

## Freedom and life satisfaction in transition

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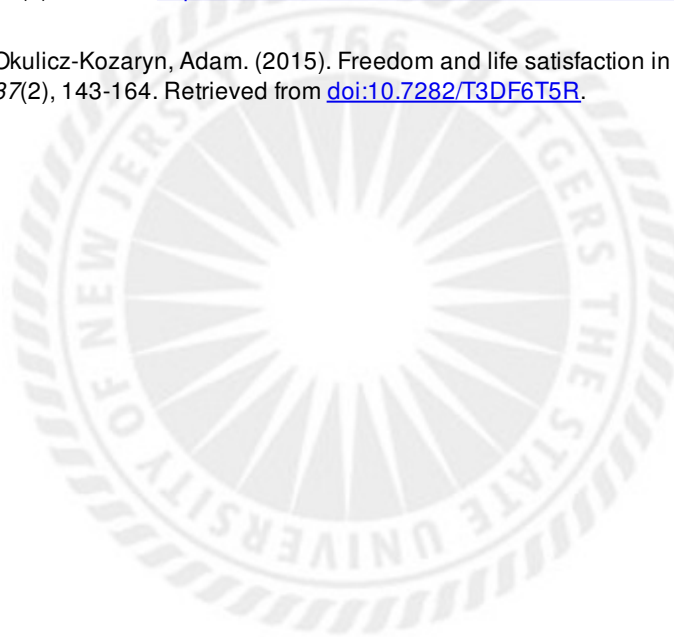
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# Freedom and Life Satisfaction in Transition

## Abstract

Freedom and life satisfaction are desirable conditions and they both have a special meaning in Eastern Europe—transition was largely about gaining freedom and ultimately overall wellbeing. There are several studies about the effect of freedom on life satisfaction, but none of them focuses on Eastern Europe. I investigate the effect of self-reported freedom on life satisfaction in post-transition Eastern Europe using the World Values Survey. Surprisingly, East Europeans feel less free and less satisfied with their lives than other nationals. But a personal feeling of freedom increases their life satisfaction at a higher rate than in other countries. Freedom is a strong predictor of life satisfaction as compared to national income.

KEYWORDS: LIFE SATISFACTION, FREEDOM, TRANSITION, EASTERN EUROPE

JEL CODES: D6, I3, N3

## 1 Introduction

East European countries (table 1) made the transition from a planned to a market economy between 1989 and 1991. All experienced deep recessions on the eve of transition, and then more or less recovered. Along with economic transition came political transition from communism to democracy. People revolted against authoritarian regimes, demanding liberty and personal freedom. It was the pursuit of well-being that generated popular support for a market economy and democracy (Hayo and Seifert 2003).

Table 1: Transition countries.

Albania	<b>Estonia</b>	Montenegro
<b>Azerbaijan</b>	FYR Macedonia	<b>Poland</b>
<b>Armenia</b>	<b>Hungary</b>	Romania
Belarus	<b>Georgia</b>	<b>Russia</b>
Bosnia and Herzegovina	<b>Kyrgyzstan</b>	Serbia
Bulgaria	<b>Latvia</b>	<b>Slovak Republic</b>
Croatia	<b>Lithuania</b>	<b>Slovenia</b>
<b>Czech Republic</b>	Moldova	<b>Ukraine</b>

\*Note: Due to missing data, the sample used in this study consists of the countries in bold face.

The pursuit of freedom and happiness, however, is one thing and achievement of them is another thing. East Europeans feel less happy than other nationals. Figure 1 plots life satisfaction against national income per capita for a cross-section of transition and non-transition countries c. 2000. Happiness in most of Eastern Europe is below the mean for all other countries given the income level. This fact requires further analysis: Why Eastern Europeans are less happy than others? The purpose of this study is to explore this puzzle—why East European countries are unhappy? I will focus on the role of self-reported, subjective freedom and control for many predictors of happiness. This paper aims to describe differences in post-transition Europe, not over-time changes. This study is cross-sectional and is not about economic or life satisfaction convergence in Europe; these have been studied elsewhere (Welsch and Bonn 2008, Easterlin 2009). Also, there is no data for the pre-transition period (i.e. before 1990) for Eastern Europe, and hence, the only available counterfactual is cross-sectional: comparison of Eastern Europe with other countries.

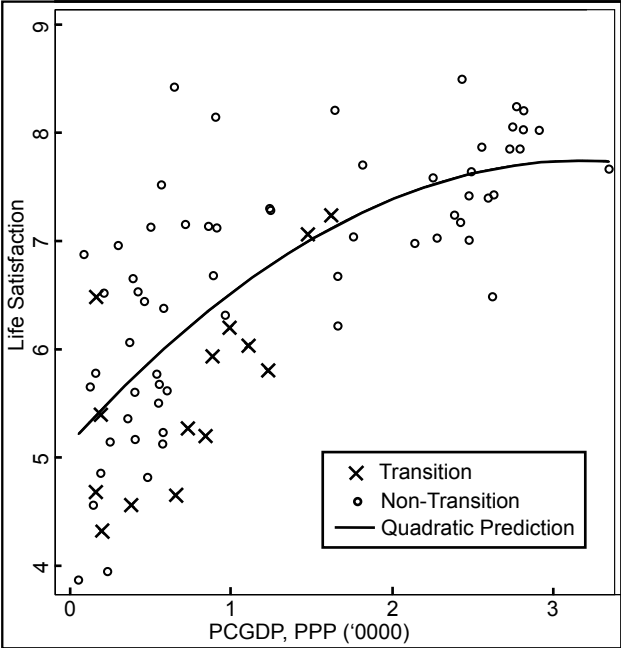


Figure 1: Relationship between life satisfaction and Per Capita Gross Domestic Product, Purchasing Power Parity (PCGDP, PPP) c. 2000 for countries included in the World Values Survey.

Hayo and Seifert (2003) reminds us that analysis in post-transition Eastern Europe requires extra caution—there was lots of turmoil in the aftermath of the transition and, hence, lots of volatility in social and economic indicators. The levels of these indicators may have partly resulted from the turmoil. But that is likely to be more of a problem for their study than mine—they studied 1991-1995, and I study late 1990s and early 2000s as shown in appendix A. For overview of over-time changes in happiness in Eastern Europe see an informative study by Easterlin (2009).

Also, there is literature about public support for market reforms—Warner (2001) argues that implementation of reforms increases support for reforms in Russia. In Bulgaria most people understood increased unemployment as necessary price to pay for the reforms (Valev 2004). The support for reforms differs by socio-demographics: unemployed, poor, old, female, and less-educated respondents living in rural areas are less inclined to favor the creation of a market economy (Hayo 2004). I will control for these characteristics in the empirical part of this study.

This study proceeds as follows. First, I will discuss the main independent variable of interest, freedom. Second, I will overview the concept of happiness, which is the dependent variable. Finally, I will discuss the relationship between freedom and happiness in Eastern Europe and estimate a simple model of this relationship.

## 2 Freedom as development

Amartya Sen (2000) proposed freedom as a measure of development. Inglehart et al. (2008) followed: "The events of the past 25 years have brought a growing sense of freedom that seems to have been even more important than economic development in contributing to rising happiness." Importantly, The Universal Declaration of Human Rights (Assembly 1948) lists freedom explicitly many times as a human right:

- right to life, liberty and security; freedom from slavery, servitude, torture, cruelty, inhuman or degrading treatment or punishment (art. 3, 4, 5, 12)
- freedom from discrimination, prejudice, arbitrary arrest, detention or exile (art. 6, 7, 8, 9, 10, 11)

- freedom of movement and residence; right to marry and own property (art. 13, 16, 17 )
- freedom of thought, assembly, religion and worship (art. 18, 19, 20)
- freedom to take part in governance and access public services (art. 21)
- right to freely chosen education and work, equal pay, rest and leisure (art. 23, 24, 26)
- freedom for the realization of one's human potential (art. 26, 29)

While there is an abundance of research about the impact of income on happiness<sup>1</sup> (e.g. Diener et al. 1993, Easterlin 1995, 2001, Clark 2003, Frank 2005, Ferrer-i Carbonell 2005, Boes and Winkelmann 2004, Bonini 2008), the research on the impact of freedom on life satisfaction is limited (Veenhoven 2000, Verme 2009). Yet, freedom may be a better measure of social and economic development than national income or at least it complements the income measure by measuring another dimension of broadly understood development (Sen 2000, Stiglitz et al. 2009). Therefore, it is important to explore the effect of freedom on life satisfaction

Freedom can be measured either at country-level or at person-level. Country-level measure is usually an expert rating (e.g. Freedom House). An obvious problem with expert ratings is that they are often biased (Bollen 1992). This paper focuses on the freedom that people feel, not on the freedom ratings that experts put on countries. From the extant literature we know that country-level freedom is associated with greater life satisfaction. Veenhoven (2000) reports that freedom and happiness are positively correlated. There are studies that do not focus on freedom-happiness relationship but include freedom as one of control variables, and find positive relationship (Vemuri and Costanza 2006, Hayo 2007). All these studies use Freedom House measure that is based on expert ratings. The only study that utilizes person-level freedom is Verme (2009), but it focuses on freedom dimensions and does not investigate the East European case.

The two kinds of freedom, country-level 'objective' expert rating and person-level subjective self-assessment are also called 'freedom from' and 'freedom to,' as defined in the classic study by Erich Fromm ([1941] 1994). For an in-depth description of the differences

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<sup>1</sup>Again, I will define happiness in the next section.

between the two types of freedom see Okulicz-Kozaryn (2014). I will use here person-level subjective self assessment of freedom from World Values Survey. This approach follows Veenhoven (2000), Verme (2009), Inglehart et al. (2008).

Surprisingly, East Europeans feel less free than people in other regions of the world. Why East Europeans feel less free than others, while they clearly gained great deal of freedom as a result of the Soviet Block collapse? One explanation is that increasing freedoms abruptly may produce paralysis rather than liberation (Schwartz 2004). People in Eastern Europe may feel overwhelmed when after almost fifty years of communism they suddenly gain many freedoms. They do not know how to use these freedoms, and even if East Europeans are objectively free, they may feel overwhelmed or even paralyzed.

Some argue that freedom is objective concept that cannot be measured well with self-reports. I argue that freedom is both, objective and subjective and the two forms of freedom do not necessarily agree with each other as demonstrated here. Keep in mind that the aim of this study is to examine the link between freedom and well-being. Objective freedom does not help a lot with happiness if people feel unfree; it is rather how much freedom people feel, not how much objective freedom there is.<sup>2</sup> East Europeans gained great deal of freedom as a result of the Soviet Bloc collapse, and hence, they should be fairly happy, but their happiness decreased (Lelkes 2006). This paradox can be resolved if freedom is measured more directly as a self-reported assessment. It turns out that East Europeans think that they are less free than others. By saying that Europeans feel less free than others I mean that the average (self-reported) freedom score is lower in Eastern Europe than in other countries. This is a conservative statement. If we compared subjective freedom in Eastern and Western Europe the difference would be much bigger than comparing Eastern Europe with all other countries (many of them in Africa and Asia). Ideally, self-reported freedom in Eastern Europe should be compared before and after the transition, but such data do not exist.

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<sup>2</sup>Personal feeling of freedom matters whether it is illusion or truth (Lefcourt 1973).

### 3 Economics of happiness

Modern scientific happiness research started in psychology. Myers (2000) summarizes this research. Personal characteristics (e.g. extroversion) and culture (e.g. affluent societies with political rights) impact life satisfaction. The key predictor of life satisfaction is broadly understood social capital. The ‘need to belong’, which can be satisfied in multiple ways, can seriously affect happiness. Religion, friendship and marriage boost life satisfaction because they provide social capital. Age and gender do not correlate strongly with life satisfaction. Older people have a closer fit between their ideals and self perceptions compared to the young (Diener et al. 1999), and some find a U-shaped correlation between age and happiness, with a minimum around age of 30 (Oswald 1997), or 45 (Sanfey and Teksoz 2005). Personal or household income matters up to a point; as long as people can afford necessities, income does not contribute much to happiness.

At the same time, over past few decades, economist have been slowly coming to realize that the classical models of rational and informed behavior are just models. That is, these models have little practical relevance. Yet, revolutions rarely happen in academia, and evolutions are slow—even now many economists stick to the classical ideas that have been shown, mostly by psychologists, wrong. For instance, see work by Amos Tversky and Daniel Kahneman (Kahneman and Tversky 1979, Kahneman 1994, Schkade and Kahneman 1998, Kahneman et al. 1997, Kahneman 2000, Kahneman et al. 2004, Kahneman and Krueger 2006). Kahneman challenged classical assumption of rational behavior, and won a Nobel prize in economics. He has also conducted some happiness research. Another economics Nobel laureate, Daniel McFadden, argues for an overhaul of the theory of consumer choice and says that economists should learn from psychologists, anthropologists and neuroscientists (Economist 2013). Almost a revolution, indeed.

Evolution in economics is happening—one symptom is a shift towards the study of culture in general, and more specifically, towards social capital or trust and religion.<sup>3</sup> But

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<sup>3</sup> Trust is widely studied by economists: Knack and Keefer (1997), Alesina and Ferrara (2000), Knack (2001), Glaeser et al. (2002), Berggren and Jordahl (2006), Guiso et al. (2006), Tabellini (2008b), Helliwell and Wang (2010). Economists also study religion: Iannaccone (1998), Barro and McCleary (2003), Lelkes (2006), Scheve and Stasavage (2006), Huber and Stanig (2011), and culture, in general: Corneo and

possibly the biggest “revolution” is the study of happiness by economists.<sup>4</sup>

This new branch in economics has officially started with *Does Economic Growth Improve the Human Lot?* (Easterlin 1974). In this and subsequent works (1995, 2001, 2003, 2006.) Easterlin argues that the happiness function is composed of aspirations and achievements. People have aspirations that they try to satisfy. Once aspirations are satisfied, happiness should follow. However, new achievements result in new aspirations, because through the process of hedonic adaptation people adapt to new circumstances. Happiness is positively correlated with income but negatively with unrealized aspirations. The two influences cancel out.

Diener and Seligman (2004) argue that economic indicators cannot fully explain life satisfaction, and often lead to misleading conclusions. Myers (2000) argues that change in national income per capita does not contribute to change in happiness within a country. Diener et al. (1999) remark that the correlation between wealth and life satisfaction may be spurious: richer countries tend to be more egalitarian and democratic, suggesting that there may be an alternative measure of development than national income. I will use here freedom as such measure.

Life satisfaction is “overall judgment of life that draws on two sources of information: cognitive comparison with standards of the good life (contentment) and affective information from how one feels most of the time (hedonic level of affect)” (Veenhoven 2008). Diener and Lucas (quoted in Steel et al. 2008, p. 142) defined happiness as evaluation of one’s life, which include “both cognitive judgments of one’s life satisfaction in addition to affective evaluations of mood and emotions,” which is virtually the same as Veenhoven’s definition. Some scholars make a distinction between happiness and life satisfaction—life satisfaction refers to cognition and happiness refers to affect. Life satisfaction is a cognitive aspect of happiness (Dorahy et al. 1998). I will not pursue this dichotomy because I have only one survey item, which likely captures mostly life satisfaction but also hap-

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Grüner (2000), Alesina and Glaeser (2004), Alesina et al. (2005), Luttmer and Singhal (2008), Tabellini (2008a,b).

<sup>4</sup>Some notable examples include: Easterlin (1995), Oswald (1997), Di Tella et al. (2001b), Alesina et al. (2004), Frank (2005), Layard (2005a,b), van Praag (2005), Di Tella and MacCulloch (2006), Rayo and Becker (2007), Easterlin (2013).



piness to some degree. Therefore the overall happiness definition by Veenhoven (2008) seems most appropriate and I will use terms “happiness” and “life satisfaction” interchangeably. Last, but not least, the study of happiness has been recently advocated by leading economists: Amartya Sen, Joseph Stiglitz (Stiglitz et al. 2009) and Jeffrey Sachs (Helliwell et al. 2012).

## 4 Data and Model

To explore the relationship of subjective freedom and life satisfaction I use self-reported measures of both concepts drawn from the World Values Survey (WVS) waves three (1994-1999) and four (1999-2004). Most countries were sampled in 1999 and 2000 with national samples of about one thousand. Appendix A provides sample details. The person-level WVS data were augmented at the country-level by selected World Development Indicators (WDI). Variables are described in table 2. Appendix B shows cross-correlation tables.

Table 2: Variables description and coding.

Variable	Definition
<b>Country-level (WDI)*</b>	
PCGDP, PPP	GDP per capita based on purchasing power parity in constant 2000 international \$.
Inflation	Inflation as measured by the consumer price index in annual %.
Unemployment	Share of the labor force that is without work but available for and seeking employment.
Life expectancy	Life expectancy at birth indicates the number of years a newborn infant would live.
Freedom (Country)	Country average of Freedom (Person).
<b>Person-level (WVS)</b>	
Happiness	1 (dissatisfied) to 10 (satisfied).
Freedom (Person)	1 (none at all) to 10 (a great deal).
Age	15 to 101.
Health	State of health (subjective): 1 (very poor) to 5 (very good).
Household Income	Household income counting all wages, salaries, pensions and other incomes: 1 (low) to 10 (high).
Education	Highest level of education attained: 1 (low) to 10 (high).
Trust	Trust in other people: 1 (Most people can be trusted); 0 (cant be too careful).
Friends	Time with friends: 1 (not at all); 2 (a few times a year); 3 (once/twice a month); 4 (weekly).
Married	1 ('Married' or 'Living together as married'); 0 otherwise.
Female	1 (female); 0 (male).
Divorced	1 ('Divorced' or 'Separated' or 'Widowed'); 0 otherwise.
Unemployed	1 (unemployed); 0 otherwise.

\*Note: some missing values were imputed. If PCGDP, inflation, or unemployment were missing for time t, they were replaced with a value for previous/next year. Life expectancy was replaced with first non-missing value six years ahead/before.

WVS respondents were asked to answer on a scale 1-10 (10=a great deal) a following question: “How much freedom of choice and control you feel you have over the way

your life turns out?”<sup>5</sup> The dependent variable, life satisfaction, is scaled in the same way and based on an answer to a following question: “All things considered, how satisfied are you with your life as a whole these days?” Tables 3 and 4 show that East Europeans feel less free and less happy than others. I hypothesize that an increase in personal freedom pays off in life satisfaction. For instance, there is evidence that perceived freedom/empowerment/autonomy leads to satisfaction among people with mental health problems (Young 2006, Zissi et al. 1998, Rosenfield 1992). Summary statistics of all variables are shown in tables 3 and 4. In addition see appendix A2, which shows levels of freedom and happiness for each country in this sample.

Table 3: Summary statistics for non-east european countries.

Variable	Mean	Std. Dev.	Min.	Max.	N
<b>Life Satisfaction</b>	6.62	2.546	1	10	93899
<b>Freedom</b>	6.747	2.512	1	10	90682
PCGDP ('0000)	1.31	1.073	0.054	4.979	90296
Unemployment ('0)	1.041	0.688	0.2	3.05	88157
Inflation ('0)	1.02	2.256	-0.117	16.862	88376
Life Expectancy ('0)	7.075	0.92	3.984	8.108	92556
Age ('00)	0.403	0.16	0.15	0.99	94651
Income	4.672	2.428	1	10	82896
Education	4.34	2.308	1	8	93938
Married	0.622	0.485	0	1	94414
Divorced	0.107	0.309	0	1	94414
Unemployed	0.093	0.29	0	1	93906
Health	3.901	0.859	1	5	64890
Trust	0.287	0.452	0	1	91369
Friends	3.306	0.875	1	4	80443

Table 4: Summary statistics for east european countries.

Variable	Mean	Std. Dev.	Min.	Max.	N
<b>Life Satisfaction</b>	5.5	2.572	1	10	19932
<b>Freedom</b>	6.100	2.543	1	10	19430
PCGDP ('0000)	0.699	0.482	0.16	1.618	20124
Unemployment ('0)	1.479	0.855	0.700	3.64	16114
Inflation ('0)	2.024	2.698	0.075	8.574	20124
Life Expectancy ('0)	7.062	0.254	6.604	7.493	20124
Age ('00)	0.432	0.169	0.17	1.01	20113
Income	4.084	2.366	1	10	18405
Education	5.03	1.969	1	8	20099
Married	0.598	0.49	0	1	20072
Divorced	0.187	0.39	0	1	20072
Unemployed	0.108	0.31	0	1	18080
Health	3.555	0.864	1	5	7045
Trust	0.217	0.412	0	1	19388
Friends	3.084	0.923	1	4	13908

<sup>5</sup>The World Value Surveys asked respondents to tap freedom from an absolute perspective, not from a relative perspective—one of comparing with others.

Who is happy?<sup>6</sup> Young and old people are happy, that is, there is U-shaped relationship (e.g. Sanfey and Teksoz 2005). Income<sup>7</sup> boosts happiness and unemployment depresses it (e.g. Di Tella et al. 2001b,a, Di Tella and MacCulloch 2006). Yet, increasing income beyond a point does not increase happiness—income pays off from in happiness at low levels of income, but for rich persons or areas, there is not much gain in happiness from additional income (Okulicz-Kozaryn 2012). Being married helps with happiness (e.g. Myers 2000, Diener and Seligman 2004). Females’ happiness may be declining as Stevenson and Wolfers (2009) are alarming us, so I control for gender. Education may have an effect on happiness (Dittmann and Goebel 2010). Social capital is one of the key predictors of happiness (Helliwell et al. 2004, Helliwell 2006), hence I control for time with friends and trust. Finally, health, is of course an important determinant of happiness and is used whenever possible in happiness equation.

There are also ecological (environmental) factors that affect happiness—happiness depends also on attributes of a place in addition to attributes of a person. This is according to the livability theory (Veenhoven and Ehrhardt 1995)—if there are livable conditions, people are happy. A key component of livable conditions is overall development or wealth, which can be operationalized by per capita income (Okulicz-Kozaryn 2012). Also, the theory tells us that the relationship between happiness and GDP is quadratic as shown in figure 1. Life expectancy is one measure of population health. Happiness and life expectancy are also related (Yang 2008). Finally, inflation and unemployment may also affect our happiness (Di Tella et al. 2001b).

Life satisfaction is ordinal, making it appropriate to use ordinal logistic regression. The differences in results for this sample, however, between linear and ordinal logistic regressions are negligible<sup>8</sup> and therefore I choose to use a linear model to address the

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<sup>6</sup>Of course, it means “on average”—while certain variables consistently predict high or low happiness, there are always exceptions.

<sup>7</sup>Household income is measured in steps: 1st step, 2nd step,...,10th step. They were constructed by the survey producers to be comparable across countries.

<sup>8</sup>Similarly, Ferrer-i-Carbonell and Frijters (2004) in their study of appropriate methodology for life satisfaction models found that ordinal logistic regression is not necessary when life satisfaction is measured on ordinal scale.

question of the effect of freedom on happiness in Eastern Europe.

I use an OLS model with robust standard errors clustered on country. Clustered standard errors account for the fact that individuals are nested and correlated within countries, and it correctly estimates standard errors for country variables. Simple OLS regression would yield incorrect standard errors on country-level variables; they would be too small because there are far fewer country-level observations than person-level observations.

## 5 Results, Discussion, and Conclusion

Coefficient estimates are set down in table 5. Again, these are OLS models with robust standard errors clustered on country. All models include year dummies and region dummies for regions as defined by the United Nations: Africa, Americas, Asia, and Oceania. Model a1 has all the variables except the interaction between freedom and Eastern Europe dummy (EE), which I add in model a2. Note that freedom variable appears twice: at person-level, and then as an average at country-level.<sup>9</sup> Model a3 adds several predictors of happiness as a group because these variables had many missing observations. Finally model a4 shows a main model (a2) for the same sample as model a3 to facilitate comparison between the two models.

From these results we learn that East Europeans are less satisfied with their lives than other nationals as indicated by negative Eastern Europe (EE) dummy variable. Life Satisfaction is positively and consistently related to freedom. The effect is even stronger for Eastern Europe, as indicated by the positive and significant interaction term.

To get a better grasp of the practical significance of the results, rich, free and happy United States may be contrasted with poor, unfree and unhappy Russia in terms of PCGDP (6,500 vs 33,400),  $\overline{Freedom}$  (5.5 vs 8) and  $\overline{Happiness}$  (4.65 vs 7.65). If we could increase  $\overline{Freedom}$  in Russia to that of the US,  $\overline{Happiness}$  in Russia would have increased (model a2) by  $2.5 * .33 = .82$ . Similarly, increasing Russia's PCGDP to that of

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<sup>9</sup>This is a common practice when modeling two level data—see for instance Rabe-Hesketh and Skrondal (2005).

Table 5: OLS regressions of happiness with robust standard errors clustered on country.

	a1	a2	a3	a4
EE * Freedom		0.14**	0.28***	0.29***
<u>country-level variables:</u>				
EE	-0.23	-1.14**	-1.94**	-2.45***
Freedom (Country)	0.32***	0.33***	0.25*	0.27*
GDP/cap PPP '0000	0.88***	0.87***	0.68	0.57
GDP/cap PPP '0000 Squared	-0.13*	-0.13*	-0.18	-0.12
Inflation Rate '0	-0.04	-0.04	0.03	0.04
Unemployment Rate '0	-0.08	-0.07	0.15	0.23
Life Expectancy	0.17	0.17	0.29*	0.28*
<u>person-level variables:</u>				
Freedom (Person)	0.30***	0.27***	0.23***	0.24***
Age('00)	-5.87***	-5.85***	-5.27***	-5.98***
Age Squared '00	6.14***	6.17***	6.43***	6.53***
Household Income	0.12***	0.12***	0.16***	0.18***
Education	-0.02	-0.02	-0.02	-0.01
Married	0.32***	0.32***	0.32***	0.31***
Divorced	-0.23***	-0.22***	-0.05	-0.10
Unemployed	-0.63***	-0.62***	-0.46***	-0.48***
Female	0.17***	0.17***	0.30***	0.24***
Trust			0.09	
Friends			0.11***	
Health			0.45***	
Year dummies	yes	yes	yes	yes
Region dummies	yes	yes	yes	yes
Constant	0.99	1.06	-2.39*	-0.36
N	81161	81161	36107	36107

+p<0.10 \*p<0.05 \*\*p<0.01 \*\*\*p<0.001

the U.S. would increase Russians  $\overline{Happiness}$  by  $2.7 * .87 - .13 * (2.7)^2 = 1.4$ . Based on this comparison, freedom has a considerable payoff in terms of happiness—more than half of PCGDP.<sup>10</sup> These calculations are conservative in a sense that they are only about the average level of freedom in a country—if person-level freedom were taken into account as well, then the effect of freedom on happiness would have been larger.

The conclusion is that not only freedom is a good measure of social and economic development as Sen (2000) argued, but it also contributes considerably to well-being. Maximizing welfare does not have to be the same as maximizing wealth. The relationship between freedom and life satisfaction is stronger in Eastern Europe as indicated by positive and significant interaction term. If we could make East Europeans feel more free, we would have increased their life satisfaction by more than in other countries. Remarkably, freedom consistently predicts a substantively and statistically significant increase in life satisfaction in all specifications despite large sample differences.

<sup>10</sup>Obviously PCGDP and freedom are measured on different scales, but we can still compare the effect of change in these measures on life satisfaction based on the distribution of these variables.

Can happiness be compared across countries? In other words, does happiness mean the same to different nationals? Many studies, as cited earlier, have assumed that happiness can be studied in a cross-section of countries. There is a book devoted to this issue—how happiness differs across cultures (Diener and Suh 2003). There are obviously large cross-cultural differences in just about anything, and happiness differs, too. Yet, it can be meaningfully compared in most cases—happiness is a reasonably valid measure and a country is a meaningful unit of analysis (Diener and Suh 1999). Furthermore, the problem of cross-cultural comparability is substantially ameliorated in the present study. Eastern Europe is quite homogeneous as compared to countries from different regions. And the region shares common recent history—all countries in the region were a part of the Soviet Union. This has implications for freedom as well. The collapse of the Soviet Union affected freedom for all countries in the region in a similar way. Just like many researchers have studied happiness across countries, also many have studied freedom (e.g. Veenhoven 2000, Inglehart et al. 2008, Verme 2009, Okulicz-Kozaryn 2014). Yet, this is not to say that meaning of freedom or happiness is exactly the same across the region. Future research could approach the topic on a case-by-case basis, for instance, using qualitative approach such as case study or ethnographic research.

How about endogeneity, causality, and robustness in general? First objection could be that since both freedom and happiness are self-reported, they may not be distinct concepts—for instance, self-reported freedom may capture one dimension of happiness. This is not the case, however—freedom and happiness are distinct concepts as shown by Verme (2009, section 6), who provided robustness checks for exactly the same 2 variables from this same dataset.

It is virtually impossible to settle the issue of endogeneity or reverse causality econometrically in this case—I do not observe the same individuals over time, neither there are any good instruments that can be used for self-reported freedom. Instead, let me rely on Ruut Veenhoven, a happiness research pioneer and expert, who reviews the concept of freedom in depth in Veenhoven (2000) and suggests that the relationship goes from freedom to happiness, not the other way round. In addition, there are multiple published

studies with freedom on the right hand side of happiness equation, which include Verme (2009), Lelkes (2006), Hayo (2007), Inglehart et al. (2008).

Subjective, self-reported freedom is important—it not only matters how much freedom is out there in the real world, but it also matters how much freedom people feel. A possible limitation of this subjective measure is that subjective measures are likely to be more correlated, e.g. freedom and happiness, than objective and subjective measures, e.g. GDP and happiness. Hence, the estimate on the freedom may be biased upwards due to its subjective nature. It does not seem to be a critical problem, however. As argued before, subjective freedom is strongly significant and quite robust, and hence, it is unlikely that its whole effect is due to this potential bias. A related issue is the relationship between objective and subjective freedom—as argued here, there is a puzzle in Eastern Europe—East Europeans have won a great deal of objective freedom as a result of the Soviet Block collapse, and yet they do not seem to feel free. Indeed, as shown by Okulicz-Kozaryn (2014), objective and subjective freedom correlate only modestly at below 0.5.

There are implications for public policy. First, it is important to note that East Europeans feel less free than others, even though they should feel free given that they won lots of objective freedoms with the collapse of the Soviet Block. Second, freedom has great payoff in happiness. We may or may not agree with Amartya Sen that freedom is a good measure of economic and social development, but freedom is a strong predictor of life satisfaction. If we agree that one of the major goals of a country’s government is to make its citizens happy, then governments in Eastern Europe should try to make people feel free in the first place.<sup>11</sup> As this study demonstrates, making people feel free in Eastern Europe has high payoff in their satisfaction. It remains for the future research to determine policies to make people feel free.

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<sup>11</sup>I mean, of course, in a well-intentioned way—governments should not just create an illusion of freedom—the subjective feeling of freedom should be accompanied by actual (objective) freedom. Yet, subjective or feeling of freedom is more than that—again, as argued throughout this paper, there may be a great deal of objective freedom and yet people may not know that it is there and may not know how to use it and be free. In short, a country may be free, but its citizens may not be free—for elaboration see Okulicz-Kozaryn (2014).

## 6 Appendix A

Table 6: Sample description.

Country	Year	Sample	Country	Year	Sample
Albania	2002	1000	Jordan	2001	1223
Algeria	2002	1282	Kyrgyzstan	2003	1043
Argentina	1999	1280	Latvia	1999	1013
Armenia	1997	2000	Lithuania	1999	1018
Australia	1995	2048	Luxembourg	1999	1211
Austria	1999	1522	Macedonia, Republic Of	2001	1055
Azerbaijan	1997	2002	Malta	1999	1002
Bangladesh	2002	1500	Mexico	2000	1535
Belarus	2000	1000	Morocco	2001	2264
Belgium	1999	1912	Netherlands	1999	1003
Bosnia And Herzegovina	2001	1200	New Zealand	1998	1201
Brazil	1997	1149	Nigeria	2000	2022
Bulgaria	1999	1000	Pakistan	2001	2000
Canada	2000	1931	Peru	2001	1501
Chile	2000	1200	Philippines	2001	1200
China	2001	1000	Poland	1999	1095
Colombia	1998	2996	Portugal	1999	1000
Croatia	1999	1003	Puerto Rico	2001	720
Czech Republic	1999	1908	Republic Of Korea	2001	1200
Denmark	1999	1023	Republic Of Moldova	2002	1008
Dominican Republic	1996	417	Romania	1999	1146
Egypt	2000	3000	Russian Federation	1999	2500
Estonia	1999	1005	Saudi Arabia	2003	1502
Finland	2000	1038	Serbia And Montenegro	2001	2260
France	1999	1615	Singapore	2002	1512
Georgia	1996	2008	Slovakia	1999	1331
Germany	1999	2036	Slovenia	1999	1006
Great Britain	1999	1000	South Africa	2001	3000
Greece	1999	1142	Spain	2000	1209
Hungary	1999	1000	Sweden	1999	1015
Iceland	1999	968	Switzerland	1996	1212
India	2001	2002	Tanzania, United Republic Of	2001	1171
Indonesia	2001	1004	Turkey	2001	4607
Iran (Islamic Republic Of)	2000	2532	Uganda	2001	1002
Iraq	2004	2325	Ukraine	1999	1195
Ireland	1999	1012	United States	1999	1200
Israel	2001	1199	Uruguay	1996	1000
Italy	1999	2000	Venezuela	2000	1200
Japan	2000	1362	Viet Nam	2001	1000
			Zimbabwe	2001	1002

## 7 Appendix A2

Table 7: Values of key variables by country.

country/region	Eastern Europe	GDP/cap PPP	Freedom	Satisfaction with your life
Albania	0	4055	6.0	5.2
Algeria	0	5554	6.7	5.7
Argentina	0	12400	7.4	7.3

Continued on next page



**Table 7 – continued from previous page**

country/region	Eastern Europe	GDP/cap PPP	Freedom	Satisfaction with your life
Armenia	1	1958	5.7	4.3
Australia	0	22535	7.6	7.6
Austria	0	28134	7.5	8.0
Azerbaijan	1	1904	5.6	5.4
Bangladesh	0	1606	5.7	5.8
Belarus	0	4828	5.6	4.8
Belgium	0	26305	6.6	7.4
Bosnia And Herzegovina	0	5397	6.3	5.8
Brazil	0	7176	7.4	7.2
Bulgaria	0	5505	6.3	5.5
Canada	0	27290	7.7	7.8
Chile	0	9121	7.2	7.1
China	0	4233	7.1	6.5
Colombia	0	6489	7.9	8.4
Croatia	0	8906	7.0	6.7
Czech Republic	1	14757	6.9	7.1
Denmark	0	27711	7.3	8.2
Dominican Republic	0	5030	7.4	7.1
Egypt	0	3599	5.5	5.4
Estonia	1	8837	6.1	5.9
Finland	0	25554	7.5	7.9
France	0	24769	6.5	7.0
Georgia	1	1596	6.2	4.7
Germany	0	24760	7.3	7.4
Great Britain	0	25953	7.1	7.4
Greece	0	16623	7.0	6.7
Hungary	1	12279	6.2	5.8
Iceland	0	27473	7.6	8.1
India	0	2504	5.7	5.1
Indonesia	0	3006	7.2	7.0
Iran (Islamic Republic Of)	0	5826	6.6	6.4
Ireland	0	28157	7.3	8.2
Israel	0	22781		7.0
Italy	0	24238	6.3	7.2
Japan	0	26220	6.0	6.5
Jordan	0	4035	7.2	5.6
Kyrgyzstan	1	1664	7.1	6.5
Latvia	1	7314	5.8	5.3
Lithuania	1	8415	6.4	5.2
Luxembourg	0	49793	7.0	7.8

Continued on next page

**Table 7 – continued from previous page**

country/region	Eastern Europe	GDP/cap PPP	Freedom	Satisfaction with your life
Macedonia, Republic Of	0	5761	5.8	5.1
Malta	0	16444	7.4	8.2
Mexico	0	9048	8.2	8.1
Morocco	0	3719	6.3	6.1
Netherlands	0	27927	6.7	7.8
New Zealand	0	18166	7.8	7.7
Nigeria	0	882	7.1	6.9
Pakistan	0	1922	4.7	4.9
Peru	0	4632	7.2	6.4
Philippines	0	3925	6.8	6.7
Poland	1	9939	6.1	6.2
Portugal	0	17596	6.9	7.0
Republic Of Korea	0	16630	7.1	6.2
Republic Of Moldova	0	1462	6.0	4.6
Romania	0	5788	6.7	5.2
Russian Federation	1	6541	5.5	4.7
Saudi Arabia	0	12461	6.6	7.3
Singapore	0	23864	7.2	7.2
Slovakia	1	11035	6.3	6.0
Slovenia	1	16184	7.2	7.2
South Africa	0	9645	6.9	6.3
Spain	0	21401	6.7	7.0
Sweden	0	24908	7.4	7.6
Switzerland	0	29118	7.2	8.0
Taiwan Province Of China			7.4	6.6
Tanzania, United Republic Of	0	541	5.8	3.9
Turkey	0	6038	5.5	5.6
Uganda	0	1270	6.8	5.7
Ukraine	1	3831	5.4	4.6
United States	0	33446	8.0	7.7
Uruguay	0	8607	7.0	7.1
Venezuela	0	5685	8.3	7.5
Viet Nam	0	2124	7.5	6.5
Zimbabwe	0	2345	5.8	3.9

## 8 Appendix B

Table 8: Correlations at person level. All correlations are significant at .01 level of significance.

Variables	GDP/cap PPP '0000	Inflation Rate '0	Unemployment Rate '0	Life Expectancy	Ex-	Satisfaction with your life	Freedom (Person)
GDP/cap PPP '0000	1.00						
Inflation Rate '0	-0.28	1.00					
Unemployment Rate '0	-0.37	0.07	1.00				
Life Expectancy	0.62	-0.23	-0.34	1.00			
Satisfaction with your life	0.30	-0.19	-0.16	0.22		1.00	
Freedom (Person)	0.14	-0.12	-0.07	0.09		0.40	1.00

Table 9: Correlations at country level level. All correlations are significant at .05 level of significance except inflation with unemployment and life expectancy with unemployment.

Variables	GDP/cap PPP '0000	Inflation Rate '0	Unemployment Rate '0	Life Expectancy	Ex-	Satisfaction with your life	Freedom (Person)
GDP/cap PPP '0000	1.00						
Inflation Rate '0	-0.26	1.00					
Unemployment Rate '0	-0.40	0.09	1.00				
Life Expectancy	0.63	-0.26	-0.23	1.00			
Satisfaction with your life	0.69	-0.40	-0.40	0.56		1.00	
Freedom (Person)	0.43	-0.33	-0.30	0.35		0.82	1.00

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