.[3]

In the second part of the analysis data on specific individuals are considered. Based on the literature (for example Ferrer-i-Carbonell & Frijters (2004) or OECD guidelines on measuring subjective well-being by Smith & Exton (2013)) and available data four main models in the following form are estimated:

$$life\ satisfaction = X\beta + \epsilon$$

[2] `https://data.worldbank.org/country/czech-republic`

[3] More information about the used weights can be found on the following page: `http://www.europeansocialsurvey.org/methodology/ess_methodology/data_processing_archiving/weighting.html`

In the first model X is a set of individual characteristics selected based on the existing literature. To the most commonly used control variables belong gender, marital status, health (in our case self-reported satisfaction with health), income, education, age and second power of age(Sanfey & Teksoz, 2007; Večerník & Myslíková, 2014; Guriev & Zhuravskaya, 2009).

In the second model regional dummy variables are added to the prior model to cover for potential disparities among regions. Respondents from Prague serve as the base group. In the third model, the regional dummy variables are replaced by domicile dummy variables (such as living in a city or living in a countryside). The reported domicile is based on the respondents judgement. People living in a big city form the base group. The fourth model includes besides the individual characteristics from the first model other variables mainly reflecting the individuals attitudes and feelings towards the state of society or political situation (such as interest in politics, satisfaction with economy or with government). Following the example of World Happiness Report 2018 variable reflecting the attitude towards immigrants is also included.

For certain variables (such as gender, income and education) also average reported life satisfaction is computed for corresponding subsets of the sample. For example, in case of gender the average reported life satisfaction of men and women are computed separately. In case of income the average reported life satisfaction is presented for every decile. The same is done for three possible levels of education - primary or less than primary, secondary and tertiary. This allows to compare the differences among the subpopulations without other factors being held constant. To estimate the evolution of life satisfaction with increasing age without other factors being controlled for, reported satisfaction is regressed solely on age and its second power.

Regarding the method of estimation of the models, there has been an extensive literature addressing the methods used for the estimation of covariates of subjective well-being. As the dependent variable takes values that are ordered integers and can be perceived as observable characteristic of latent well-being, ordered probit (eventually ordered logit) model may seem as a appropriate method of estimation. It has been shown that in case of life satisfaction (or subjective well-being in general) the results of estimating latent response models are usually coherent with estimation using ordinary least squares. Ordinary least squares regression is usually preferred and commonly used for the simplicity of interpretation and comparison of results due to assumed cardinality. As the aim of the thesis is to compare the estimates across time, ordinary least

squares regression with heteroskedasticity robust standard errors appears to be the convenient method. For several determinants for which the estimated coefficient differed over time also the significance of the difference in time is tested relative to the most recent data available (e.i. 2016). This is done by merging the dataset for all years in the ESS into one joint dataset and estimating a model including among other control variables also binary variables for years and interaction terms between the binary variables for years and the variable of interest.

As mentioned in the introduction of the used data, the data from the 90s are of different scale. They are regressed in their original form (without rescaling) and compared within each other. Even though, the magnitudes are not comparable due to the different range among reported levels of happiness the comparison with the estimates of latter years may bring some interesting insights.

It is in place to address the interpretation of the estimated models and their meaning. The self-reported life satisfaction is likely to be influenced by countless factors. Majority of these factors is not observed and can not be controlled for (for example due to data availability or the structure of the data). Some of the unobserved factors are very likely to be correlated with the included control variables, which may lead to substantial bias. As it was already mentioned the main limitation of the analysis is that the individual unobserved fixed effects can not be controlled for due to the structure of the survey . This inevitably leads to violation of assumptions needed for causal inference (Ferrer-i-Carbonell & Frijters, 2004). Therefore, the estimated coefficients can not be interpreted as causal effects but should be viewed as estimated correlations or ceteris paribus differences. For this reason the factors analysed in the context of happiness are sometimes referred to as co-variates or correlates of happiness or life satisfaction rather than determinants.

Last but not least, it is in order to address the validity and reliability of usage of the self-reported life satisfaction as a measure of subjective well-being and generally its suitability for analysis. One of the main concerns is measurement error that is very likely to be correlated with the included explanatory variables (Bertrand & Mullainathan, 2001; Wilkinson, 2007). Bertrand & Mullainathan (2001) and Krueger & Schkade (2008) argue that despite the limitations the self-reported life satisfaction is a useful measure to be analysed. This claim is supported by an exhaustive body of literature using the self-reported life satisfaction as dependent variable.

Chapter 4

Results

In the first section the aggregate life satisfaction in the Czech Republic is summarized. The most recent situation for which data are available and the development of the reported life satisfaction over time are outlined. In the second section the determinants of life satisfaction and the development of the differences in reported satisfaction associated with these determinants are addressed.

4.1 Life satisfaction and its development over time

The most current data available in the European Social Survey are from 2016. Descriptive statistics of the reported life satisfaction in 2016 can be found in Table 4.1. The median value is 7, hence at least 50 % of respondents reported being satisfied with their lives as from the 11-level scale (where 0 is "Extremely dissatisfied" and 10 is "Extremelly satisfied") they chose values closer satisfaction than to dissatisfaction. The first quantile is 6 and the third is 8. This implies that less than 25 % of the sample evaluated their life as neutral or not satisfactory and at least 25 % as very satisfactory.

Table 4.1: Descriptive statistics of reported life satisfaction in 2016

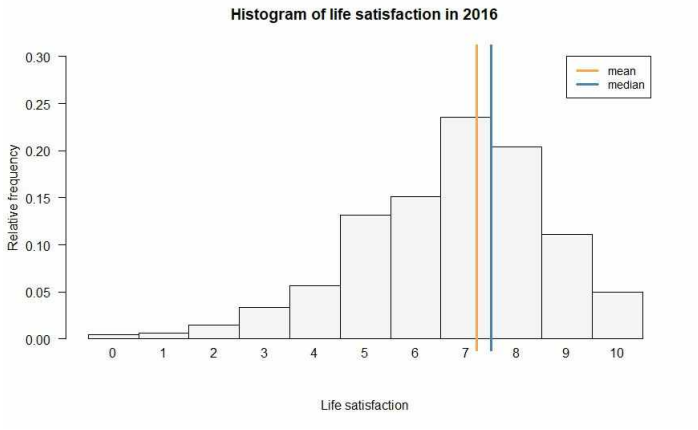
	Min	1st Qu.	Median	Mean	3rd Qu	Max	Sd	NAs
Sample	0	6	7	6.82	8	10	1.89	35

Note: computed from the European Social Survey 2016 data set; mean is a weighted mean using the post-stratification weights provided by the European Social Survey

Figure 4.1 depicts the relative frequency of answers for every possible level of reported life satisfaction in 2016. The most frequently reported level is 7, followed by 8 and then 6. The histogram is skewed to the left, the weighted

mean (6.82) is lower than the median (7). This implies that more than 50 % of the sample experience satisfaction above the average.

Figure 4.1: Distribution of reported life satisfaction in 2016



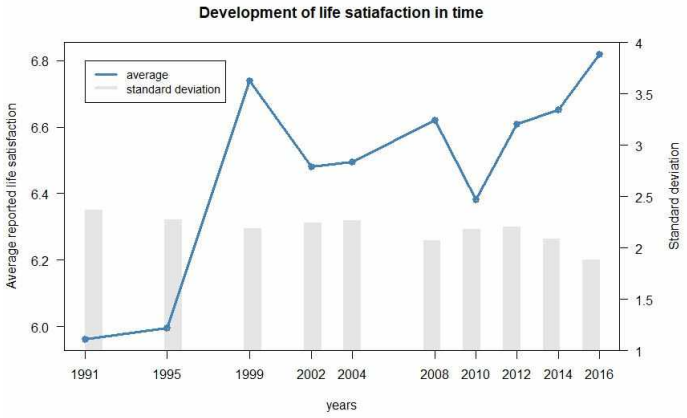
Note: frequency of the reported life satisfaction in the Czech Republic in 2016 based on the data from European Social Survey

To put the average reported satisfaction into global context, according to the World Happiness Report 2016 the Czech Republic ranked as the 27$^{\text{th}}$ happiest country among more than 150 countries included in the ranking (Helliwell *et al.*, 2016). Two more recent World Happiness Reports has been released since 2016. The Czech Republic was the 23$^{\text{rd}}$ and the 21$^{\text{st}}$ in 2017 and 2018, respectively (Helliwell *et al.*, 2017; 2018). This means that the Czech Republic is right behind the western countries and in some cases even in front of them. In the last three World Happiness Reports the Czech Republic is the second happiest from the former communist countries being overtaken only by the unified Germany.

To provide more precise picture of the development of average life satisfaction over time, in Figure 4.2 the mean values alongside the corresponding standard deviations are plotted in time. Table A.3 in the Appendix contains the descriptive statistics of reported satisfaction in every year for which data are available. In the recent years life satisfaction appears considerably higher compared to the yearly years of the transition, even though the data are not completely comparable due to the usage of different scales for reporting life satisfaction. Nevertheless, it is clear that even though most transitional countries experienced a decrease in satisfaction during the first half of the 90s (Deaton, 2008; Easterlin, 2009; Sanfey & Teksoz, 2007), as Večerník & Myslíková (2014) highlighted the satisfaction in the Czech Republic appears not to have fallen

during this period. It might be the case that the decrease did occur however in a year that is not captured by the data.

Figure 4.2: Development of average reported satisfaction over time



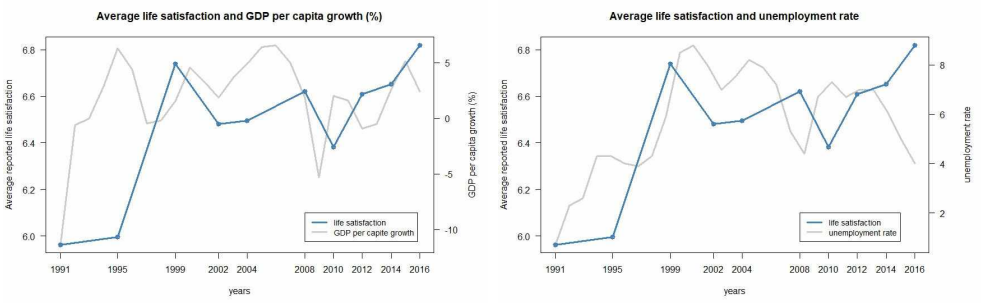
Note: computed from the European Social Survey (2002 - 2016), World Values Survey (1995) and European Social Survey (1991,1999); the data from the WVS and EVS are rescaled as indicated in Table A.2; for computing the averages using the data from the European Social Survey designed weights are used

Regarding the development in the following years, after a steep increase between 1995 and 1999, the average life satisfaction decreased in 2002. From the mean values it appears that the overall life satisfaction may have been slightly increasing since then with a temporary drop around the year 2010 following the crisis in 2009 and a rather steep increase in 2016. In 2016 the reported life satisfaction reached its maximum out of the available years. The median value is however constant over time. In favour of the overall increase in happiness in 2016 is that the fist quantile was for the first time 6 and not 5 as in the previous years (Table A.3 in Appendix).

In Figure 4.3 the average reported life satisfaction is plotted alongside the growth of GDP per capita and unemployment rate. It appears that especially during the 90s life satisfaction was rising despite rising unemployment. It was not until 2004 that the relationship between average reported life satisfaction and unemployment rate started to be negative. Regarding the GDP growth, it is likely that GDP growth positively correlates with the average life satisfaction to a certain extent. The substantial increase in life satisfaction in 1999 was accompanied by growing GDP. The drop in GDP growth during the crisis in 2009 is reflected in a decline in satisfaction (in 2010 as data from the years 2008 and 2009 are not available). In the most recent years the GDP growth was rising and so was average life satisfaction. By simply observing the graphs, it appears that the conclusion drawn by Sanfey & Teksoz (2007),Deaton (2008) and Guriev

& Zhuravskaya (2009) are reasonable and higher growth of GDP appears to correlate with higher reported satisfaction. However, further analysis would have to be conducted in order to draw any conclusions about the relationship and probably data for longer time period would be needed.

Figure 4.3: Development of reported life satisfaction and macro-economic determinants



Note: data on GDP per capita growth and unemployment are from the World Bank database; the average reported satisfaction is computed from the European Social Survey (2002 - 2016), World Values Survey (1995) and European Social Survey (1991,1999); the data from the WVS and EVS are rescaled as indicated in Table A.2; for computing the averages using the data from the European Social Survey designed weights are used

Summarizing the reported satisfaction into only one number (such as mean) may lead to incorrect conclusion. The summary statistics of the reported life satisfaction for every wave can be found in the Appendix in Table A.3 and a histogram of relative frequency of answers for every year in the Appendix in Figure A.1. The histograms suggest that people in the Czech Republic became over time on average happier. The frequency of reporting low satisfaction decreased and so did the frequency of reporting extreme satisfaction in the three last waves. The reported satisfaction in 2016 is more concentrated around the values corresponding to rather satisfied (7 or 8 points out of 11) compared to the previous years when the reported life satisfaction was slightly more spread along the scale.

From all the presented figures it appears that the over-all life satisfaction in the Czech Republic is increasing. In the more recent years, the majority of responses is concentrated around the mean and the median. This implies that there is not an extreme gap in life satisfaction in the Czech Republic.

4.2 Determinants of life satisfaction and their development over time

In this part the differences in average life satisfaction associated with certain factors are assessed. The results of the analysis are not presented for every estimated model separately. Instead a special subsection is devoted to every of the analysed control variables. The results of the regressions can be found in Table A.11 to Table A.18 in the Appendix.

The first part is devoted to regional disparities in life satisfaction. Following that the results for individual characteristics are discussed in the following order: age, gender, marital status and having children, income and unemployment, education, health, domicile and eventually belonging to a religion. The last section is devoted to the socio-political variables.

4.2.1 Region

In 2016 average reported life satisfaction in the north-western parts of the republic is lower than the average reported satisfaction. On the other hand, people from the north-eastern part were on average slightly happier than the average (Table A.4 in the Appendix).

Regarding the ceteris paribus differences, in the two last waves most of the regions reported lower satisfaction compared to Prague (Table A.13 and Table A.14 in the Appendix). It appears that people in the north-western part of the republic may indeed experience lower satisfaction in the long run, as both the ceteris paribus difference and the differences in average reported satisfaction suggest so. The residents of Moravskoslezský kraj in the north-eastern part of the republic reported holding all other factors fixed higher satisfaction compared to Prague in almost every year. Otherwise, it seems that the ceteris paribus difference among regions are not substantial. Moreover, the differences among regions are only rarely found significant.

4.2.2 Age

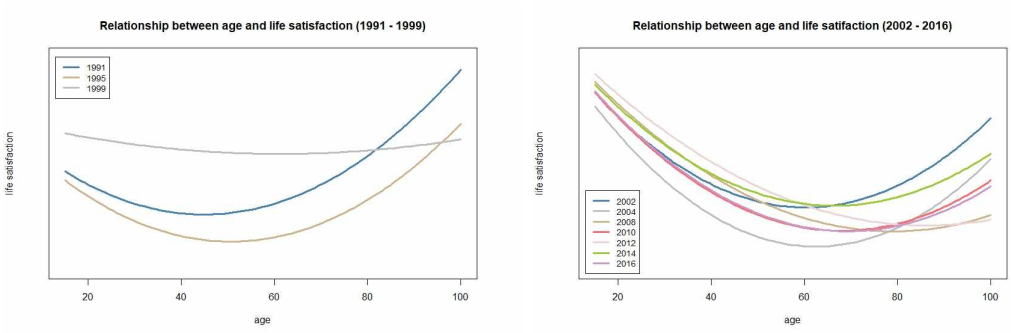
If other factors are not controlled for the relationship between age and life satisfaction is estimated to be U-shaped for every considered year (Table A.5 and Table A.6). Even after controlling for other factors the relationship between reported life satisfaction and age is estimated to be convex for almost every

available year. In the model including socio-political variables the relationship appears to be U-shaped in every considered year except for 2012.

Even during the transitional years in the 90s the relationship seems to be convex if other variables are controlled for as well as if the relationship is not cleared from any other factors. Večerník & Myslíková (2014); Deaton (2008) suggested that life satisfaction strictly decreases with age in transitional countries. Guriev & Zhuravskaya (2009); Sanfey & Teksoz (2007) found the relationship to be U-shaped only if other factors are controlled for. This implies that the relationship in the Czech Republic probably differed from the relationship estimated for the transitional countries in general.

Even though, the relationship appears to be convex in all the years considered, the coefficients and their significance differ greatly. For example, in 2004 the coefficients are found significantly different from those in 2016. The coefficient for age ranges from -0.048 on the 11-level scale in 2012 to -0.08 on the 10-level scale in 1995. For the second power of age it varies between 0.001 in the earlier years (1991, 1995, 2002 and 2004) and 0.0003 in the later years (2008 and further). Only in 1999 the coefficients are lower (-0.019 on the 10-level scale for age and 0.0002 for age squared), which is also the only year where both age and its second power were not found significant if other factors are not controlled for (Table A.5 and Table A.6). However, if other factors are controlled for the coefficients are found significant even in 1999.

Figure 4.4: Life satisfaction over life compared across time



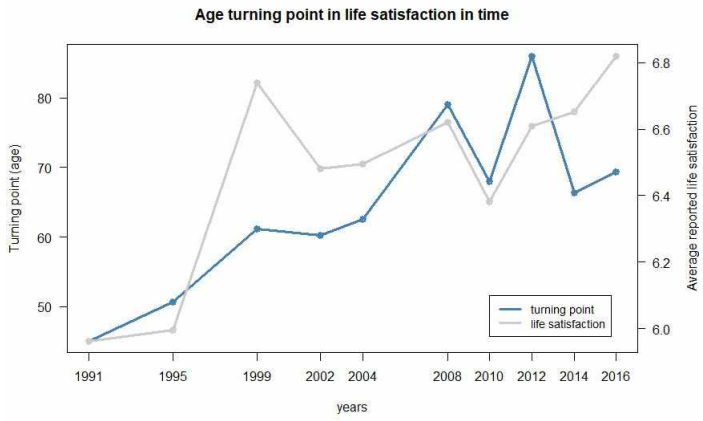
Note: estimated from the data provided by the World Values Survey, European Values Survey and European Social Survey by regressing reported satisfaction solely on age and its second power (Table A.5 and Table A.6 in the Appendix); the mean of reported satisfaction is subtracted from every year for better comparability; the results are plotted in two different plots as the surveys are not completely comparable

As the coefficients are not coherent across time, the slope at which life satisfaction is firstly decreasing with age and the slope at which it then increases differ in time. In Figure 4.4 the relationship between age and average life satisfaction are plotted (without other factors being controlled for). In the early

years of the transition and in 2002 and 2004 the estimated rate of eventual increase is much steeper compared to later years and in 2008 and 2012 is probably the lowest.

The different coefficients have yet another implication. The estimated turning points from which life satisfaction is no longer decreasing in age but starts to increase changed over time. Table A.7 in Appendix summarizes the turning points for every considered year and Figure 4.5 represents the development of the turning points over time graphically. Guriev & Zhuravskaya (2009) and Sanfey & Teksoz (2007) proposed the life satisfaction to be U-shaped in transitional countries only if other factors are controlled for and Guriev & Zhuravskaya (2009) estimated the turning point to be around 60, Sanfey & Teksoz (2007) in early-50s. Data from the World Values Survey and the European Values Survey however imply that during the first decade of transition life satisfaction in the Czech Republic was U-shaped even if other variables were not controlled for and the turning points appear to be 45, 51 and 61 years in 1991, 1995 and 1999, respectively. In 2002 the satisfaction begins to slightly increase in age after the 60^{th} year of age, at the age of 79 in 2008 and 86 in 2012. More recently the turning point again occurs a bit sooner in life - at the age of 66 and 69 in 2014 and 2016, respectively. Overall, the turning points in the Czech Republic occur in the latter years of life, which corresponds with the conclusion Guriev & Zhuravskaya (2009) drew about transitional countries in general.

Figure 4.5: Development of turning points points of life satisfaction



Note: computed from data provided by the World Values Survey, European Values Survey and European Social Survey by regressing reported satisfaction on age and its second power (Table A.5 and Table A.6 in the Appendix)

To summarize, the reported life satisfaction in the Czech Republic is indeed U-shaped in age. However, especially after the turn of the century the turning points occur rather late in life. Therefore, for the majority of the life satisfaction appears to be decreasing in age at diminishing rate.

4.2.3 Gender

Table 4.2 summarizes the average reported life satisfaction separately for men and women. In 1991, 1995 and 2016 women reported slightly higher average life satisfaction compared to men. In the remaining 7 years men were on average happier. The differences are usually rather small, except for the year 2014 when men were on average by 0.470 more satisfied than women. If other factors are held constant the results are rather inconclusive in a longer time horizon (Table A.11 to Table A.18 in Appendix). This is mainly due to the fact, that the estimated difference differed over time substantially. For example, the ceteris paribus difference between men and women in 2004 and 2008 were found significantly higher compared to 2016.

Table 4.2: Average life satisfaction according to gender

Year	1991	1995	1999	2002	2004	2008	2010	2012	2014	2016
Difference	−0.065	−0.037	0.016	0.076	0.076	0.217	0.031	0.470	0.296	−0.021
Men	6.331	6.374	7.072	6.374	6.498	6.732	6.368	6.850	6.803	6.809
Women	6.396	6.411	7.057	6.298	6.422	6.515	6.337	6.380	6.507	6.830
Observations	924	1147	1908	1351	3026	2018	2386	2009	2126	2269

Note: difference is the difference between men and women;for 2002 - 2016 weigtes from the Europen social Survey are used

In the period from 1991 to 2004 men are estimated to be ceteris paribus on average less satisfied than women. Moreover, in most of the years this difference is found significant in at least some of the models if other factors are controlled for (expect for 1999). In 2008, 2010 and 2014 the results are not coherent across the models. The sign differs and the coefficients are not significant in any of them. In 2012 men are estimated to be significantly more satisfied than women (by almost 0.3 point and p-value below 5 %) if only the usual characteristics are controlled for. Once the region, domicile or other socio-political variables are controlled the coefficient decreases and becomes insignificant. On the other hand, in the most recent wave in 2016 men are estimated to be holding all other factors equal on average less satisfied than women. The difference is found significant only in the model where socio-political variables are included.

Sanfey & Teksoz (2007) concluded that unlike the non-transitional countries in the transitional countries there are no significant disparities between men

and women in life satisfaction. It is therefore possible that the conclusions drawn by Sanfey & Teksoz (2007) for transitional countries as whole may not hold in case of the Czech Republic.

Overall, it appears that ceteris paribus women report on average slightly higher levels of happiness compared to men. This difference is subject to changes over time. However, men report slightly higher over-all average life satisfaction compared to women even in years where they are estimated to report ceteris paribus lower life satisfaction. This finding suggest that men might be more likely to have characteristics which are associated with higher levels of happiness. Therefore, they are more likely to report higher satisfaction compared to women. Yet if in exactly the same situation and with exactly the same background women would be probably on average more satisfied.

4.2.4 Marital status

In the analysis of the relationship between satisfaction and marital status respondents that did not indicate that they are either married, divorced or widowed (e.g. individuals that are single or have a partner and are not married) serve as the base group. The estimated difference of being married compared to the base group is rather inconclusive. In most of the estimated models the effect is not significant and its sign as well as magnitude change. The only year when this effect is found significant in every model is 2002, when being married is on average associated with higher satisfaction. Surprisingly the difference is estimated to be negative and of relatively high magnitude (more than - 0.8) in some cases (namely in the most recent wave from 2016). However, due to the chosen base group where are also people that live with their partner without being married or people that prefer being single, it is rather hard to draw any conclusions.

Unlike being married, the difference in satisfaction of divorced is quite consistent. Being divorced is associated with lower average life satisfaction in every considered wave regardless of the included control variables (except for the year 2012 if only the usual individual characteristics are controlled for). Moreover, this effect is very significant in several of the models and in almost every model is rather high in magnitude (usually more than or at least around -0.3). In 1995, 2004 and 2016 the effect is very significant and reaches up to -0.825 on the 10-level scale, -0.992 and almost - 0.6 on the 11-level scale respectively

if only the basic characteristics are controlled for. If also other factors are controlled the magnitude changes only slightly.

This finding may appear not to be in line with the theory of adaptation and hedonic treadmill, which proposes that unfortunate life events such as divorce or a serious injury are followed by a short term decrease in life satisfaction. However, as soon as the individual lives in the situation for some time, his or her life satisfaction returns to its initial rather stable value. This theory was reinvestigated several times, usually some evidence of at least partial adaptation was found but not in every case (for example Clark *et al.* (2008)). As the data on how long a person has been divorced are not available this hypothesis can not be fully tested. However, it appears to be reasonable to assume that most of the people that reported that they are divorced have already been divorced for some time. Even though, the evidence implies that being divorced is associated with lower life satisfaction this relationship may not be causal. It can be the case that unhappy and pessimistic people are more prone to divorce as their relationship can suffer from their attitudes and characteristics.Being divorced also being widowed or loosing a spouse due to death is not always estimated to be associated with lower life satisfaction compared to the base group.

Generally, the estimated coefficients and associations in case of marital status have to be interpreted carefully. The main limitations is the fact that people in the base group are not homogeneous in the sense of their status. Due to this fact the results might be biased and misleading even in the sense of estimated difference in reported satisfaction.

Similarly to the marital status, even the effect of having children is ambiguous. There is no direct question on having children in the European Social Survey, therefore a variable indicating whether the respondent has ever lived in a household with children is used as a proxy. As in case of marital status the estimated difference in satisfaction is inconclusive. It is possible that the used variable does not reflect the true situation credibly. In the 90s the direct question was asked and having children was correlated with significantly higher life satisfaction 1999. However, if the socio-political variables are included the difference decreases substantially and is no longer significant. In 1991 and 1995 the difference was not found significant.

4.2.5 Income and unemployment

As mentioned in the section devoted to the literature review, the research on income and satisfaction is extensive yet the exact relationship is hard to generalize. By simply observing the mean values for every decile of household income, it appears that average life satisfaction is not strictly increasing in income especially for the upper deciles (Table 4.3). However, the differences in average life satisfaction between the lower and upper deciles are substantial (in some years up to 2 points on the 11-level scale of reported life satisfaction). Table A.8 and Table A.9 in the Appendix summarize the estimated differences in average reported life satisfaction between the corresponding decile of income and individuals whose earnings belong to the lowest 10 % without other factors being controlled for. If other factors are controlled for the estimated differences decrease substantially and in several years are no longer significant (2004, 2010, 2012).

Table 4.3: Average reported life satisfaction for deciles of income

Decile	1991	1995	1999	2002	2004	2008	2010	2012	2014	2016
1^{st}		5.529	6.322	4	4.923	5.418	5.063	5.094	5.642	5.752
2^{nd}		5.838	6.987	5.599	5.654	5.915	5.805	5.638	6.204	6.103
3^{rd}		6.103	7.052	6.296	5.986	6.543	5.592	5.796	6.349	6.361
4^{th}		6.414	7.287	6.599	6.692	6.857	6.005	5.658	6.397	6.372
5^{th}		6.530	6.947	6.707	6.681	7.073	6.156	6.095	6.771	6.786
6^{th}		6.706	7.214	6.911	6.388	7.302	6.575	6.420	6.931	6.599
7^{th}		6.699	7.413	6.700	6.682	7.138	6.802	6.789	7.029	7.052
8^{th}		7.146	7.442	7.455	6.614	6.400	6.436	7.366	6.812	7.155
9^{th}		7.241	7.731	7	7.304	7.875	6.899	7.425	6.870	7.024
10^{th}		7.529	7.789	8	6.136	7.200	7.244	7.018	7.469	7.527
Observations	0	938	1717	980	1974	1444	1695	1422	1548	1723

Note: the presented results are not always comparable, as two different scale are used for assessing life satisfaction: data for the years 1995 and 1999 from the World Values Survey and European Values Survey follow 10-level scale from 1 to 10, data for the latter years from the European Social Survey follow a 11-level scale from 0 to 10; data for 1991 are not available

Table 4.4 summarizes the difference between average life satisfaction of the corresponding decile and the preceding decile. Moving to a higher decile of household income is in mostly correlated with higher reported satisfaction. However, in every year at least one of the estimated differences is negative (eg. those in higher decile of income reported lower average life satisfaction). The inter decile differences vary and do not fully support the hypothesis that the effect of income on life satisfaction is positive and diminishing (even if other factors are controlled for).

Regarding the development over time, it appears that the life satisfaction of respondents belonging to the lowest decile has been increasing since 2002, with a temporary decrease in 2010 following the crisis in 2009. In the two waves following this crisis unemployed were significantly less satisfied compared to

Table 4.4: Differences associated with move to a higher decile of income

Decile	1991	1995	1999	2002	2004	2008	2010	2012	2014	2016
1^{st}										
2^{nd}		0.309	0.665	1.599	0.731	0.497	0.742	0.544	0.562	0.351
3^{rd}		0.265	0.065	0.697	0.332	0.628	-0.213	0.158	0.145	0.258
4^{th}		0.311	0.235	0.303	0.706	0.314	0.413	-0.138	0.048	0.011
5^{th}		0.116	-0.340	0.108	-0.011	0.216	0.151	0.437	0.374	0.414
6^{th}		0.176	0.267	0.204	-0.293	0.229	0.419	0.325	0.160	-0.187
7^{th}		-0.007	0.199	-0.211	0.294	-0.164	0.227	0.369	0.098	0.453
8^{th}		0.447	0.029	0.755	-0.068	-0.738	-0.366	0.577	-0.217	0.103
9^{th}		0.095	0.289	-0.455	0.690	1.475	0.463	0.059	0.058	-0.131
10^{th}		0.288	0.058	1	-1.168	-0.675	0.345	−0.407	0.599	0.503
Observations	0	938	1717	980	1974	1444	1695	1422	1548	1723

Note: the presented results are not always comparable, as two different scale are used for assessing life satisfaction: data for the years 1995 and 1999 from the World Values Survey and European Values Survey follow 10-level scale from 1 to 10, data for the latter years from the European Social Survey follow a 11-level scale from 0 to 10; data for 1991 are not available

the most recent wave. Other than that more precise conclusions are hard to be drawn.

Being financially secured appears to be necessary condition for attaining higher levels of satisfaction. For majority the source of finance is their job. Moreover, job provides space for social interaction and can bring a sense of purpose and fulfilment. Therefore, it is in place to analyse the reported satisfaction of unemployed.

As it could have been anticipated, being unemployed is associated with lower reported life satisfaction. Again the magnitude and significance of the effect varies greatly across time as well as according to the other included variables. One of the reasons for this inconsistency of results across models is that individual characteristics that may increase the probability of becoming unemployed are not controlled for. Moreover, as in case of divorce, it is possible that the relationship is to a certain extent reverse. Unhappy and pessimistic individuals may be more prone to becoming or staying unemployed compared to optimistic and happy individuals. Therefore, the only conclusion that appears valid is that unemployed individuals appear to report lower satisfaction compared to employed individuals, yet the causal relationship should not be concluded from the results.

Following the literature on transitional countries, also the effect of being self-employed compared to being an employee is analysed (Sanfey & Teksoz, 2007; Lelkes, 2006). Being self-employed is found to be correlated with higher reported satisfaction in most of the years except for 1999 and 2008 when the estimated differences are negative but almost negligible (-0.002 and - 0.056 respectively). In other years the value of the coefficients mostly ranges between

0.180 and 0.317. For the year 1991, which is the only year when the estimated difference is significant, self-employed were on average by 0.9 point on the 10-level scale more satisfied.

The finding that in 1991 self-employed were on average more satisfied than employees keeping all other factors equal is coherent with the findings of Sanfey & Teksoz (2007) and Lelkes (2006). They concluded that in transitional countries unlike non-transitional countries self-employed do not report lower satisfaction. In case of the Czech Republic this finding appears to hold only in 1991 and 1995. In 1999 the effect is estimated to be almost zero. It is possible that in 1991 the significantly higher satisfaction of self-employed may originate in the initial enthusiasm of the change of the regime, which opened new possibilities for entrepreneurs.

Regarding the effect in latter years, the period surrounding crisis in 2009 deserves attention. Unfortunately, last data before the crisis are from 2004, when self-employed were significantly more satisfied (difference almost 0.4). In 2008 the estimated difference is negative but of minor magnitude (- 0.056). In 2010 the coefficient is again positive but of smaller magnitude compared to 2004. Therefore, it is possible that as a result of the crisis self-employed became less satisfied. However, as even in 2016 the effect is not significant it is possible that the crisis either had a permanent effect on satisfaction of self-employed or that employees are comparably happy as self-employed in the most recent years.

4.2.6 Education and being a student

By simply comparing the reported life satisfaction for people who did not attain higher education than primary with those who finished secondary or even tertiary education, the average reported satisfaction is higher for the more educated in most years (Table 4.5). The difference in the satisfaction of only primary educated individuals compared to individuals who finished tertiary education is always positive and quite noticeable. However, this difference is likely to by caused also by other factors that correlated with education (such as income) and not the education itself.

Even by comparing the average reported satisfaction it is clear that people with secondary education reported only slightly higher satisfaction compared to the only primary educated ones. This is coherent with the findings of Sanfey & Teksoz (2007) who suggested that only higher levels of education are associated

Table 4.5: Average reported satisfaction for different levels of education

Education	1991	1995	1999	2002	2004	2008	2010	2012	2014	2016
Primary		6.251		6.07	6.122	6.397	6.101	6.668	6.504	6.575
Secondary		6.559		6.197	6.39	6.514	6.241	6.39	6.596	6.65
Tertiary		7.246		6.935	7.027	7.188	6.947	7.227	6.99	7.191
Observations	0	1107	0	1346	3012	2018	2384	1966	2132	2269

Note: the presented results are not always comparable, as two different scale are used for assessing life satisfaction: data for the years 1995 from the World Values Survey follow 10-level scale from 1 to 10, data for the latter years from the European Social Survey follow a 11-level scale from 0 to 10; data for 1991 and 1999 are not available

with higher satisfaction in the transitional countries. In 2012 the reported satisfaction of secondary educated is even lower than the one of the primary educated.

If other factors that are likely to influence the satisfaction are controlled for, the difference is even less straightforward. Generally the magnitude of the effect as well as its significance varies across time but also changes depending on other control variables. In most cases the difference between the secondary or tertiary educated and only primary educated is positive but not significant. It appears that it is not the education itself that is the reason for the different satisfaction but rather other factors that probably correlate with higher education.

Moving from the highest attained education, the ceteris paribus difference in satisfaction reported by students compared to others was analysed. In 1991 students reported on average significantly higher satisfaction compared to others. On the other hand, in 1995 the reported satisfaction of students was noticeably lower compared to others and also students in 1991. Sanfey & Teksoz (2007) suggested that in case of transitional countries students were one of the most happy stratum of the society during the early transitional years. Data from the Czech Republic support the hypothesis only partially. It is possible that the generation of students in 1991 was more enthusiastic about the change of the regime and simply carried their higher satisfaction with them to their further life or this enthusiasm may have vanished. This however, does not explain why students in 1995 reported noticeably lower satisfaction than student in following years (including 1999).

The difference in average satisfaction of students compared to the rest of the population in the following years changes greatly in magnitude and significance in time and depends on the included control variables. In most cases students are estimated to be ceteris paribus happier, except the already mentioned 1995 and the two last waves in 2014 and 2016 when students reported slightly lower satisfaction holding all other factors fixed. In several cases the change in the

difference was found significant. For example, in 2004 and 2008 students were found on average significantly more satisfied than in 2016.

4.2.7 Health

To measure the difference of those feeling very healthy or those not feeling healthy the respondents indicating such state of health are compared with individuals who considered their health to be neutral or simply only good.

Unsurprisingly, not feeling in a good health condition is associated with substantially lower life satisfaction holding all other factors equal. The estimated effect is relatively consistent in sign and magnitude across time as well as models compared to the other control variables. It is very significant (p-value lower than 0.01) and of very high magnitude compared to other considered factors. The difference is estimated around or higher than -1.0 in almost every case.

Feeling very healthy is associated with higher reported life satisfaction. In most case the estimated difference between very healthy and the base group is significant and its magnitude differs from 0.4 to a bit more than 1. This imply that the ceteris paribus difference between a very healthy individuals and not healthy individuals can exceed 2.5 points.

It may appear that this finding therefore does not support the theory of adaptation of life satisfaction to illness and unfavorable life events as in case of being divorced. However, as in case of divorce there is possibility of reverse causality - unhappy individuals might more prone to illnesses as well as they may perceive their state of health much worse than optimistic and happy individuals who are objectively in the same state of health would.

4.2.8 Domicile

Respondents living in a big city (according to their judgement) serve as the base group. The effect of living in a town compared to a big city changed over time. From 2002 until 2010 living in a town compared to a big city was negatively associated with life satisfaction, in the last two waves the difference was estimated to be positive but close to zero and insignificant.

The difference of those living in a suburbs of a bigger metropolis is ambiguous as it changes in magnitude as well as sign across time. The changes in two consecutive waves can be up to 0.6 point of 11-level scale. As it is not really likely that the life at the suburbs would change that dramatically over two years and as none of the coefficients is found significant it appears that

no generalizing conclusion can be made. Similar holds for living in a village. The effect of living in a village is positive but of minor magnitude for the most recent waves. This suggest that there might not be any difference in average life satisfaction between individuals living in village and individuals living in a town if all other factors are controlled for.

Interestingly after controlling for other important factors such as income or unemployment, people living in the country side reported significantly lower life satisfaction compared to other in the period from 2002 to 2010 (eventually 2012). The size of the difference is substantial. In 2016 the difference was not that striking. The effects can not again be attributed exclusively to living in the countryside as it correlates with many other factors which are not controlled for. One of them could be the opportunity to enjoy leisure or be socially and culturally active.

Over-all, it appears that holding other factors fixed the differences in life satisfaction among different domiciles are not structural and might even be insignificant, except for individuals living in a rural areas who report systematically on average lower satisfaction.

4.2.9 Religion

According to the census conducted in 2011, 34.5 % of the population are atheist, 20.8 % religious and 44.7 % did not indicate their attitude towards religion. However, in the census in 2001 only 8 % are of unclear believes, 32.1 % belonged to religion and 59.9 % were found atheist (Czech Statistical Office, 2014). This makes the Czech Republic one of the most atheist countries in the world. From the religious inhabitants vast majority belongs to the Roman Catholic Church. Therefore, it is hard to estimate the effect of different religions on life satisfaction. As the portion of the population claiming allegiance to any religion is relatively low, analysing the effect of belonging to religion without distinction seems reasonable. The difference was only controlled for if also other socio-political variables were included in the model (Table A.17 and Table A.18 in Appendix).

The belonging to a religion appears to be correlated with higher life satisfaction. The difference is estimated to be insignificant and between 0.2 and 0.3 for the period 2002 - 2010. Interestingly in 2014 it is only 0.006 and following that in 2016 it is 0.4 with very high significance ($p - value < -0.01$). In the WVS and EVS datasets for the 90s the question of belonging to a religion was not

included. However, the respondents in 1995 and 1999 could indicate whether they find comfort in religion. The coefficients were again not found significant and of minor magnitude (0.025 and 0.038 on a 10-level scale, respectively).

It appears that belonging to a religion correlates with only slightly higher satisfaction and that it is not likely to be correlated with lower satisfaction. This finding is coherent to the one drawn by Eichhorn (2011) who reports that religious people tend to report higher life satisfaction mainly in overall more religious countries and in less religious countries this difference is not substantial.

4.2.10 Political and other factors

Sanfey & Teksoz (2007) suggested that the further increase in life satisfaction in transitional countries might be conditional not only on growing GDP but also on the development of institutions and trust in them. In this section the effect of factors such as trust in government or in legal system are analysed. To extend the analysis also other individual political or social attitudes besides the trust in legals system or satisfaction with government are considered (among them for example political position on the commonly used left-wing and right-wing scale). The full results and set of control variables can be found in Table A.17 and Table A.18.

Trust in legal system and satisfaction with government is usually estimated to be significantly correlated with higher reported satisfaction holding other factors fixed. In some years the estimated differences are comparable to the effect of reporting very good state of health. In 1991, 1995 and 1999 the question on trust in legal system was not asked or was formulated in a different way. In 1991 individuals that trusted the justice system and had confidence in parliament were on average ceteris paribus significantly happier. This difference might have been caused by the optimistic anticipation regarding the change of the regime in 1989. The same holds for those who had confidence in legal system and parliament in 1995. In 1999 the difference is not statistically significant and is of relatively minor magnitude compared to the difference in the preceding years. Trust in legal system appears to be more important than satisfaction with government. However, in 2016 those who trusted legal system were not found on average significantly happier and those who were satisfied with government reported on average higher life satisfaction. The joint difference in satisfaction of those who trusted legal system and were satisfied with

government compared to others in 2016 is noticeably lower compared to the previous years.

Data on satisfaction with the economy are not available for the 90s. Since 2004 those satisfied with economy reported on average significantly higher life satisfaction. The minimal estimated difference was in 2012 (0.556), the maximal in the following wave of the ESS in 2014 (1.176). In all the remaining years the difference was around 0.7. This mean that again as in case of trust in legal system, the difference is rather substantial and in some years even comparable to the difference between individuals who felt extremely healthy and those who assessed their state of health as neutral.

Coming back to the political aspects, respondents that indicated being interested in politics or finding politics important reported significantly lower satisfaction in 2016. The difference is negative but not significant also in 2008 and 1991. In all the other considered years respondents interested in politics either reported almost the same or only slightly higher life satisfaction (the coefficient is significant in 2004 and 2012). Regardless of the interest in politics, individuals that evaluated their opinions to belong to the further right-wing reported on average higher life satisfaction keeping all other factors fixed compared to others (including individuals assessing their political views as belonging to the extended center or left-wing). On the other hand, those who identified themselves as belonging to the further or far left-wing reported on average ceteris paribus lower life satisfaction in every year except 1991, 2002 and 2014 (the difference compared to base group of people with views around the center being significant only in 2002). Generally, during the whole period considered people on the further right-wing reported higher life satisfaction compared to those on the further left-wing.

Moving from the political aspects and to provide some further perspective on the differences in reported life satisfaction, the average reported satisfaction of those who trust others and those who do not trust them or are neutral are compared. Intuitively and in line with the existing literature those who find other trustworthy reported on average higher life satisfaction. In most of years the effect is significant reaching its maximum in 2010 with the estimated difference being 0.918. In several years the difference is of comparable or lower magnitude as the difference between those how trust in legal system and those who do not or between the right-wing and left-wing supporters.

Lastly, as a reaction to the recent heated debate on the topic of immigration in Europe, the opinion on the effect of immigrants on the Czech Republic as a

place for living is evaluated. Those who believe that immigrants make Czech Republic a worse country for living reported on average ceteris paribus lower satisfaction. In 2016 this difference is significant and of comparable magnitude to those in 2002, 2004 and 2010. In 2014 and 2012 it is close to zero and in 2008 the difference was the most striking (reaching -0.5 point). The portion of respondents that believe that immigrants have a negative effect on the country has increased in the last waves from 35.6 % in 2012 to 44.8 % in 2016 (Table A.10 in Appendix). This signifies that the question of immigration to Europe is one that is of high importance to the inhabitants of the Czech Republic, yet it does not appear that the overall satisfaction would be decreased by this factors.

Chapter 5

Conclusion

In this thesis the relationships between reported life satisfaction and certain factors are addressed. The aim of this thesis is to provide an analysis regarding specifically the Czech Republic and to assess the potential differences in the relationships over time. This is also the main contribution of this thesis as neither has been recently done. Several findings proposed regarding the life satisfaction during the transition from the communism by previous literature are re-examined. Data from the World Values Survey, European Values Survey and European Social Survey for the period between 1991 and 2016 are used. The presented results should be interpreted carefully due to high possibility of bias. Moreover, they should not be viewed as causal relationships.

Before addressing the associations of certain factors and reported life satisfaction, also the aggregate levels of reported satisfaction are examined. The presented results on the development of aggregate life satisfaction support the findings of Večerník & Myslíková (2014) that, unlike the life satisfaction in most transitional countries, the reported life satisfaction in the Czech Republic did not experience a decrease in the mid 90s. However, it is possible that the decrease appeared in years that are not captured by the data. In 1999 sharp increase occurred followed by a lower satisfaction in 2002. Since 2002 average life satisfaction appears to be slightly increasing with a temporary decrease around the crisis in 2009. The distribution of reported life satisfaction confirms the overall increase in aggregate life satisfaction and suggests that there is no structural gap between the least and the most satisfied. In the worldwide context, the Czech Republic ranks as the second happiest post-communist country after the unified Germany and recently has been among the 25^{th} most happy countries in the world (Helliwell *et al.*, 2018).

Regarding the geographical distribution of life satisfaction within the Czech Republic, it appears that people from the north-western parts may be in the long run on average less satisfied. On the other hand, those living in the north-eastern parts reported in the past decade ceteris paribus slightly higher life satisfaction. Otherwise, it appears that there are no substantial differences among regions. People living in a secluded house reported on average lower satisfaction. Other than that, it seems that there are no structural differences in the reported life satisfaction depending on the size of the municipality.

Moving on from the potential geographical differences to other demographical determinants, some findings are in line with the existing literature and some not fully. One of the findings in line with the general findings is that divorced individuals reported on average significantly lower life satisfaction. Unlike being divorced, the estimated difference in satisfaction of people who lost their spouse is not always associated with lower reported satisfaction. The association between being married and reported satisfaction is usually not significant and varies greatly in magnitude as well as sign. Similarly to being married, the ceteris paribus difference between those who have and do not have children is rather inconclusive.

The literature on the development of satisfaction over life is extensive. In case of non-transitional countries there is rather a consensus that the relationship is U-shaped (Frijters & Beatton, 2012; Blanchflower & Oswald, 2008; Baird *et al.*, 2010). However, in case of the post-communist countries the literature differs. In case of the Czech Republic the average reported life satisfaction appears to be U-shaped (ceteris paribus and also if other factors are not controlled for). This would imply that life satisfaction decreases in age up until a certain age from which it starts to increase. The turning points from which life satisfaction starts to increase in age appear to have occurred later and later in life as the time proceeded. Generally, they appear rather late in life especially in the more recent years (specifically, no sooner that at the age of 65). On the other hand, during the early years of transition the turning points appeared substantially earlier (45 and 51 in 1991 and 1995, respectively). The finding that life satisfaction was U-shaped during the transition in the Czech Republic even if other factors are not controlled for extends the conclusion drawn for transitional countries in general by Sanfey & Teksoz (2007) and Guriev & Zhuravskaya (2009). They suggested that the relationship is U-shaped only if other factors are controlled for. Some authors even concluded that during the transition from communism life satisfaction was decreasing in age and no increase

in the later years occurred (Deaton, 2008; Večerník & Myslíková, 2014).

Other aspect in which the Czech Republic appears to differ from the relationships estimated generally for the transitional countries is the difference in reported life satisfaction between men and women. Sanfey & Teksoz (2007) suggested that there are no significant differences between the satisfaction reported by men and the satisfaction reported by women in transitional countries compared to non-transition ones, where females are estimated to be on average more satisfied. The data analysed in this thesis suggest that even though women might be ceteris paribus happier than men, in many years men reported higher average life satisfaction without other factors being controlled for. Among other things, this imply that there might be an unequal distribution of factors resulting in higher satisfaction among men and women.

Regarding the relationship between income and reported satisfaction, the difference between the highest and the lowest deciles of income are positive, significant and of considerable magnitude. However, moving to a higher decile of income is not always associated with higher satisfaction. Over-all the findings presented in this thesis do not fully support the hypothesis that life satisfaction is increasing in income with diminishing rate as in several cases the difference between two subsequent deciles are negative (even in case of the lower deciles).

The estimated difference among unemployed and employed are negative and significant during the whole period. The presented results support the findings of Sanfey & Teksoz (2007) and Lelkes (2006) that during the early 90s self-employed in the transitional countries unlike self-employed in non-transitional countries did not report lower life satisfaction. In latter years the estimated difference is usually close to zero.

Not only self-employed but also students in the transitional countries were suggested to be on average ceteris paribus happier compared to others (Sanfey & Teksoz, 2007). The presented results are coherent with this statement only in 1991. In the following years the difference changes magnitude but is usually positive, yet rarely significant. Regarding the education more generally, the association among higher attained education and reported satisfaction is usually not significant if other factors are controlled for (including unemployment, income, health and marital status).

Differences associated with health belong to the most substantial. People that feel unhealthy report significantly lower satisfaction. The estimated ceteris paribus difference between very healthy and unhealthy reached up to 2.5 points

on a 11-level scale in some years and is over-all one of the highest differences found in the analysis.

On the other hand, the difference among religious and non-religious are almost negligible. Eichhorn (2011) proposed that religious people report on average higher life satisfaction only in over-all religious countries. As the Czech Republic ranks among one of the most atheist countries, the estimated relationship in the Czech Republic supports the finding of Eichhorn (2011).

Moving from religion to other believes and convictions, those who asses their opinions to belong to the further right wing on the commonly used political scale reported on average higher satisfaction compared to the individuals that reported their political orientation to be around the center. People that identified themselves as left-wing supporters reported usually on average significantly lower satisfaction compared to others. The magnitudes of this differences are substantial as they are comparable to the difference between not healthy and healthy individuals or in some years the difference between low earners and high earners. Other factors that are associated with significantly higher satisfaction are: trust in others, trust in legal system and satisfaction with economy or government. In most cases the estimated differences are substantial compared to other considered factors (such as state of health or income).

It is in place to emphasize that the estimated differences associated with the satisfaction with institutions and economy are very likely to be overestimated due to the impossibility to control for individual fixed effect. The bias is caused by the fact that it can be legitimately assumed that more satisfied or optimistic individuals report higher satisfaction with economy, state and government as well as high life satisfaction. On the other hand, generally unsatisfied and pessimistic individuals are prone to report lower satisfaction. The same holds for the state of health. Similar bias may occur in case of other examined factors (such as being divorced or unemployed), where the probability of reverse causation is high. Therefore, the estimated differences should be viewed with caution.

Despite the limitations of the presented results, they do not rule out the possibility of some at least partial causation. Therefore, there are possible policy implications that could be drawn based on them. As the differences in reported satisfaction of those who are satisfied with the state, its institutions and economy are substantial, one of the policy implication can be to concentrate on these aspects.

To generalize the findings, it appears that the differences in life satisfaction

change over time. This implies that the results of studies on determinants of life satisfaction may depend heavily on the period from which the data are used. Secondly, several relationships estimated for the transitional countries in general seem not to have held in case of the Czech Republic. This implies that merging data from different countries might lead to inaccurate results. Moreover, conclusions regarding specific countries based on results for a group of countries should be drawn with high caution.

The main obstacle of this analysis is the format of the data. As they are independent cross-sections pooled over time, the individual fixed effects can not be controlled for. Ferrer-i-Carbonell & Frijters (2004) point out that the impossibility to control for individual fixed effects in the analysis of reported satisfaction usually leads to bias. Therefore, there is a possibility for further research and re-examination of the presented results by collecting panel data similar to the German Socio-Economic Panel and the British Household Panel Survey in the United Kingdom. Collection of panel data is demanding and costly, therefore it is definitely useful to maintain the data collection in the future at least in the current form of independent cross-sections. This will allow for further research regarding the development of the differences over time and the possible relationship between aggregate life satisfaction and macro-economic determinants (such as GDP growth, unemployment).

Regarding the estimated relationships themselves, several seem to provide foundations for further research. One of them would be the difference in reported life satisfaction among men and women. It might be interesting to examine why men report on average higher satisfaction, even though they are estimated to be ceteris paribus less satisfied. Also the estimated development of the relationship of age and life satisfaction over time might be addressed (for example, examining why the turning point changed over time).

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Appendix A

Tables and Figures

A.1 Tables

Table A.1: Used data source and total number of observations

Year	1991	1995	1999	2002	2004	2008	2010	2012	2014	2016
Survey	EVS	WVS	EVS	ESS	ESS	ESS	ESS	ESS	ESS	ESS
Number of observations	924	1147	1908	1360	3026	2018	2386	2009	2148	2300

Note: Survey indicates from which survey are the data for the corresponding year; EVS stands for European Values Survey, WVS for World Values Survey, ESS for European Social Survey

Table A.2: Rescaling of the WVS and EVS data

Original	1	2	3	4	5	6	7	8	9	10
Rescaled	0	10/9 $\doteq$ 1.111	20/9 $\doteq$ 2.222	30/9 $\doteq$ 3.333	40/9 $\doteq$ 4.444	50/9 $\doteq$ 5.556	60/9 $\doteq$ 6.667	70/9 $\doteq$ 7.778	80/9 $\doteq$ 8.889	10

Note: original stands for the original 10-level scale used in World and European Values Survey

Table A.3: Descriptive statistics of reported life satisfaction in 2016

Year	Min	1st Qu.	Median	Mean	3rd Qu	Max	Sd	Observations
2016	0	6	7	6.82	8	10	1.89	2265
2014	0	5	7	6.65	8	10	2.10	2141
2012	0	5	7	6.61	8	10	2.20	1979
2010	0	5	7	6.38	8	10	2.18	2378
2008	0	5	7	6.62	8	10	2.08	1995
2004	0	5	7	6.5	8	10	2.27	2977
2002	0	5	7	6.48	8	10	2.25	1348
1999*	0	5.556	6.667	6.738	7.778	10	2.19	1900
	(1)	(6)	(7)	(7.06)	(8)	(10)	(1.97)	
1995*	0	4.444	6.667	5.994	7.778	10	2.28	1140
	(1)	(5)	(7)	(6.40)	(8)	(10)	(2.05)	
1991*	0	4.444	6.667	5.961	7.778	10	2.37	924
	(1)	(5)	(7)	(6.37)	(8)	(10)	(2.13)	

Note: for the years 2002 - 2016 data and weights designed by the European Social Sruvey are used
** = after rescaling as indicated in Table A.2, without rescaling in brackets*

Table A.4: Comparison of regions

Region	Reg. Median	Reg. Mean	Sd	Diff. in Median	Diff. in Mean	N
Praha	7	6.70	1.81	0	-0.01	277
Středočeský kraj	7	6.65	1.87	0	-0.06	265
Jihočeský kraj	7	6.62	1.94	0	-0.09	139
Plzeňský kraj	7	6.75	2.01	0	0.04	136
Karlovarský kraj	6	6.26	1.69	-1	-0.45	65
Ústecký kraj	7	6.37	1.71	0	-0.34	199
Liberecký kraj	7	7.06	1.67	0	0.35	99
Královéhradecký kraj	7	6.87	2.22	0	0.16	126
Pardubický kraj	7	6.72	1.84	0	0.01	115
Vysočina	7	6.46	2.02	0	-0.25	113
Jihomoravský kraj	7	6.61	1.72	0	-0.10	251
Olomoucký kraj	7	7.09	1.90	0	0.38	139
Zlínský kraj	7	7.02	1.64	0	0.31	115
Moravskoslezský kraj	7	6.82	2.12	0	0.11	261

Note: Reg. stand for regional; Diff. in Median stands for the difference between the median of the region and the median of the whole republic, Diff. in Mean stands for the difference between the regional mean and the mean of the whole republic

Table A.5: Life satisfaction and age (1991 - 1999)

	Dependent variable: life satisfaction (10-level scale)		
	(1991)	(1995)	(1999)
age	-0.070^{***}	-0.080^{***}	-0.019
	(0.027)	(0.021)	(0.016)
age squared	0.001^{***}	0.001^{***}	0.0002
	(0.0003)	(0.0002)	(0.0002)
Constant	7.760^{***}	8.193^{***}	7.577^{***}
	(0.566)	(0.461)	(0.349)
Observations	922	1140	1895

*p<0.1; **p<0.05; ***p<0.01

Data source: European Values Survey, World Values Survey;
OLS regression with heteroskedasticity robust standard errors reported in the brackets

Table A.6: Life satisfaction and age (2002 - 2016)

	Dependent variable: life satisfaction (11-level scale)						
	(2002)	(2004)	(2008)	(2010)	(2012)	(2014)	(2016)
age	-0.063^{***}	-0.073^{***}	-0.054^{***}	-0.063^{***}	-0.048^{***}	-0.057^{***}	-0.062^{***}
	(0.019)	(0.012)	(0.014)	(0.014)	(0.015)	(0.015)	(0.012)
age squared	0.001^{***}	0.001^{***}	0.0003^{**}	0.0005^{***}	0.0003^{*}	0.0004^{***}	0.0004^{***}
	(0.0002)	(0.0001)	(0.0001)	(0.0001)	(0.0002)	(0.0002)	(0.0001)
Constant	8.015^{***}	8.392^{***}	8.254^{***}	8.082^{***}	8.146^{***}	8.240^{***}	8.474^{***}
	(0.446)	(0.269)	(0.314)	(0.305)	(0.318)	(0.336)	(0.261)
Observations	1263	2896	1995	2378	1951	2132	2265

*p<0.1; **p<0.05; ***p<0.01

Data source: European Social Survey;
OLS regression with heteroskedasticity robust standard errors reported in the brackets

Table A.7: Turing points of life satisfaction compared across time

Year	1991	1995	1999	2002	2004	2008	2010	2012	2014	2016
Turning point	44.972	50.611	61.177	60.240	62.508	79.083	68.010	86.028	66.333	69.315
Observations	922	1140	1895	1263	2896	1995	2378	1951	2132	2265

Note: data source World Values Survey, European Values Survey and European Social Survey; estimated by regressing reported satisfaction solely on on age and its second power (Table A.5 and Table A.6 in the Appendix)

Table A.8: Life satisfaction and income (1991 - 1999)

	Dependent variable: life satisfaction (10-level scale)	
	(1995)	(1999)
Constant	5.529***	6.322***
	(0.355)	(0.120)
houshold income 2nd decile	0.309	0.665***
	(0.391)	(0.190)
houshold income 3rd decile	0.574	0.730***
	(0.404)	(0.170)
houshold income 4th decile	0.885**	0.965***
	(0.388)	(0.182)
houshold income 5th decile	1.000**	0.625***
	(0.392)	(0.175)
houshold income 6th decile	1.177***	0.892***
	(0.396)	(0.223)
houshold income 7th decile	1.170***	1.091***
	(0.405)	(0.170)
houshold income 8th decile	1.616***	1.120***
	(0.408)	(0.222)
houshold income 9th decile	1.712***	1.409***
	(0.496)	(0.219)
houshold income 10th decile	2.000***	1.467***
	(0.537)	(0.216)
Observations	938	1717

*p<0.1; **p<0.05; ***p<0.01

Data source: European Values Survey, World Values Survey;
OLS regression with heteroskedasticity robust standard errors reported in the brackets

Table A.9: Life satisfaction and income (2002 - 2016)

	Dependent variable: life satisfaction (11-level scale)						
	(2002)	(2004)	(2008)	(2010)	(2012)	(2014)	(2016)
Constant	3.750***	4.963***	5.418***	5.063***	5.094***	5.642***	5.752***
	(0.848)	(0.395)	(0.222)	(0.214)	(0.367)	(0.193)	(0.168)
houshold income 2nd decile	1.849**	0.691*	0.496*	0.742***	0.544	0.562**	0.352
	(0.865)	(0.419)	(0.253)	(0.266)	(0.428)	(0.253)	(0.214)
houshold income 3rd decile	2.546***	1.023**	1.125***	0.529*	0.702*	0.707***	0.609***
	(0.859)	(0.410)	(0.246)	(0.275)	(0.426)	(0.264)	(0.223)
houshold income 4th decile	2.849***	1.729***	1.439***	0.942***	0.563	0.755***	0.621***
	(0.855)	(0.403)	(0.246)	(0.266)	(0.413)	(0.240)	(0.211)
houshold income 5th decile	2.957***	1.718***	1.655***	1.093***	1.001**	1.129***	1.035***
	(0.877)	(0.419)	(0.266)	(0.258)	(0.403)	(0.229)	(0.217)
houshold income 6th decile	3.161***	1.425***	1.884***	1.512***	1.325***	1.289***	0.847***
	(0.909)	(0.454)	(0.295)	(0.250)	(0.390)	(0.234)	(0.231)
houshold income 7th decile	2.950***	1.719***	1.720***	1.739***	1.695***	1.387***	1.300***
	(0.937)	(0.464)	(0.447)	(0.255)	(0.393)	(0.241)	(0.202)
houshold income 8th decile	3.705***	1.651***	0.982	1.373***	2.272***	1.170***	1.404***
	(1.029)	(0.511)	(0.760)	(0.277)	(0.394)	(0.245)	(0.205)
houshold income 9th decile	3.250***	2.341***	2.457***	1.836***	2.330***	1.228***	1.272***
	(0.934)	(0.467)	(0.470)	(0.278)	(0.397)	(0.270)	(0.225)
houshold income 10th decile	4.250***	1.173*	1.782**	2.181***	1.923***	1.828***	1.775***
	(0.848)	(0.617)	(0.852)	(0.281)	(0.411)	(0.351)	(0.220)
Observations	980	1974	1444	1695	1422	1548	1723

*p<0.1; **p<0.05; ***p<0.01

Data source: European Social Survey;
OLS regression with heteroskedasticity robust standard errors reported in the brackets

Table A.10: Percentage of respondents indicating that immigrants make the Czech Republic a worse place for living

Year	2002	2004	2008	2010	2012	2014	2016
Percentage	31.7%	36.4%	34.5%	38.3%	35.6%	40.0%	44.8%
Number of respondents	1168	2645	1903	2258	1858	2055	2206

Data source: European Social Survey

Table A.11: Life satisfaction and selected individual characteristics (1991 - 1999)

	Dependent variable: life satisfaction (10-level scale)		
	(1991)	(1995)	(1999)
age	−0.076**	−0.106***	−0.065***
	(0.031)	(0.028)	(0.021)
age squared	0.001***	0.001***	0.001***
	(0.0003)	(0.0003)	(0.0002)
male	−0.040	−0.303**	−0.100
	(0.141)	(0.141)	(0.097)
secondary education		0.149	
		(0.159)	
tertiary education		0.829***	
		(0.197)	
married	−0.009	−0.125	0.160
	(0.313)	(0.229)	(0.236)
divorced	−0.480	−0.825***	−0.328
	(0.400)	(0.309)	(0.268)
widowed	−0.144	−0.306	−0.328
	(0.420)	(0.353)	(0.298)
unemployed	−0.542	−1.209***	−0.839***
	(1.020)	(0.328)	(0.265)
not good health	−1.919***		
	(0.260)		
very good health	0.518**		
	(0.257)		
student	0.758***	−0.779	0.210
	(0.243)	(0.474)	(0.254)
houshold income 2nd decile		0.300	0.417**
		(0.374)	(0.204)
houshold income 3rd decile		0.598	0.495***
		(0.427)	(0.189)
houshold income 4th decile		0.873**	0.738***
		(0.417)	(0.211)
houshold income 5th decile		1.184***	0.435**
		(0.423)	(0.206)
houshold income 6th decile		1.279***	0.698***
		(0.432)	(0.260)
houshold income 7th decile		1.205***	0.884***
		(0.439)	(0.202)
houshold income 8th decile		1.452***	1.014***
		(0.451)	(0.246)
houshold income 9th decile		1.545***	1.228***
		(0.528)	(0.243)
houshold income 10th decile		1.733***	1.285***
		(0.566)	(0.246)
children	0.296	0.067	0.408*
	(0.304)	(0.261)	(0.215)
Constant	7.597***	7.831***	7.534***
	(0.613)	(0.677)	(0.475)
Observations	922	905	1695

*p<0.1; **p<0.05; ***p<0.01

Data source: European Values Survey, World Values Survey;
OLS regression with heteroskedasticity robust standard errors reported in the brackets

Table A.12: Life satisfaction and selected individual characteristics (2002 - 2016)

	Dependent variable: life satisfaction (11-level scale)						
	(2002)	(2004)	(2008)	(2010)	(2012)	(2014)	(2016)
age	−0.087**	−0.086***	−0.003	0.033	0.005	−0.079**	−0.064**
	(0.035)	(0.027)	(0.033)	(0.033)	(0.036)	(0.038)	(0.028)
age squared	0.001***	0.001***	0.00003	0.00000	0.0001	0.001**	0.001***
	(0.0003)	(0.0003)	(0.0003)	(0.0003)	(0.0003)	(0.0004)	(0.0003)
male	−0.658***	−0.277**	−0.212	−0.168	0.289**	−0.056	−0.174
	(0.165)	(0.122)	(0.169)	(0.164)	(0.125)	(0.185)	(0.138)
secondary education	0.173	0.517**	−0.121	−0.195	0.110	0.580**	−0.063
	(0.250)	(0.201)	(0.243)	(0.252)	(0.245)	(0.257)	(0.181)
tertiary education	0.663**	0.696***	−0.015	0.056	0.480*	0.644*	0.037
	(0.313)	(0.270)	(0.344)	(0.333)	(0.289)	(0.340)	(0.238)
ever had children at home	−0.210	0.336*	−0.177	−0.278	0.150	0.109	0.323
	(0.252)	(0.184)	(0.245)	(0.240)	(0.277)	(0.269)	(0.197)
married	0.886**	0.304	0.300	−0.367	0.427	0.451	−0.958
	(0.367)	(0.194)	(0.265)	(0.516)	(0.291)	(0.760)	(0.735)
divorced	−0.272	−0.992***	−0.160	−0.369	0.006	−0.322	−0.577**
	(0.435)	(0.289)	(0.301)	(0.272)	(0.319)	(0.342)	(0.240)
widowed	0.283	−0.529*	0.321	−0.548*	0.372	0.091	−0.445
	(0.414)	(0.281)	(0.327)	(0.324)	(0.425)	(0.446)	(0.337)
unemployed	−0.737	−1.022**	−0.283	−1.040***	−1.826***	−1.289***	−0.238
	(0.457)	(0.441)	(0.465)	(0.288)	(0.408)	(0.418)	(0.480)
student	0.346	0.576**	0.318	0.499	0.827**	−0.020	−0.131
	(0.503)	(0.272)	(0.352)	(0.327)	(0.341)	(0.361)	(0.263)
not good health	−1.617***	−1.299***	−1.210***	−2.219***	−1.682***	−1.050***	−1.172***
	(0.260)	(0.224)	(0.234)	(0.293)	(0.279)	(0.331)	(0.296)
very good health	0.773***	1.026***	0.414	1.350***	0.936***	1.153***	0.625***
	(0.241)	(0.168)	(0.256)	(0.218)	(0.155)	(0.237)	(0.172)
houshold income 2nd decile	2.039**	0.691	0.479	0.254	−0.349	0.289	0.611**
	(0.870)	(0.614)	(0.298)	(0.312)	(0.421)	(0.307)	(0.262)
houshold income 3rd decile	2.587***	0.571	0.717**	0.075	0.239	0.256	0.975***
	(0.858)	(0.612)	(0.355)	(0.316)	(0.384)	(0.333)	(0.281)
houshold income 4th decile	2.808***	0.943	1.111***	0.054	−0.412	0.338	0.755**
	(0.848)	(0.604)	(0.374)	(0.357)	(0.392)	(0.360)	(0.327)
houshold income 5th decile	2.872***	0.989	0.936**	0.088	−0.135	−0.009	1.001***
	(0.876)	(0.627)	(0.409)	(0.360)	(0.398)	(0.347)	(0.322)
houshold income 6th decile	3.196***	0.649	1.644***	0.281	0.032	0.686*	1.234***
	(0.883)	(0.654)	(0.429)	(0.329)	(0.390)	(0.369)	(0.419)
houshold income 7th decile	3.023***	0.908	1.665***	0.362	0.701*	−0.263	1.369***
	(0.929)	(0.647)	(0.632)	(0.368)	(0.396)	(0.425)	(0.323)
houshold income 8th decile	3.334***	0.545	1.732**	−0.189	0.849**	−0.079	1.129***
	(1.035)	(0.809)	(0.695)	(0.418)	(0.390)	(0.452)	(0.330)
houshold income 9th decile	2.973***	1.067	2.124***	0.518	0.888**	0.911	1.384***
	(0.960)	(0.667)	(0.491)	(0.379)	(0.392)	(0.609)	(0.339)
houshold income 10th decile	3.901***	−0.441	1.291**	1.117***	0.283	1.213**	1.420***
	(0.851)	(0.817)	(0.518)	(0.373)	(0.416)	(0.594)	(0.393)
Constant	5.100***	6.630***	6.038***	4.991***	4.976***	7.318***	6.965***
	(1.249)	(0.836)	(0.789)	(0.782)	(0.878)	(0.883)	(0.667)
Observations	883	1780	883	1618	638	705	986

*p<0.1; **p<0.05; ***p<0.01

Data source: European Social Survey;
OLS regression with heteroskedasticity robust standard errors reported in the brackets

Table A.13: Life satisfaction and regions (1995 - 1999)

	Dependent variable: life satisfaction (10-level scale)	
	(1995)	(1999)
Středočeský	−0.089	−0.149
	(0.297)	(0.209)
Západočeský	0.219	−0.238
	(0.317)	(0.223)
Jihočeský	0.199	−0.064
	(0.307)	(0.215)
Severočeský	−0.300	−0.152
	(0.294)	(0.210)
Východočeský	−0.135	−0.128
	(0.287)	(0.216)
Jihomoravský	−0.244	−0.407**
	(0.257)	(0.188)
Severomoravský	−0.447	0.085
	(0.275)	(0.191)
age	−0.103***	−0.066***
	(0.028)	(0.021)
age squared	0.001***	0.001***
	(0.0003)	(0.0002)
male	−0.293**	−0.098
	(0.141)	(0.097)
secondary education	0.153	
	(0.160)	
tertiary education	0.796***	
	(0.199)	
married	−0.148	0.182
	(0.237)	(0.235)
divorced	−0.853***	−0.326
	(0.308)	(0.267)
widowed	−0.305	−0.335
	(0.356)	(0.297)
children	0.081	0.402*
	(0.263)	(0.215)
unemployed	−1.242***	−0.848***
	(0.329)	(0.266)
student	−0.815*	0.253
	(0.480)	(0.253)
houshold income 2nd decile	0.330	0.402**
	(0.378)	(0.204)
houshold income 3rd decile	0.615	0.460**
	(0.428)	(0.191)
houshold income 4th decile	0.884**	0.704***
	(0.419)	(0.212)
houshold income 5th decile	1.190***	0.397*
	(0.424)	(0.207)
houshold income 6th decile	1.247***	0.664**
	(0.435)	(0.262)
houshold income 7th decile	1.179***	0.827***
	(0.441)	(0.205)
houshold income 8th decile	1.402***	1.004***
	(0.456)	(0.247)
houshold income 9th decile	1.497***	1.205***
	(0.541)	(0.247)
houshold income 10th decile	1.597***	1.219***
	(0.593)	(0.255)
Constant	7.955***	7.743***
	(0.704)	(0.507)
Observations	905	1695

*p<0.1; **p<0.05; ***p<0.01

Data source: European Values Survey, World Values Survey;
OLS regression with heteroskedasticity robust standard errors reported in the brackets

Table A.14: Life satisfaction and regions (2002 - 2016)

	Dependent variable: life satisfaction (11-level scale)						
	(2002)	(2004)	(2008)	(2010)	(2012)	(2014)	(2016)
Středočeský kraj	0.165	−0.472		−0.019	−0.457	0.288	−0.336
	(0.410)	(0.317)		(0.248)	(0.358)	(0.401)	(0.257)
Jihočeský kraj	0.525	−0.123		0.697***	−0.032	−0.345	−0.098
	(0.365)	(0.355)		(0.254)	(0.505)	(0.399)	(0.270)
Plzeňský kraj	0.300	0.110		0.106	0.856*	−0.387	0.247
	(0.492)	(0.263)		(0.275)	(0.495)	(0.509)	(0.325)
Karlovarský kraj	−0.012	−0.107		−0.711*	−1.852***	−0.273	0.080
	(0.513)	(0.323)		(0.421)	(0.534)	(0.447)	(0.432)
Ústecký kraj	0.301	0.061		0.340	0.315	−0.298	0.084
	(0.387)	(0.258)		(0.232)	(0.381)	(0.384)	(0.252)
Liberecký kraj	0.829**	0.146		0.237	−0.364	0.404	0.126
	(0.377)	(0.337)		(0.301)	(0.911)	(0.530)	(0.373)
Královehradecký kraj	0.066	0.663**		0.006	0.139	0.020	−0.175
	(0.549)	(0.300)		(0.327)	(0.339)	(0.426)	(0.301)
Pardubický kraj	0.806**	−0.418		0.480	0.060	0.185	−0.207
	(0.368)	(0.357)		(0.302)	(0.409)	(0.354)	(0.507)
Vysočina	0.332	0.126		0.651**	0.503	−0.372	−0.088
	(0.434)	(0.264)		(0.280)	(0.528)	(0.448)	(0.366)
Jihomoravský kraj	0.349	0.483*		0.313	−0.264	0.107	−0.054
	(0.326)	(0.265)		(0.218)	(0.339)	(0.336)	(0.286)
Olomoucký kraj	−0.235	−0.014		0.232	−0.100	0.366	0.365
	(0.394)	(0.262)		(0.257)	(0.476)	(0.428)	(0.302)
Zlínský kraj	−0.017	0.294		0.504**	−0.421	−0.821	0.603**
	(0.360)	(0.328)		(0.245)	(0.462)	(0.517)	(0.282)
Moravskoslezský kraj	0.237	−0.388		0.160	0.479	0.359	0.422
	(0.345)	(0.247)		(0.213)	(0.303)	(0.343)	(0.258)
Střední Čechy			0.524				
			(0.327)				
Jihozápad			0.961***				
			(0.328)				
Severozápad			0.697**				
			(0.324)				
Severovýchod			0.017				
			(0.329)				
Jihovýchod			0.114				
			(0.302)				
Střední Morava			0.482				
			(0.300)				
Moravskoslezsko			0.032				
			(0.355)				
Other included controlled variables presented in Table A.15							
Observations	882	1780	883	1618	638	705	986

*p<0.1; **p<0.05; ***p<0.01

Data source: European Social Survey;
OLS regression with heteroskedasticity robust standard errors reported in the brackets

Table A.15: Life satisfaction and regions (2002 - 2016) continuation

	Dependent variable: life satisfaction (11-level scale)						
	(2002)	(2004)	(2008)	(2010)	(2012)	(2014)	(2016)
age	−0.094***	−0.086***	−0.003	−0.025	0.062	−0.070*	−0.069**
	(0.036)	(0.026)	(0.032)	(0.024)	(0.052)	(0.038)	(0.028)
age_sq	0.001***	0.001***	0.00002	0.0004*	−0.001	0.001*	0.001***
	(0.0003)	(0.0003)	(0.0003)	(0.0002)	(0.0005)	(0.0004)	(0.0003)
male	−0.704***	−0.256**	−0.213	−0.146	0.188	−0.105	−0.156
	(0.169)	(0.121)	(0.168)	(0.111)	(0.189)	(0.188)	(0.136)
secundary_educ	0.264	0.515***	−0.048	0.283	−0.509*	0.626**	−0.076
	(0.247)	(0.199)	(0.239)	(0.208)	(0.272)	(0.257)	(0.182)
university	0.836**	0.641**	0.240	0.579**	−0.256	0.648**	0.070
	(0.327)	(0.279)	(0.353)	(0.249)	(0.395)	(0.326)	(0.236)
student	0.493	0.529*	0.411	0.376	0.771*	−0.014	−0.097
	(0.512)	(0.274)	(0.352)	(0.294)	(0.407)	(0.346)	(0.262)
children_at_houshold_ever	−0.238	0.296	−0.138	−0.060	0.299	0.031	0.369*
	(0.255)	(0.184)	(0.241)	(0.150)	(0.382)	(0.272)	(0.204)
married	0.919**	0.268	0.271		0.996	0.441	−0.832
	(0.368)	(0.192)	(0.257)		(1.093)	(0.846)	(0.747)
divorced	−0.247	−1.016***	−0.228		−0.251	−0.352	−0.557**
	(0.435)	(0.293)	(0.298)		(0.392)	(0.343)	(0.244)
widowed	0.273	−0.529*	0.332		0.249	0.034	−0.467
	(0.410)	(0.282)	(0.326)		(0.582)	(0.438)	(0.342)
unemployed	−0.737	−0.978**	−0.228	−1.154***	−1.818***	−1.194***	−0.291
	(0.455)	(0.440)	(0.436)	(0.273)	(0.485)	(0.407)	(0.466)
not_good_health	−1.556***	−1.326***	−1.166***	−1.694***	−1.599***	−1.188***	−1.099***
	(0.260)	(0.228)	(0.225)	(0.212)	(0.324)	(0.321)	(0.295)
very_good_health	0.713***	1.019***	0.386	0.920***	1.123***	1.058***	0.599***
	(0.235)	(0.171)	(0.256)	(0.160)	(0.239)	(0.235)	(0.169)
houshold_income_2nd_decile	2.072**	0.522	0.475	0.374	0.120	0.274	0.609**
	(0.942)	(0.569)	(0.300)	(0.293)	(0.415)	(0.304)	(0.262)
houshold_income_3rd_decile	2.638***	0.417	0.635*	−0.307	0.559	0.249	1.024***
	(0.927)	(0.564)	(0.354)	(0.309)	(0.400)	(0.345)	(0.283)
houshold_income_4th_decile	2.830***	0.770	1.056***	0.379	−0.200	0.348	0.846***
	(0.914)	(0.558)	(0.373)	(0.282)	(0.419)	(0.372)	(0.327)
houshold_income_5th_decile	2.859***	0.836	0.853**	0.449*	0.391	0.034	1.025***
	(0.942)	(0.587)	(0.405)	(0.270)	(0.436)	(0.357)	(0.326)
houshold_income_6th_decile	3.134***	0.490	1.507***	0.756***	0.481	0.810**	1.315***
	(0.944)	(0.607)	(0.446)	(0.268)	(0.454)	(0.371)	(0.417)
houshold_income_7th_decile	2.974***	0.705	1.606***	0.966***	0.617	−0.130	1.482***
	(0.985)	(0.604)	(0.619)	(0.284)	(0.446)	(0.422)	(0.330)
houshold_income_8th_decile	3.274***	0.262	1.563**	0.544*	1.025**	−0.018	1.212***
	(1.128)	(0.782)	(0.730)	(0.311)	(0.422)	(0.481)	(0.328)
houshold_income_9th_decile	2.979***	0.931	2.078***	0.976***	0.768*	1.120*	1.567***
	(1.028)	(0.618)	(0.648)	(0.309)	(0.448)	(0.646)	(0.342)
houshold_income_10th_decile	3.909***	−0.755	1.375**	1.396***	0.511	1.515***	1.531***
	(0.942)	(0.778)	(0.536)	(0.295)	(0.467)	(0.547)	(0.403)
Constant	4.941***	6.865***	5.691***	5.501***	4.256***	7.055***	6.895***
	(1.319)	(0.828)	(0.836)	(0.632)	(1.253)	(0.902)	(0.671)
Regional dummy variables presented in Table A.14							
Observations	882	1780	883	1618	638	705	986

*p<0.1; **p<0.05; ***p<0.01

Data source: European Social Survey;
OLS regression with heteroskedasticity robust standard errors reported in the brackets

Table A.16: Life satisfaction and the size of the municipality (2002 - 2016)

	Dependent variable: life satisfaction (11-level scale)						
	(2002)	(2004)	(2008)	(2010)	(2012)	(2014)	(2016)
suburbs	−0.558	0.042	−0.541	−0.148	0.193	0.597	−0.172
	(0.387)	(0.229)	(0.388)	(0.349)	(0.259)	(0.396)	(0.362)
town	−0.131	−0.110	−0.029	−0.161	0.220	0.078	0.028
	(0.187)	(0.130)	(0.172)	(0.156)	(0.138)	(0.177)	(0.144)
village	0.116	−0.031	0.052	−0.104	0.083	0.004	0.005
	(0.199)	(0.147)	(0.185)	(0.176)	(0.148)	(0.207)	(0.143)
countryside	−0.841	−1.543**	−1.169*	−2.218***	−2.516***		−0.175
	(1.210)	(0.612)	(0.679)	(0.795)	(0.295)		(0.570)
age	−0.072**	−0.089***	−0.016	−0.003	0.001	−0.063*	−0.050*
	(0.033)	(0.022)	(0.029)	(0.030)	(0.032)	(0.037)	(0.026)
age sq	0.001***	0.001***	0.0002	0.0003	0.0001	0.001*	0.001***
	(0.0003)	(0.0002)	(0.0003)	(0.0003)	(0.0003)	(0.0004)	(0.0002)
male	−0.492***	−0.341***	−0.153	−0.251*	0.300***	0.006	−0.188
	(0.149)	(0.102)	(0.144)	(0.145)	(0.113)	(0.156)	(0.123)
secondary education	0.081	0.388**	−0.226	0.150	−0.007	0.516**	0.136
	(0.239)	(0.163)	(0.217)	(0.219)	(0.231)	(0.255)	(0.156)
tertiary education	0.455	0.682***	−0.125	0.527*	0.314	0.720**	0.237
	(0.309)	(0.215)	(0.321)	(0.283)	(0.264)	(0.307)	(0.207)
student	0.424	0.397	0.264	0.526*	0.724**	−0.151	0.200
	(0.460)	(0.253)	(0.319)	(0.283)	(0.295)	(0.342)	(0.246)
married	0.864***	0.184	0.406	−0.531	0.568**	0.203	−0.719
	(0.327)	(0.182)	(0.251)	(0.564)	(0.258)	(0.707)	(0.592)
divorced	−0.073	−1.026***	−0.118	−0.387	0.052	−0.365	−0.641***
	(0.379)	(0.237)	(0.278)	(0.258)	(0.278)	(0.314)	(0.219)
widowed	0.113	−0.699***	0.164	−0.551*	0.709**	0.257	−0.509*
	(0.382)	(0.243)	(0.310)	(0.300)	(0.336)	(0.384)	(0.289)
children at houshold ever	−0.321	0.292*	−0.088	−0.214	−0.206	0.134	0.250
	(0.253)	(0.164)	(0.228)	(0.226)	(0.237)	(0.241)	(0.184)
unemployed	−1.116**	−0.755**	−0.324	−1.036***	−1.555***	−1.092***	−0.313
	(0.478)	(0.336)	(0.434)	(0.287)	(0.335)	(0.405)	(0.356)
not good health	−1.654***	−1.401***	−1.198***	−2.136***	−1.466***	−0.970***	−0.949***
	(0.250)	(0.169)	(0.204)	(0.231)	(0.230)	(0.309)	(0.219)
very good health	0.765***	0.968***	0.574**	1.250***	0.932***	1.267***	0.686***
	(0.235)	(0.140)	(0.223)	(0.200)	(0.145)	(0.195)	(0.148)
houshold income 2nd decile	2.430***	0.382	0.362	0.132	−0.436	0.437	0.393*
	(0.901)	(0.519)	(0.262)	(0.260)	(0.406)	(0.276)	(0.217)
houshold income 3rd decile	2.647***	0.249	0.509	0.123	0.022	0.779***	0.869***
	(0.884)	(0.513)	(0.311)	(0.279)	(0.390)	(0.282)	(0.245)
houshold income 4th decile	2.846***	0.692	0.975***	0.048	−0.255	0.660**	0.630**
	(0.878)	(0.508)	(0.324)	(0.323)	(0.395)	(0.319)	(0.264)
houshold income 5th decile	3.012***	0.710	0.885**	0.207	0.033	0.229	0.951***
	(0.894)	(0.520)	(0.362)	(0.311)	(0.395)	(0.312)	(0.265)
houshold income 6th decile	3.167***	0.440	1.636***	0.309	0.127	1.069***	1.096***
	(0.917)	(0.547)	(0.367)	(0.307)	(0.392)	(0.320)	(0.333)
houshold income 7th decile	3.055***	0.671	1.373**	0.404	0.610	0.415	1.240***
	(0.950)	(0.548)	(0.647)	(0.339)	(0.394)	(0.335)	(0.281)
houshold income 8th decile	3.521***	0.573	1.361*	−0.107	0.809**	0.205	1.021***
	(1.112)	(0.637)	(0.779)	(0.377)	(0.397)	(0.397)	(0.277)
houshold income 9th decile	3.136***	1.049*	2.267***	0.401	0.918**	1.307**	1.312***
	(0.958)	(0.559)	(0.519)	(0.366)	(0.402)	(0.548)	(0.311)
houshold income 10th decile	4.558***	0.085	1.775***	0.985***	0.433	1.796***	1.349***
	(0.953)	(0.710)	(0.620)	(0.357)	(0.419)	(0.525)	(0.353)
Constant	4.866***	7.246***	6.405***	5.671***	5.253***	6.529***	6.447***
	(1.244)	(0.719)	(0.730)	(0.749)	(0.830)	(0.846)	(0.604)
Observations	883	1780	877	1618	617	691	986

*p<0.1; **p<0.05; ***p<0.01

Data source: European Social Survey;
OLS regression with heteroskedasticity robust standard errors reported in the brackets

Table A.17: Life satisfaction and socio-political factors (1991 - 1999)

	Dependent variable: life satisfaction (10-level scale)		
	(1991)	(1995)	(1999)
trust in others	0.653***	0.220	0.500***
	(0.141)	(0.151)	(0.108)
trust in justice system	0.662***		0.161
	(0.137)		(0.128)
confidence in legal system		0.525***	
		(0.153)	
confidence in parliament	0.270*	0.470***	0.212
	(0.139)	(0.164)	(0.141)
comfort from religion		0.025	0.038
		(0.166)	(0.124)
self-employed	0.924***	0.317	−0.002
	(0.351)	(0.259)	(0.215)
politics important	−0.191	0.022	0.130
	(0.140)	(0.161)	(0.107)
political scale right	0.714***	0.293	0.526***
	(0.168)	(0.179)	(0.105)
political scale left	0.165	−0.429	−0.670***
	(0.353)	(0.353)	(0.222)
age	−0.059**	−0.071**	−0.071***
	(0.030)	(0.030)	(0.024)
age squared	0.001**	0.001**	0.001***
	(0.0003)	(0.0003)	(0.0002)
male	0.039	−0.293*	−0.096
	(0.136)	(0.154)	(0.105)
secondary education		0.190	
		(0.171)	
tertiary education		0.724***	
		(0.218)	
married	−0.058	−0.336	0.189
	(0.307)	(0.259)	(0.268)
divorced	−0.494	−0.897***	−0.218
	(0.385)	(0.342)	(0.302)
widowed	−0.089	−0.399	−0.311
	(0.409)	(0.392)	(0.332)
unemployed	−0.350	−1.433***	−0.940***
	(0.884)	(0.369)	(0.293)
not good health	−1.782***		
	(0.247)		
very good health	0.512**		
	(0.252)		
student	0.832***	−1.480***	−0.003
	(0.300)	(0.522)	(0.277)
houshold income 2nd decile		0.028	0.294
		(0.423)	(0.218)
houshold income 3rd decile		0.309	0.501**
		(0.464)	(0.204)
houshold income 4th decile		0.566	0.546**
		(0.461)	(0.227)
houshold income 5th decile		0.929**	0.396*
		(0.464)	(0.212)
houshold income 6th decile		0.868*	0.333
		(0.479)	(0.289)
houshold income 7th decile		0.797*	0.691***
		(0.483)	(0.211)
houshold income 8th decile		0.735	0.831***
		(0.501)	(0.255)
houshold income 9th decile		1.107*	1.040***
		(0.571)	(0.263)
houshold income 10th decile		1.387**	0.964***
		(0.601)	(0.262)
children	0.454	0.291	0.284
	(0.299)	(0.296)	(0.236)
Constant	6.465***	7.107***	7.560***
	(0.618)	(0.746)	(0.542)
Observations	908	741	1408

*p<0.1; **p<0.05; ***p<0.01

Data source: European Values Survey, World Values Survey;
OLS regression with heteroskedasticity robust standard errors reported in the brackets

Table A.18: Life satisfaction and socio-political factors (2002 - 2016)

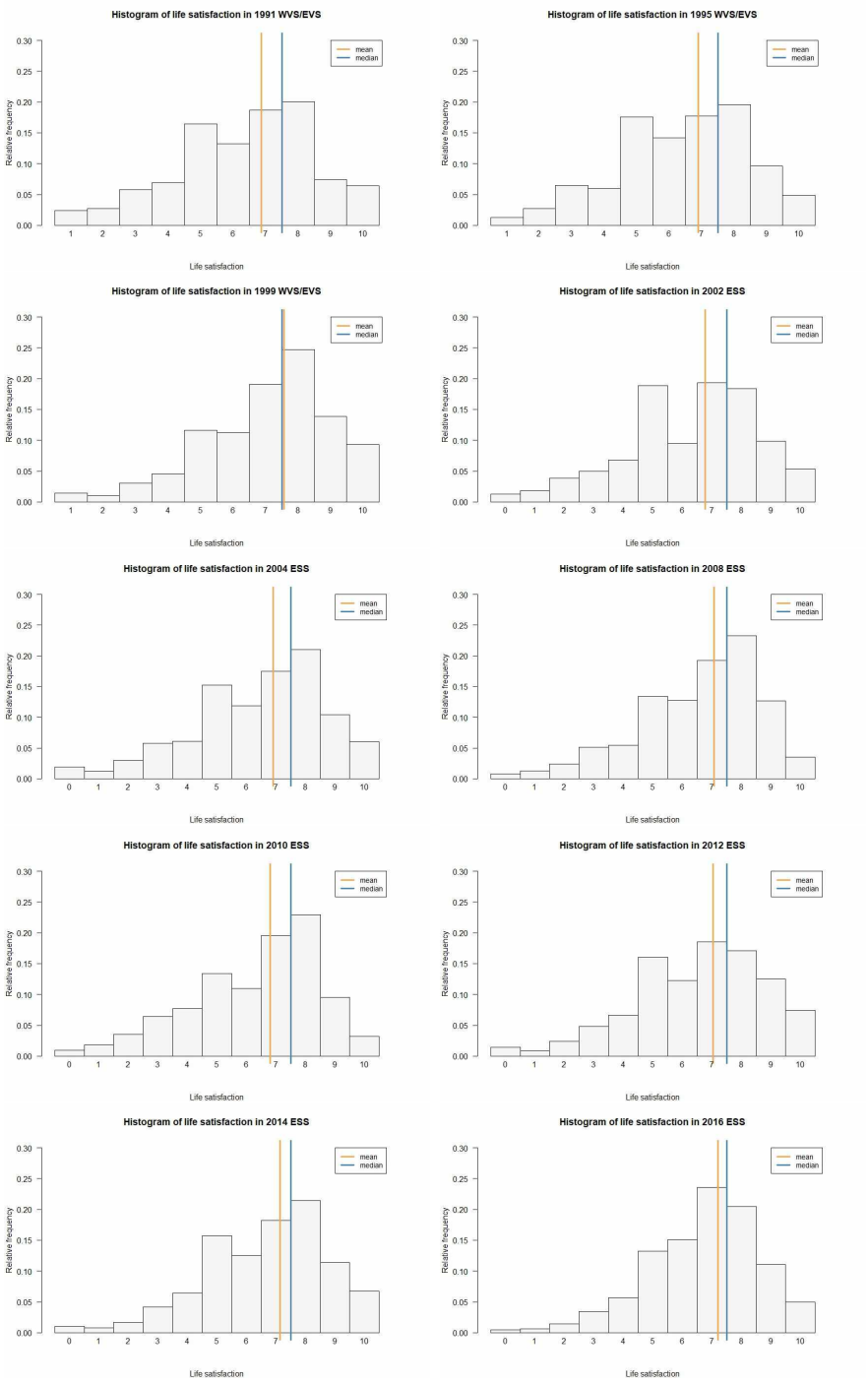
	Dependent variable: life satisfaction (11-level scale)						
	(2002)	(2004)	(2008)	(2010)	(2012)	(2014)	(2018)
trust in others	0.522***	0.700***	0.724***	0.918***	0.250*	0.248	0.383***
	(0.182)	(0.128)	(0.157)	(0.160)	(0.138)	(0.208)	(0.136)
trust in legal system	0.732***	0.832***	0.522***	0.197	0.741***	0.397**	0.109
	(0.191)	(0.149)	(0.168)	(0.180)	(0.133)	(0.194)	(0.137)
interest in politics	0.087	0.287**	−0.267	0.123	0.237*	0.052	−0.410**
	(0.172)	(0.135)	(0.190)	(0.185)	(0.141)	(0.215)	(0.175)
feeling close to party	−0.237	0.041	0.307**	−0.088	−0.0002	−0.137	0.318**
	(0.168)	(0.126)	(0.155)	(0.157)	(0.129)	(0.184)	(0.137)
political scale right	0.905***	0.436***	0.762***	0.593***	0.557***	0.614**	0.243
	(0.182)	(0.146)	(0.201)	(0.208)	(0.137)	(0.244)	(0.185)
political scale left	0.541*	−0.176	−0.656**	−0.174	−0.539***	0.201	−0.667***
	(0.276)	(0.186)	(0.255)	(0.237)	(0.185)	(0.273)	(0.214)
satisfaction economy	0.350	0.730***	0.714***	0.725***	0.556***	1.176***	0.746***
	(0.235)	(0.194)	(0.232)	(0.229)	(0.180)	(0.198)	(0.148)
satisfaction government	0.717***	0.124	0.003	0.319	1.120***	0.522**	0.267*
	(0.209)	(0.202)	(0.231)	(0.204)	(0.180)	(0.230)	(0.153)
belonging to religion	0.281	0.210*	0.141	0.222	−0.048	0.095	0.427***
	(0.181)	(0.127)	(0.172)	(0.175)	(0.156)	(0.231)	(0.157)
immigrants worse place	−0.201	−0.324***	−0.503***	−0.223	−0.007	−0.060	−0.253**
	(0.167)	(0.119)	(0.163)	(0.155)	(0.126)	(0.175)	(0.121)
self-employed	0.168	0.366	−0.018	0.122	0.023	0.207	0.292
	(0.300)	(0.232)	(0.321)	(0.312)	(0.207)	(0.337)	(0.242)
age	−0.052	−0.087***	−0.014	0.00003	0.017	−0.094**	−0.030
	(0.036)	(0.025)	(0.032)	(0.033)	(0.030)	(0.038)	(0.030)
age squared	0.001*	0.001***	0.0001	0.0003	−0.00000	0.001**	0.001*
	(0.0003)	(0.0002)	(0.0003)	(0.0003)	(0.0003)	(0.0004)	(0.0003)
male	−0.379**	−0.299***	−0.102	−0.237	0.086	−0.206	−0.242*
	(0.163)	(0.113)	(0.159)	(0.161)	(0.123)	(0.164)	(0.134)
secondary education	−0.271	0.261	0.045	0.349	0.303	0.175	0.055
	(0.289)	(0.200)	(0.249)	(0.288)	(0.352)	(0.323)	(0.168)
tertiary education	0.003	0.328	−0.024	0.502	0.393	0.260	0.143
	(0.350)	(0.262)	(0.327)	(0.341)	(0.379)	(0.355)	(0.219)
student	0.953*	−0.005	0.238	0.378	0.053	−0.617	−0.202
	(0.525)	(0.335)	(0.453)	(0.457)	(0.436)	(0.512)	(0.326)
married	0.890***	0.139	0.289	−0.400	0.062	0.222	−0.975
	(0.343)	(0.207)	(0.253)	(0.613)	(0.236)	(0.687)	(0.610)
divorced	0.120	−0.895***	−0.116	−0.402	−0.412	−0.241	−0.614***
	(0.393)	(0.264)	(0.284)	(0.277)	(0.263)	(0.341)	(0.231)
widowed	0.206	−0.517*	0.061	−0.394	0.082	−0.060	−0.521*
	(0.428)	(0.268)	(0.322)	(0.314)	(0.338)	(0.398)	(0.306)
children at houshold ever	−0.275	0.300	0.212	−0.272	0.007	0.044	0.067
	(0.262)	(0.190)	(0.231)	(0.238)	(0.215)	(0.276)	(0.193)
unemployed	−0.784	−0.449	−0.373	−0.845**	−1.522***	−1.212***	−0.128
	(0.519)	(0.354)	(0.507)	(0.331)	(0.308)	(0.457)	(0.382)
not good health	−1.498***	−1.077***	−0.977***	−1.658***	−1.325***	−0.921***	−0.863***
	(0.298)	(0.182)	(0.216)	(0.242)	(0.240)	(0.344)	(0.228)
very good health	0.577**	0.865***	0.207	0.960***	0.687***	1.023***	0.542***
	(0.251)	(0.148)	(0.243)	(0.223)	(0.145)	(0.233)	(0.162)
houshold income 2nd decile	2.229**	0.301	0.287	−0.051	−0.603	0.220	0.339
	(0.991)	(0.555)	(0.291)	(0.277)	(0.422)	(0.303)	(0.220)
houshold income 3rd decile	2.512***	−0.072	0.187	−0.118	−0.355	0.421	0.801***
	(0.969)	(0.553)	(0.350)	(0.299)	(0.398)	(0.297)	(0.265)
houshold income 4th decile	2.703***	0.538	0.682*	0.072	−0.530	−0.077	0.601**
	(0.961)	(0.550)	(0.365)	(0.333)	(0.413)	(0.343)	(0.290)
houshold income 5th decile	2.663***	0.434	0.517	0.077	−0.193	0.107	0.800***
	(0.983)	(0.561)	(0.383)	(0.341)	(0.402)	(0.319)	(0.280)
houshold income 6th decile	2.659***	0.084	1.595***	0.158	0.031	0.488	0.829**
	(1.005)	(0.588)	(0.389)	(0.356)	(0.400)	(0.310)	(0.359)
houshold income 7th decile	3.291***	0.385	1.395*	0.526	0.374	−0.341	1.132***
	(1.025)	(0.609)	(0.787)	(0.383)	(0.407)	(0.379)	(0.302)
houshold income 8th decile	2.964**	0.680	1.957**	−0.268	0.250	−0.157	0.987***
	(1.275)	(0.668)	(0.834)	(0.440)	(0.414)	(0.456)	(0.307)
houshold income 9th decile	3.322***	0.580	0.918**	0.043	0.420	1.409***	1.248***
	(1.045)	(0.638)	(0.406)	(0.417)	(0.426)	(0.476)	(0.354)
houshold income 10th decile		0.115	2.332**	0.993**	−0.075	0.345	1.325***
		(0.712)	(1.161)	(0.387)	(0.436)	(0.697)	(0.385)
Constant	4.240***	7.125***	5.807***	5.142***	4.727***	7.720***	5.767***
	(1.418)	(0.747)	(0.800)	(0.865)	(0.850)	(0.906)	(0.701)
Observations	653	1229	659	1289	453	507	788

*p<0.1; **p<0.05; ***p<0.01

Data source: European Social Survey;
OLS regression with heteroskedasticity robust standard errors reported in the brackets

A.2 Figures

Figure A.1: Histograms of reported life satisfaction (1991 - 2016)



Note: data for the years 1991,1995 and 1999 from the World Values Survey and the European Values Survey are plotted in their original scale (from 1 to 10) and the remaining data from the European Social Survey in scale from 0 to 10

Appendix B

Explanatory Variables

In the list below the origin of the used explanatory variables is described.

Characteristic	Variable	Survey	Detail
age	age	all	reported age directly provided in the datasets
	age squared	all	second power of the age computed computed from the reported age
domicile	a big city	ESS	= 1 if the reported municipality of residence is a big city, 0 otherwise
	suburbs	ESS	= 1 if the reported municipality of residence is suburbs , 0 otherwise
	town	ESS	= 1 if the reported municipality of residence is town , 0 otherwise
	village	ESS	= 1 if the reported municipality of residence is village , 0 otherwise
	countryside	ESS	= 1 if the reported municipality of residence is countryside , 0 otherwise
education	secondary	ESS and 1991	= 1 if highest attained education is secondary or corresponding, 0 otherwise
	tertiary	ESS and 1991	= 1 if highest attained education is tertiary or higher, 0 otherwise
gender	male	all	= 1 if variable for gender provided in the dataset indicates "male", 0 otherwise
	female	all	= 1 if variable for gender provided in the dataset indicates "female", 0 otherwise
having children	children	WVS/EVS	= 1 if reported number of children is at least 1, 0 otherwise
	children at household ever	ESS	= 1 if indicated that has ever lived in a household with children, 0 otherwise
health	very good health	all except 1995, 1999	= 1 if on a 5-level scale the health is reported as very good (e.i. the best possible option), 0 otherwise
	not good health	all except 1995, 1999	= 1 if on a 5-level scale the health is reported as very bad (e.i. the worst possible option), 0 otherwise
household income	1^{st} decile	all except 1991	= 1 if the reported rank of household income corresponds to the 1^{st} decile of income, 0 otherwise
	2^{nd} decile	all except 1991	= 1 if the reported rank of household income corresponds to the 2^{nd} decile of income, 0 otherwise
	3^{rd} decile	all except 1991	= 1 if the reported rank of household income corresponds to the 3^{rd} decile of income, 0 otherwise
	4^{th} decile	all except 1991	= 1 if the reported rank of household income corresponds to the 4^{th} decile of income, 0 otherwise
	5^{th} decile	all except 1991	= 1 if the reported rank of household income corresponds to the 5^{th} decile of income, 0 otherwise
	6^{th} decile	all except 1991	= 1 if the reported rank of household income corresponds to the 6^{th} decile of income, 0 otherwise
	7^{th} decile	all except 1991	= 1 if the reported rank of household income corresponds to the 7^{th} decile of income, 0 otherwise
	8^{th} decile	all except 1991	= 1 if the reported rank of household income corresponds to the 8^{th} decile of income, 0 otherwise
	9^{th} decile	all except 1991	= 1 if the reported rank of household income corresponds to the 9^{th} decile of income, 0 otherwise
	10^{th} decile	all except 1991	= 1 if the reported rank of household income corresponds to the 10^{th} decile of income, 0 otherwise
immigrants opinion	immigrants worse place	ESS	= 1 if answer on the 11-level scale (where 0 = "immigrants make our country a worse place for living" and 10 = "immigrants make our country a better place for living") answer below 5 (exclusive) was reported, 0 otherwise
interest in politics	interest in politics	ESS	= 1 if from the 4-level scale the two values indicating very interested and quite interested in politics were reported, 0 otherwise
	politics important	WVS/EVS	= 1 if from the 4-level scale the two values indicating that politics is very or rather important were reported, 0 otherwise
marital status	married	all	= 1 if for marital status being married was indicated, 0 otherwise
	divorced	all	= 1 if for marital status being divorced was indicated, 0 otherwise
	widowed	all	= 1 if for marital status being widowed was indicated, 0 otherwise
political believes	political scale right	ESS	= 1 if on 11-level scale (where 0 = "left" and 10 = "rigt") value above 7 (exclusive) was indicated, 0 otherwise
	political scale left	ESS	= 1 if on 11-level scale (where 0 = "left" and value below 3 (exclusive) was indicated, 0 otherwise
	political scale right	WVS/EVS	= 1 if on 10-level scale (where 1 = "left" and 10 = "rigt") value above 7 (exclusive) was indicated, 0 otherwise
	political scale left	WVS/EVS	= 1 if on 10-level scale (where 1 = "left" and value below 3 (exclusive) was indicated, 0 otherwise
region	Praha	ESS WVS/EVS except 1991	= 1 if reported region is Praha, 0 otherwise
	Středočeský kraj	ESS except 2008	= 1 if reported region is Středočeský kraj, 0 otherwise
	Jihočeský kraj	ESS except 2008	= 1 if reported region is Jihočeský kraj, 0 otherwise
	Plzeňský kraj	ESS except 2008	= 1 if reported region is Plzeňský kraj, 0 otherwise
	Karlovarský kraj	ESS except 2008	= 1 if reported region is Karlovarský kraj, 0 otherwise
	Ústecký kraj	ESS except 2008	= 1 if reported region is Ústecký kraj, 0 otherwise

continued on the next page

Characteristic	Variable	Survey	Detail
continued from the previous page			
region	Liberecký kraj	ESS except 2008	= 1 if reported region is Liberecký kraj, 0 otherwise
	Královehradecký kraj	ESS except 2008	= 1 if reported region is Královehradecký kraj, 0 otherwise
	Pardubický kraj	ESS except 2008	= 1 if reported region is Pardubický kraj, 0 otherwise
	Moravskoslezský kraj	ESS except 2008	= 1 if reported region is Moravskoslezský kraj, 0 otherwise
	Jihomoravský kraj	ESS except 2008	= 1 if reported region is Jihomoravský kraj, 0 otherwise
	Vysočina	ESS except 2008	= 1 if reported region is Vysočina, 0 otherwise
	Olomoucký kraj	ESS except 2008	= 1 if reported region is Olomoucký kraj, 0 otherwise
	Zlínský kraj	ESS except 2008	= 1 if reported region is Zlínský kraj, 0 otherwise
	Střední Čechy	ESS 2008	= 1 if reported region is Střední Čechy (central part of the republic), 0 otherwise
	Jihozápad	ESS 2008	= 1 if reported region is jihozápad (South-west of the republic), 0 otherwise
	Severozápad	ESS 2008	= 1 if reported region is severozápad (North-west of the republic), 0 otherwise
	Severovýchod	ESS 2008	= 1 if reported region is severovýchod (South-west of the republic), 0 otherwise
	Jihovýchod	ESS 2008	= 1 if reported region is jihovýchod (South-east of the republic), 0 otherwise
	Střední Morava	ESS 2008	= 1 if reported region is střední Morava (East of the republic), 0 otherwise
	Moravskoslezsko	ESS 2008	= 1 if reported region is Moravskoslezsko (Northeast of the republic), 0 otherwise
	Středočeský	WVS/EVS except 1991	= 1 if reported region is středočeský (central part of the republic), 0 otherwise
	Západočeský	WVS/EVS except 1991	= 1 if reported region is západočeský (West of the republic), 0 otherwise
	Jihočeský	WVS/EVS except 1991	= 1 if reported region is jihočeský (South-west of the republic), 0 otherwise
	Severočeský	WVS/EVS except 1991	= 1 if reported region is severočeský (North of the republic), 0 otherwise
	Východočeský	WVS/EVS except 1991	= 1 if reported region is východočeský (North-north-east of the republic), 0 otherwise
	Jihomoravský	WVS/EVS except 1991	= 1 if reported region is jihomoravský (South-east of the republic), 0 otherwise
	Severomoravský	WVS/EVS except 1991	= 1 if reported region is severomoravský (North-east of the republic), 0 otherwise
religion	belonging to religion	ESS	= 1 if on question about belonging to a religion answred "yes", 0 otherwise
	comfort from religion	WVS/ESS except 1991	= 1 if to the question: "Do you find comfort and strength from religion?" answered "yes", 0 otherwise
satisfaction with economy	satisfaction economy	ESS	= 1 if answer on the 11-level scale (where 0 = "extremely dissatisfied" and 10 = "extremely satisfied") is higher than 7, 0 otherwise
satisfaction with government	satisfaction government	ESS	= 1 if answer on the 11-level scale (where 0 = "extremely dissatisfied" and 10 = "extremely satisfied") is higher than 7, 0 otherwise
self-employed	self-employed	ESS	= 1 if employment relationship indicating "self-employed", 0 otherwise
		WVS/EVS	= 1 if indicating self-employment for having paid employment, 0 otherwise
being a student	student	ESS	= 1 if variable for being a student is marked, 0 otherwise
		WVS/EVS	= 1 if "student" is reported for currently not having a paid employment, 0 otherwise
trust in legal system	trust in legal system	ESS	=1 if answer on a 11-level scale (0 = can not be trusted, 10 = can be trusted) value higher than 7 was indicated, 0 otherwise
	confidence in legal system	WVS/EVS 1995	= 1 if from the 4-level scale the two values indicating high or relatively high confidence in legal system were reported, 0 otherwise
	trust in justice system	WVS/EVS 1991, 1999	= 1 if from the 4-level scale the two values indicating that the justice system can be trusted a lot or to a certain extent were reported, 0 otherwise
trust in others	trust in others	ESS	= 1 if answer on a 11-level scale (0 = "you can never be to careful", 10 = "most people can be trusted") is higher than 7,0 otherwise
		WVS/EVS	= 1 if indicating that can be trusted from binary variable, 0 otherwise
unemployment	unemployed	ESS	= 1 if variable representing unemployed in the dataset is marked, 0 if not marked
		WVS/EVS	=1 if "unemployed" is reported for currently not having paid employment, 0 otherwise