

ABSTRACT

Title of dissertation: GOODBYE LENIN, HELLO EUROPE?
AN EMPIRICAL INVESTIGATION
OF SUBJECTIVE WELL-BEING IN TRANSITION
AND POST-TRANSITION ECONOMIES

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In this dissertation, I rely on self-reported objective and subjective data to study processes related to acquiring new opportunities and exercising choice in transition and post-transition countries, i.e., the economies in Central and Eastern Europe and the Former Soviet Union, which recently underwent or are still going through transitions to democracy and market economy. The departure point is the proposition that at the macro level, transition consists of marketization and democratization processes but at the individual level, transition generated a process of acquiring autonomy, i.e., taking charge of one's own life and making personal choices instead of relying on the government. Frustration and disillusionment may accompany this process, as it is often a difficult transformation involving uncertainty and volatility, sacrifices, and changing time use, norms, or reference groups.

This dissertation consists of three separate but related essays. Specifically, Chapter 1 taps into the relationship between capabilities and subjective well-being. Chapter 2 directly builds on that by exploring the well-being consequences of the

pursuit of new opportunities through migration. Finally, Chapter 3 investigates the life satisfaction effects of joining the European Union, which was a process that provided citizens in transition economies with new rights and opportunities. The research questions in these three essays relate to broader inquiries about the well-being implications of the process of learning to be in charge of one's own life.

A fundamental, yet not well-understood determinant of human well-being is the capacity to exercise choice and live a fulfilling life. Chapter 1 explores how actual and perceived manifestations of this capacity relate to subjective well-being dimensions. The chapter furnishes evidence that in transition economies and other world regions, capabilities and subjective well-being are related and both objective and subjective capabilities are more important for life evaluations than for emotional states. Capabilities are also generally less important for the happiest respondents. We further demonstrate that the same set of capabilities and means has a slightly different relative importance for different well-being dimensions *across different regions*. We also show novel evidence related to the least well-understood subjective well-being dimension: eudaimonic happiness, which relates to having meaning and purpose in life. Finally, our results demonstrate that while employment arrangements contribute to happiness overall, they are also associated with stress and anger.

The second chapter uses Gallup World Poll data, statistical matching, and difference-in-differences to assess the effects of migration on the well-being of migrants from transition economies living in advanced countries. In addition to increasing household income, migration enhances subjective well-being. While all

migrants realize income gains, there is a substantial well-being migration premium for the unhappiest movers. Moreover, by voting with their feet, migrants not only exercise choice but also enhance their perceived opportunities, including satisfaction with freedom and standard of living. Based on the results, migration can be seen as a development mechanism as it enhances migrants' means, well-being, and capabilities.

The third chapter provides novel evidence about the perceived well-being effects of EU accession in the ten post-communist countries which joined the European Union between 2004 and 2007 (EU-10). Using difference-in-differences, the main finding is that EU accession had no immediate influence on the perceived well-being of Bulgarians and Romanians (EU-2) in 2007 but was positively related to life satisfaction in 2008-2009, with some variation by socio-demographic groups. In addition, there were EU-related well-being gains in most of the EU-8 countries, which were experienced shortly after joining. Taken at face value, the results suggest that EU membership has immediate perceived well-being effects in the more advanced transition members and is associated with well-being gains only after a lag in the less advanced ex-communist members. From a policy perspective, these results are relevant to countries aspiring to EU membership such as the Western Balkans and the Ukraine. The chapter also suggests that the increased control of corruption and EU aid were associated with higher life satisfaction in Bulgaria and Romania, although a greater share of EU imports had the opposite influence. In the EU-8, better governance, economic growth, and EU imports had a positive influence on life satisfaction, while the control of corruption had a marginally significant negative

association.

This dissertation's results have several policy implications. First, given that public policy has a role in assisting those lacking choice and freedoms by providing them with equal opportunities, the results in Chapter 1 may ultimately have importance in that arena. The findings suggest that the same set of opportunities and means may have a different meaning and value in different contexts or among different cohorts. Therefore, policies aiming to enhance opportunities may have a differential impact on subjective well-being across groups. For example, if policy-makers aim to enhance subjective well-being, they may choose to invest in objective capabilities and means (such as income, employment, and education). Alternatively, for normative reasons, decision-makers may choose to equalize capabilities of all kinds for all citizens despite the differential weights that different put on them and the differential impact on subjective well-being.

Second, immigrant well-being is not only a pivotal part of each nation's well-being but immigrant dissatisfaction may also be symptomatic of deeper social problems such as social exclusion and discrimination. While policy debates and the extant literature tend to focus on the distributional consequences of immigrants on natives in the destination countries, Chapter 2 finds that migration has positive effects on the incomes, subjective well-being, and perceived opportunities of migrants from transition economies living in advanced countries, implying that migration can be a development mechanism enhancing individual well-being. Yet, arguably migration is not a comprehensive development strategy as it does not solve deeply-rooted social problems such as corruption, poor economic policies, and market and govern-

ment failures in the sending countries.

Third, Chapter 3's findings are relevant to policymakers in the Western Balkans and the Eastern Partnership countries, which aspire to EU membership. Like Bulgaria and Romania, these candidate countries are less advanced and less prepared for membership than accession countries in previous enlargements. Therefore, if accepted into the EU, citizens in these countries will likely experience the subjective well-being gains after a lag. The results also have implications for the EU's enlargement and integration policies.

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by

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Dedication

To my mother Neli.

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List of Abbreviations

ATT	Average Treatment Effect on the Treated
BPL	Best Possible Life
CCEB	Candidate Countries Eurobarometer
CEE	Central and Eastern Europe
CF	Cohesion Fund
DID	Difference-in-Differences
EaP	Eastern Partnership
EB	Eurobarometer
EBRD	European Bank for Reconstruction and Development
ENP	European Neighborhood Policy
ESS	European Social Survey
EU	European Union
FDI	Foreign Direct Investment
FSU	Former Soviet Union
GDP	Gross Domestic Product
GNI	Gross National Income
GWP	Gallup World Poll
IMF	International Monetary Fund
ISPA	Instrument for Structural Policies for Pre-Accession
IOM	International Organization for Migration
LAC	Latin America and the Caribbean
MCV	Mechanism for Cooperation and Verification
NATO	North Atlantic Treaty Organization
OECD	Organization for Economic Cooperation and Development
PPP	Purchasing Power Parity
PSM	Propensity Score Matching
QDID	Quantile Difference-in-Differences
SWB	Subjective Well-being
US	United States
USSR	Union of Soviet Socialist Republics (Soviet Union)
WB	World Bank
WDI	World Development Indicators
WGI	Worldwide Governance Indicators

Chapter 1: To Have or to Be? Happiness and Capabilities in Transition (with Carol Graham)

1.1 Overview

Using Gallup World Poll data for 2009-2012, we explore the relationship between perceived and actual opportunities and subjective well-being, with a particular focus on transition economies. With the collapse of the communist regimes, citizens in these countries had to promptly learn to make autonomous choices and take initiative, instead of depending on the state. We provide evidence that in transition economies and other world regions, capabilities and well-being are related and both objective and subjective capabilities are more important for life evaluations than for positive hedonic well-being. Capabilities are also generally less important for the happiest respondents. We further demonstrate that the same set of capabilities and means has a slightly different relative importance for hedonic and evaluative well-being *across different regions*. We also show novel evidence related to the least well-understood subjective well-being dimension: eudaimonic happiness, which relates to having meaning and purpose in life. Specifically, perceived capabilities, personal and family traits, smiling, and between-country differences are the biggest

predictors of meaning and purpose in life in transition economies. Finally, our results demonstrate that while employment arrangements contribute to happiness overall, they are also associated with stress and anger.

Given that public policy has a role in assisting those lacking choice and freedoms by providing them with equal opportunities, the results in Chapter 1 may ultimately have importance in that arena. The findings suggest that the same set of opportunities and means may have a different meaning and value in different contexts or among different cohorts and thus policies aiming to enhance opportunities may have a differential impact on subjective well-being across groups. For example, if policymakers aim to enhance evaluative well-being, they may choose to invest in objective capabilities and means (such as income, employment, and education). Alternatively, for normative reasons, decision-makers may choose to equalize capabilities of all kinds for all citizens despite the differential weights that different people put on them and the differential impact on subjective well-being. We hope to contribute insight into one of the most complex and important well-being determinants, namely, people's capacity to pursue fulfilling lives.

1.2 Introduction

1.2.1 Human Well-being and Capabilities

Because human well-being is a multidimensional concept, defining and measuring the distinct well-being elements can broaden and deepen our understanding of social welfare. Subjective well-being metrics complement Gross Domestic Prod-

uct (GDP) indicators to furnish a more comprehensive view of the human condition. Moreover, a fundamental well-being determinant, which is the focus of this study, is the individual capacity to make autonomous choices and pursue a fulfilling life. The purpose of this paper is to contribute to our understanding of *actual* and *perceived* aspects of this capacity and their empirical relationship with subjective well-being dimensions (i.e., hedonic, evaluative, and eudaimonic well-being defined below). We implicitly argue that human development and well-being are ultimately about enlarging individual choices and opportunities, so that people can "lead the kinds of lives we have reason to value" (Sen, 1999).¹ Adapting concepts from the human development approach, we define "agency" as the capacity to pursue a purposeful and fulfilling life (Graham, 2011), and "capability" as "the freedom to achieve various lifestyles" (Sen, 1999).²

Furthermore, the human development approach distinguishes between *func-*

¹In this chapter, we consider the capacity to live a purpose life (i.e., agency) as a *cause* of well-being, which allows us to study the relationship between its manifestations and subjective well-being. While Alkire, Finnis, and Nussbaum view agency as a part of human well-being (see (Alkire, 2002, 2005)), Sen (1985) and Crocker (2008) clearly distinguish between well-being and agency. Alkire (2005) introduces the idea that agency can be both a dimension and a cause of well-being.

²We use "agency," "autonomy," "being in charge of one's own life" and "capacity to lead a purposeful life" interchangeably. This is in sharp distinction with the principal-agent terminology in institutional economics, according to which the agent acts on behalf of the principal (Crocker, 2012). We use the terms "freedoms," "opportunities," and "capabilities" interchangeably. For more nuanced definitions and distinctions and a philosophical discussion, see Sen (1985), Crocker (2008), and Crocker and Robeyns (2009).

tionings, which are acts and expressions of being and doing such as being fed, being hungry, being sheltered, and *capabilities*, which comprise the freedoms and opportunities to act to achieve desirable functionings (Hall, 2013). Agency is the capacity to choose among different opportunities to achieve valuable states of being and doing.

Recognizing that there are alternative perspectives and approaches, in this paper, we conceptualize of capabilities as manifestations of the capacity to live a purposeful life and are interested in how different capabilities relate to subjective well-being dimensions. As in other quantitative studies on capabilities and well-being, in our analysis, capabilities are social indicators reflecting people's quality of life (Robeyns, 2005).

Assuming that subjective well-being is a function of capabilities, the goal is to identify and measure a set of such capabilities.³ At present, no procedural method exists for developing and selecting capability metrics (Robeyns, 2005) and different authors select different approximations of capabilities. There are several attempts to measure capability indicators based on questions in existing surveys (Anand, Hunter, & Smith, 2005; Ramos & Silber, 2005; Veenhoven, 2010) and specially designed questionnaires (Anand & van Hees, 2006; Anand et al., 2009; Anand, Krishnakumar, & Tran, 2011; Simon et al., 2013). Anand and van Hees (2006) argue

³Unlike Sen and Crocker, Nussbaum (2011) offers a pre-determined list of ten central capabilities as the minimum threshold for human flourishing. Sen considers Nussbaum's list as one of possible sets of capability lists and thinks that this list is too fixed and does not allow for evaluation and deliberation. According to Crocker (2008), moreover, there should be no list of capabilities as contexts vary and the lists cannot and should not be seen as a substitute for public dialogue and deliberation.

that survey questions about "scope to achieve things" and "limitation of opportunities" can capture capabilities.

Building on these studies, we use self-reported measures available in the Gallup World Poll (GWP) to select proxies for capabilities and means. Our goal is to select variables that capture whether respondents have the opportunities, tools, and means to live the kinds of lives they have reason to value. In the absence of a set list of capabilities and consensus on how to measure them, the selection of capability proxies based on existing data is subject to epistemological errors. In an effort to minimize these biases, we include variables that have been used in previous studies and attempt to capture a range of capability concepts. We further distinguish between *objective* and *perceived* opportunities and means that serve as proxies for the freedoms, means, and opportunities to achieve things in life. The perceptions variables include: (i) perceptions of health; (ii) belief in hard work as a means of getting ahead; (iii) satisfaction with freedom to choose in life. The objective metrics are: (i) household income (a proxy for means); (ii) education; and (iii) employment status. Ideally, we would like to measure all capability variables using objective indicators (as opposed to self-reported subjective metrics) but are constrained by what questions are already available in GWP (Table A.1).

Furthermore, subjective well-being has three dimensions: hedonic, evaluative, and eudaimonic (Figure 1.1) (Durand & Smith, 2013; OECD, 2013b; Stone & Mackie, 2013). First, *evaluative* well-being is a reflective assessment of people's lives as a whole rather than a description of an emotional state. Judgments about life satisfaction could also be applied to specific life domains such as work, health,

community, and relationships (Stone & Mackie, 2013). This dimension is measured through survey questions about satisfaction with life as a whole and the Cantril ladder of life question (which asks respondents to rank their current life relative to their best possible life), among others (Cantril, 1965). In this paper, we propose that and test whether evaluative well-being is inherently related to the opportunities that people have to exercise choice and to pursue fulfilling lives (i.e., their capabilities and autonomy).

Second, the *hedonic* subjective well-being dimension, or affect, reflects affective states and emotional experiences related to people’s job quality, their immediate health conditions, daily work commutes, and social networks at a particular point in time.⁴ Hedonic well-being is about how people experience their lives rather than how they remember them (Kahneman & Krueger, 2006). This dimension encompasses negative emotions such as worry and stress (i.e., negative affect), and positive emotions of pleasure, enjoyment, and happiness at the moment (i.e., positive affect). It is measured through survey questions about experiencing positive and negative feelings (e.g., “Were you happy yesterday?,” “Did you experience stress yesterday?”). The distinction between positive and negative affect (Figure 1.1) is important as one is not the inverse of the other and track differently from evaluative well-being and from one another (Stone & Mackie, 2013).⁵

⁴Psychologists use the term “affect” to describe feelings and emotions (OECD, 2013b).

⁵We use the term “happiness” to mean positive hedonic well-being. We use the terms “affect” and “emotional states” interchangeably. We use the terms “life evaluations,” “life satisfaction,” and “evaluative well-being” interchangeably.

Research shows that respondents clearly distinguish between affect and life evaluations and answer these questions differently. For example, a very destitute person might report to be happy in the hedonic sense while also indicating low life satisfaction (Helliwell, Layard, & Sachs, 2013). From a public policy perspective, this distinction matters and can allow policymakers to better target poverty and destitution.

Eudaimonic well-being is about people's perceptions of worthwhiliness, meaning, and value of their life and reflects the ancient Greek notion of happiness as life purpose, challenges, and growth (Stone & Mackie, 2013). This concept goes beyond the reflections of life as a whole and emotional states and focuses on flourishing and the realization of human potential (OECD, 2013b). While there is a dearth of research on this subjective well-being dimension, it may be reflected in both hedonic and evaluative constructs, despite the fact that there are discrepancies between what people find pleasurable and enjoyable vs. what they find rewarding or meaningful (White & Dolan, 2009). Although there is a general consensus about evaluative and hedonic well-being, the conceptual framework for eudaimonic well-being is less well-established (OECD, 2013b). Subjective well-being metrics are valid and reliable, psychometrically sound, internally consistent and comparable across individuals, different levels of development, and over time (Diener, Suh, Lucas, & Smith, 1999; Diener, Inglehart, & Tay, 2012; Helliwell, Barrington-Leigh, Harris, & Huang, 2010; Krueger & Schkade, 2008) and are increasingly used in public policy and economic analyses (Diener, Lucas, Schimmack, & Helliwell, 2009; Di Tella & MacCulloch, 2006; O'Donnell, 2013; Stone & Mackie, 2013).

1.2.2 Transition Economies

We focus on transition economies, i.e., the countries and Central and Eastern Europe (CEE) and the Former Soviet Union (FSU) which recently underwent or are still going through marketization and democratization processes. It is especially important to understand subjective well-being and capabilities in the transition context as with the collapse of the communist regimes, citizens in these countries had to promptly acquire and utilize the capacity to make autonomous choices and take initiative instead of depending on the state to provide for them. This information is relevant to policymakers seeking to improve well-being through investments in capabilities such as health and education. Furthermore, while we realize that people take advantage of various opportunities and "convert" them to well-being at different rates (Hall, 2013), we argue that transition economies are especially appropriate for studying the capabilities-well-being link as they furnish a context of changing norms and volatility, in which capabilities may play a particular role.

In June 1989, communist regimes in the USSR and Eastern Europe, which did not permit freedom of association or multiparty elections, covered 9 percent of the world's population and 10 percent of the world's territory (Milanovic, 1998). The end of the Cold War, however, led to fundamental global changes and the alleged "end of history" (Fukuyama, 1989). Since then, countries in Central and Eastern Europe (CEE) and the Former Soviet Union (FSU) experienced various socio-economic and political reforms, which brought about experiences unknown during socialism. Unemployment, inequality, and income volatility accompanied the more

positive experiences of obtaining new political rights and civil liberties. While the beginning of the transition process was turbulent and unpromising (Murrell, 1996), some of these ex-communist economies are now EU members and even classified as "advanced" economies (i.e., the Czech Republic, Estonia, Slovakia, and Slovenia) (IMF, 2013).

Despite their initial declines, income and consumption indicators improved during transition. For example, while positive from 1980 to 1988, real GDP per capita in the region was consistently negative until the mid-1990s (Figure 1.2 and also (Milanovic, 1998)). Real GDP growth between the 1980s and 2012 was on average 72 percent despite declines in Georgia, Kyrgyzstan, Moldova, Serbia, Tajikistan, and the Ukraine (Table 1.1). Moreover, by 2004, per capita consumption of household goods (e.g., residential housing, cars, landlines, computers) was 34 percent above the pre-transition levels (Guriev & Zhuravskaya, 2009). Table 1.1 also indicates improvements in the World Bank's Voice and Accountability index since it was first introduced in 1996.⁶ The rising income and consumption indicators suggest that transition was a success. If we include the non-monetary gains from enhanced political and personal freedoms and the time savings from not waiting in line for rationed goods, then the conclusion may be supported even further (Guriev

⁶The index captures the extent to which a country's citizens are able to participate in selecting their government, freedom of expression, freedom of association, and a free media (Kaufmann, Kraay, & Mastruzzi, 2010). The former Yugoslav countries and the Ukraine experienced the most pronounced improvements though there has been some backsliding in some of the FSU countries, most notably Russia.

& Zhuravskaya, 2009).

Despite these gains in income and freedoms, ordinary citizens in the CEE and FSU economies are dissatisfied with transition. According to EBRD data from 2006, only 35 percent of respondents agreed with the statement that the economic situation in their country is better today than in 1989 (49 percent disagreed). Dissatisfaction with transition translates into low self-reported life satisfaction. The results from over 70 studies on happiness in transition imply that people paid for transition with their happiness (Easterlin, 2009; Selezneva, 2011). While pre-1989 life satisfaction data are generally scarce, the evidence shows that life satisfaction in Russia, which had been falling since the 1980s, plummeted in the 1990s, and reached the world's lowest levels ever recorded (Inglehart, Foa, Ponarin, & Welzel, 2013). Easterlin (2009) shows that life satisfaction in Hungary, Russia, and Belarus declined dramatically from the 1980s until 1990s. In most transition economies, life satisfaction and income have risen after their drop in the 1990s, although the life satisfaction recovery was less than that in GDP. The literature offers various explanations for this "unhappiness in transition," including the depreciation of education acquired under socialism, deteriorating public goods, income inequality (Guriev and Zhuravskaya, 2009); stagnating labor market conditions (Easterlin, 2009); and changing norms and volatility (Graham & Pettinato, 2002a).

1.2.3 Research Questions and Contributions

Unlike other studies on the topic, this paper is not about the determinants of unhappiness in transition. Rather, it investigates the relationship between subjective well-being and objective and perceived freedoms and opportunities in transition economies. Its main goal is to discern the relative importance of objective vs. perceived opportunities for different subjective well-being dimensions. The departure point is the proposition that at the macro level, transition consists of marketization and democratization processes but at the individual level, transition generated a process of acquiring personal autonomy, i.e., taking charge of one's own life and making personal choices instead of relying on the state. Frustration and disillusionment may accompany the transition process, as it is often a difficult transformation involving uncertainty and volatility, sacrifices, and changing time use, norms, or reference groups.

This study asks the following questions: (i) Are *perceived* or *actual* opportunities and means more important for evaluative *or* hedonic well-being in transition economies? (ii) Does the well-being-opportunities link in transition economies differ from that in other regions? (iii) Does a given set of tools and capabilities have the *same* association with evaluative well-being for the happiest and unhappiest citizens in transition economies?

First, we find that the same set of capabilities and means is more important for life evaluations (i.e., evaluative well-being) than for experienced happiness (i.e., hedonic well-being)s. Second, the regional comparisons indicate a pattern across

development levels, with respondents in the wealthier EU-15 countries putting a smaller emphasis on income but a higher emphasis on freedom than respondents in transition economies and Latin America and the Caribbean (LAC), which corroborates previous research findings (Inglehart, Foa, Peterson, & Welzel, 2008). Smiling and personal characteristics are very important for the emotional states (i.e., experienced happiness) of respondents in poorer regions.⁷ When we split transition economies by whether they are EU members or not, both income and autonomy matter more to evaluative well-being in the EU members than in the non-EU countries.

Importantly, 25 years after the fall of the communist regimes in CEE and Central Asia, citizens in these states value belief in hard work when they think about their lives as a whole as much as those in the rich EU-15 countries, and value freedom more than their counterparts in the less-developed LAC context. The results show, moreover, that the ex-communist EU members emphasize freedom and income more than their non-EU counterparts. Third, we furnish novel evidence about the least well-understood subjective well-being dimension, namely *eudaimonic* well-being (related to feelings of meaning and purpose in life). We find that perceived capabilities, personal and family traits, smiling, and between-country differences are the biggest predictors of meaning and purpose in life in transition economies. Fourth, we also show that most perceived and actual capabilities and means are less important to subjective well-being at the highest levels of the subjective well-being

⁷Table A.2 shows the main results excluding the smiling variable and Table A.3 presents findings using an optimism control instead.

distribution. Fifth, our evidence suggests that while employment can promote hedonic and evaluative well-being, it can also contribute to stress and anger in transition economies.

1.3 Literature Review

Empirical research has established the correlation between capabilities and subjective well-being (Anand & van Hees, 2006; Anand et al., 2005, 2009; Van Ootegem & Spillemaeckers, 2010; Veenhoven, 2010) and the link between freedom of choice/locus of control and well-being (A. Becker, Deckers, Dohmen, Falk, & Kosse, 2012; Veenhoven, 2000; Verme, 2009).⁸ In this paper, we build on research suggesting that which subjective well-being dimension individuals emphasize may be mediated by their capacity to control their lives (Graham & Lora, 2009; Graham & Pettinato, 2002b; Kahneman & Deaton, 2010). The literature shows that evaluative and hedonic well-being have different correlates. Kahneman and Deaton (2010) find that health, caregiving, loneliness, and smoking better predict hedonic well-being, while income and education (which are objective capabilities and means) have a greater association with evaluative well-being. The authors also find that income correlates much more closely with evaluative than hedonic well-being in the United States. Specifically, the positive correlation between hedonic well-being and income ends at about \$75,000 (i.e., median income in the United States) but the association between income and evaluative well-being continues linearly. This suggests that

⁸See Alkire (2005) for a summary of subjective quantitative studies of human agency.

beyond a certain threshold, additional income cannot enhance daily emotions (although insufficient income is clearly linked to suffering and negative moods), but higher levels of income offer more choices and opportunities. Similarly, Tay and Diener (2011) find that life evaluation is more closely associated with basic needs fulfillment and country-level economic conditions, while positive and negative affect are more closely associated with individual level conditions (social ties, respect, and autonomy).

Graham and Lora (2009) show, moreover, that the most pertinent variables for the reported life satisfaction of the Latin American poor (i.e., those with incomes below the median), after having enough food to eat, are friends and family on whom to rely in times of need. In contrast, the most important factors for the life satisfaction of the rich (i.e., those with incomes above the median) are work and health. Friends and family are likely the vital safety nets that make daily life tolerable for the poor in the hedonic sense, while work and health provide respondents means to make life choices.

Another manifestation of the different subjective well-being dimensions that individuals emphasize is the "happy peasant and frustrated achiever" paradox, whereby very poor people state that they are happy at the same time that cohorts experiencing positive income change and mobility report deep frustration (Graham & Pettinato, 2002b). It is likely that low-income respondents who have adapted to adversity emphasize positive hedonic well-being (e.g., happiness), while those with raised expectations in the process of acquiring means and capabilities are thinking about their lives as a whole (i.e., evaluative well-being). In addition, the process

of acquiring capabilities is unpleasant (especially in terms of hedonic well-being) as it is paved with uncertainty, rapid change, and altered norms and reference groups (Graham, 2009; Graham & Lora, 2009). The latter statement hinges on the unanswered question of whether some unhappiness necessarily underlies the search for opportunity and progress, or whether the associated changes reduce subjective well-being (in all its dimensions), at least in the short-term.

Individuals who focus primarily on daily (i.e., hedonic) experiences - due to low expectations, lack of autonomy, or imposed social norms - may have less incentive to invest in the future. In contrast, those who are forward-looking and goal-oriented may at times sacrifice daily experiences for longer-term objectives and anticipated well-being in the future. The cross-sectional nature of our data do not allow us to explore such dynamics and the possibility of sacrificing hedonic well-being for long-term gains. In addition, because we have pooled cross-sections, rather than a panel, we cannot address issues of causality.

1.4 Methods

1.4.1 Main Model

We explored the subjective well-being dimension Y of individual i , in year t , residing in country c , conditioned on socioeconomic and demographic traits:

$$Y_{itc} = X'_{itc}\alpha + T'_{itc}\beta + Z'_{itc}\gamma + \kappa_c + \tau_t + \varepsilon_{itc} \quad (1.1)$$

where X' is a vector of perceived and actual capabilities and means (the absence of a health problem; belief in hard work; perceptions of autonomy; income, education, and employment) T' is a vector of observed individual-level variables such as gender, age, marital status, and others, Z' is a vector of person-specific observed household-level variables such as household size, location (i.e., rural or urban), and others; α , β , and γ are coefficient vectors, κ_c represents country dummies, τ_t represents controls for time (year of survey), and ε_{itc} is the stochastic error term.

For ease of interpretation, all baseline regression equations are estimated using Ordinary Least Squares (OLS) as ignoring the ordinality of subjective well-being data has little effect on the results (Ferrer-i Carbonell & Frijters, 2004). Variance decompositions based on logistic and ordered logistic regressions are moreover virtually impossible to perform with a large number of covariates as the orderings of the predictors matter for calculating relative importance (Menard, 2004).

1.4.2 Variance Decompositions and Standardized Coefficient Estimates

This discussion draws on (Fields, 2004). To discern whether *perceived* or *actual* opportunities and means are relatively more important for evaluative and hedonic well-being, we rely on variance decompositions methods and standardized coefficient estimates. Standardized coefficient estimates measure the *relative influence* in the statistical sense while variance decompositions allow to discern the *relative importance* of a variable based on its share of the explained variance (Menard,

2004). As is well-known, OLS results demonstrate the effect of a one-unit change in the independent variable on the dependent variable, holding constant the other included variables in the model. The R^2 measures how much of the variance in the dependent variable is explained by the included independent variables. When the included independent variables are not measured on the same scale, standardized coefficient estimates provide a measure of relative influence. In contrast, variance decompositions allow to discern how much of the variation in the dependent variable is explained by each of the independent variables (Fields, 2004). In a method proposed by Fields (2003), the variation in the dependent variable is decomposed into as many parts as factors so that the total variance is equal to the sum of the variances explained by each variable. If the standard regression equation is (Fields, 2004):⁹

$$Y = \beta^0 + \sum_{k=1}^K X^k \beta^k + \varepsilon, K = 1, \dots, n, \quad (1.2)$$

the variance of Y can be decomposed as:

$$var(Y) = \sum_{k=1}^K cov[X^k \hat{\beta}^k, Y] + cov[\hat{\varepsilon}, Y]. \quad (1.3)$$

The share of the variance of Y attributable to the k th explanatory variable is given by:

$$s(X^k) = \frac{cov[X^k \hat{\beta}^k, Y]}{var(Y)}, \quad (1.4)$$

⁹We used the Stata package `-ineqrbd-` (Fiorio & Jenkins, 2010) for the decompositions.

and the share of the residual is:

$$s(\hat{\varepsilon}) = \frac{\text{cov}[\hat{\varepsilon}, Y]}{\text{var}(Y)}. \quad (1.5)$$

Expressing $s(X^k)$ in terms of percentage contribution to R^2 (whereby each share sums to 100 percent):

$$p(X^k) = \frac{s(X^k)}{R^2} \quad (1.6)$$

Negative values for $p(X^k)$ are possible when the multiple regression coefficient on (X^k) and the simple correlation coefficient on (X^k) have the opposite signs (recognizing that $p(X^k) = \frac{\hat{\beta}^k \hat{\beta}_{X^k, Y}}{R^2}$).

1.4.3 Quantile Regressions

We follow a method described by Binder and Coad (2011) based on Koenker and Bassett (1978). While standard regressions describe the conditional mean, quantile regressions allow us to explore the entire conditional distribution by analyzing the effects of the covariates at different points of the conditional subjective well-being distribution. Rather than splitting the sample into segments based on values of the dependent variable (and thus losing statistical validity), quantile regressions weight data points depending on whether they are above or below the best fit line. In essence, quantile regressions work like OLS but instead of minimizing the sum of squared residuals, they minimize the sum of equally weighted absolute residuals (for the median), and the sum of differentially weighted residuals for the other quantiles (Neumayer, Plümper, & Barthel, 2014). For example, if regressions are estimated

at the 75th percentile, then observations above the best fit line are given weights that are 7.5 times higher than those below the best fit line (Binder & Coad, 2011).

Quantile regressions have several informational and methodological advantages. First, from a policy perspective, it may be important to understand the distributions extremes in order to know whether particular policies (e.g., enhancing capabilities through universal education) are equally relevant for the happiest and unhappiest individuals. Second, from a normative point of view, some policies may have a small positive effect on the majority but still be morally problematic if they create disproportionate gains or losses for a minority. Third, methodologically, estimating means across heterogeneous populations may seriously under- or over-estimate the impacts or even fail to identify some effects. Quantile regressions do not assume that the error terms are identically distributed at all points of the conditional distribution, which allows for individual heterogeneity as the slope parameters differ along the quantiles (Binder & Coad, 2011). The quantile regression model is:

$$Y_{it} = X'_{it}\beta_{\theta} + \varepsilon_{\theta_{it}} \tag{1.7}$$

with

$$Quant_{\theta} = (Y_{it}|X'_{it}) = X'_{it}\beta_{\theta} \tag{1.8}$$

where Y_{it} is subjective well-being (Best Possible Life (BPL) defined below), X is a vector of covariates, β is the vector of parameters to be estimated, and ε is the stochastic error term. $(Y_{it}|X'_{it})$ is the θ th conditional quantile (where $0 < \theta < 1$) given the covariates; θ solves the following minimization problem:

$$\begin{aligned}
\min_{\beta} \frac{1}{n} \left\{ \sum_{i,t:y \geq X'_{it}\beta} \theta |Y_{it} - X'_{it}\beta| + \sum_{i,t:y < X'_{it}\beta} (1 - \theta) |Y_{it} - X'_{it}\beta| \right\} \\
= \min_{\beta} \frac{1}{n} \sum_{i=1}^n \rho_{\theta}(u_{\theta it})
\end{aligned} \tag{1.9}$$

where $\rho_{\theta}(\cdot)$ is:

$$\rho_{\theta}(u_{\theta it}) = \begin{cases} \theta u_{\theta it} & \text{if } u_{\theta it} \geq 0 \\ (\theta - 1)u_{\theta it} & \text{if } u_{\theta it} < 0 \end{cases} \tag{1.10}$$

The quantile equations are operationalized using Stata's `-sqreg-` command. We used bootstrapped standard errors (with 20 replications).¹⁰

Binder and Coad's (2011) work highlights the differential importance of education, social factors, and income diminishes at higher levels of the subjective well-being distribution. For instance, while education is positive for subjective well-being in general, it is negatively correlated with well-being at the top of the happiness distribution. This could be due to the fact that learning makes the "happy peasants" realize their absolute or relative deprivation and lack of choice and opportunities. It may also be that the most educated have unrealistic expectations and ambitions and even their autonomy and capabilities cannot make them happy (Graham, 2011). It is likely, therefore, that the same capabilities, means, and autonomy, have different meaning and importance for people at different points of the SWB distribution.

¹⁰For further discussion of the quantile regression method, see Buchinsky (1998), Cade and Noon (2003), and Koenker and Hallock (2001).

1.5 Data

The data are from the Gallup World Poll (GWP), which is an annual survey run by the Gallup Organization in about 160 countries worldwide. Polling about 1,000 respondents per country, the survey is nationally representative (of populations aged 15 and over). Because different individuals are interviewed each year, the dataset represents pooled cross-sections rather than a panel. We use the 2009-2012 sample as prior years lack employment status data. The surveys are face-to-face in countries where telephone coverage is limited, and by landline and cell phone in those where it is universal (primarily the OECD countries). The difference in interview mode may bias subjective well-being responses, for which we control, albeit imperfectly, by including country dummies in the regressions.¹¹

¹¹Individuals respond differently to subjective well-being questions in face-to-face vs. on the telephone. Dolan and Kavetsos (2012) find that in-person responses are biased downwards compared to telephone responses in the UK. While we cannot control for this as precisely as we would like, our regressions have country dummies, which should at least in part capture differences in response modes across countries. Panel data from the UK also show that a partner's presence during the interview was associated with under-reporting job satisfaction while the presence of children increased the likelihood of over-reporting it for women (Conti & Pudney, 2011). We do not have a variable for whether the partner or children were present at the time of the interview in GWP but could control for audience effects by including controls for household size, marital status, and has children in the household.

1.5.1 Dependent Variables

Our analyses use five dependent variables (in separate regressions) (Table A.1). First, we measure evaluative well-being using the best possible life (BPL) Cantril ladder question, which asks respondents to compare their life to the best possible life they can imagine on an eleven-point scale. Because it frames the individual's reported well-being to a notional reference norm (i.e., one's best possible life), answers to this question typically correlate more closely with income than open-ended happiness or life satisfaction questions (Graham, Chattopadhyay, & Picon, 2010b). The responses to the BPL question run on an eleven-point scale, corresponding with the steps on the notional ladder, where zero represents the worst possible life, and ten corresponds to the best possible life. Second, we use one variable to assess positive hedonic well-being, namely, whether or not the respondent experienced happiness yesterday; and two questions to assess negative hedonic well-being, i.e., whether or not the respondent felt stress and whether she experienced anger yesterday.

We also present novel evidence about the relationship between various capabilities and means and a proxy variable for *eudamonic* well-being, the well-being dimension related to meaning and purpose in life. The question was asked in 2009-2011 only in several countries.¹²

¹²The countries include: Albania, Bangladesh, Bosnia and Herzegovina, Bulgaria, Chad, Croatia, Indonesia, Kazakhstan, Kosovo, Kyrgyzstan, Macedonia, Malaysia, Mali, Montenegro, Niger, Nigeria, Senegal, Serbia, Tajikistan, Tanzania, and Turkey.

1.5.2 Focal Independent Variables

If individual subjective well-being is a function of a vector of perceived and actual opportunities, our strategy is to find reasonable proxies for these opportunities using the available variables in the GWP. Since we focus on self-reported data, there may be a discrepancy between respondents' perceptions of opportunities and capabilities and the freedoms actually have but that we cannot capture. We included household income, employment status, and educational attainment as proxies for *objective* capabilities and means (Table A.1). The rationale is that these three variables reflect objective means and tools that respondents have to make choices about the kinds of lives they have reasons to value. GWP's employment categories distinguish between those employed full-time, the self-employed, part-time employees (both voluntary and involuntary), the unemployed, and those out of the labor force. In all regressions, the reference group is "out of the labor force."

We would have liked to include objective capability variables reflecting health status, nutrition, and others but we are limited by the data availability. We used perceptions of capabilities as proxies for these objective capability concepts. Specifically, we used: perceptions of health, satisfaction with freedom to choose, and belief that hard work gets you ahead in life (Table A.1).¹³

First, the health perception variable is based on a question asking respondents

¹³We considered an indicator for whether the respondent has the opportunity to do her best at work and in indicator for whether he could choose how to spend his time but excluded these due to many missing observations.

whether they have health problems preventing them from doing things that other people their age normally do. We define this variable as the absence of a health problem or the capability to engage in activities. The literature shows a strong positive association between health and subjective well-being, which is stronger than that between well-being and income, with the causality running both ways (Graham, 2008; Veenhoven, 2010). Health is important for allowing individuals to take advantage of other opportunities and is one of Nussbaum's ten central capabilities (Nussbaum, 2011).¹⁴

Second, *belief in hard work as a means of getting ahead* reflects perceptions of social mobility and fairness. We consider this variable a capability proxy as it reflects personal beliefs about the role of individual effort vis-a-vis political connections or luck. While this variable reflects capabilities that are circumstantial and a function of the politico-economic situation in the country, it is at the individual level and captures attitudes about effort and self-efficacy. For example, Americans have a lower inequality aversion than Europeans (Alesina, Di Tella, & MacCulloch, 2004), partly because of the belief that inequality signifies that one can get ahead through hard work.

Third, the *satisfaction with freedom* variable relates to people's opportunities to choose and is a proxy for autonomy (i.e., "agency"). Ideally, we would like to have a metric about perceptions or ranking of autonomy, as opposed to satisfaction with freedom but are again limited by the available data. Research shows that those

¹⁴The absence of a health problem variable is insignificant in Anand et al.'s subjective well-being regression (2011).

who believe that outcomes in their lives depend on internal factors such as effort appreciate freedom more than those who believe in factors beyond their control such as destiny (Verme, 2009).

1.5.3 Other Controls

In addition to the socio-demographic variables (age, age squared, gender, marital status, religiosity, household size, children in household, urban/rural location), we included two additional controls for whether the respondent: (i) smiled yesterday and (ii) learned or did something interesting the day before. First, those with higher levels of positive hedonic affect (i.e., smiling), may be more likely to perceive that they have capabilities and means. Because both happiness and capabilities are self-reported, unobservable personality traits likely play a big role, implying that the capabilities-well-being relationship suffers from endogeneity.¹⁵ As we show in the results section, unobserved personality traits have a greater impact in the hedonic rather than the evaluative well-being regressions, as the BPL question is more precisely framed. We also report the main findings without the smiling variable and

¹⁵Anand et al. (2011) use a generalized linear latent and mixed model (GLAMM) to assess the impact of capabilities on life satisfaction in the presence of endogeneity (i.e., personality traits) and find that the GLAMM results do not differ from their baseline findings (i.e., those not correcting for endogeneity). They conclude that even though some personality traits may be important for the capability-happiness relationship, their inclusion or exclusion makes little difference for the overall direction and magnitude of the results. However, their dependent variable is satisfaction with life overall (and not best possible life) and does not allow them to discern the role of unobservable personality traits for the two different well-being dimensions that we include in our analysis.

using a control for whether the respondent feels optimistic (Tables A.2-A.3).

In addition, learning is likely positively correlated with subjective well-being, especially for respondents who have means and opportunities. It may moreover decrease the subjective well-being or add to the stress and anger of those lacking capabilities. For example, research shows that learning through information and communication technologies can be beneficial to well-being, but lead to frustration among poor cohorts, likely because of providing information about material goods or opportunities and choices they lack (Graham & Nikolova, 2013a).

1.6 Summary Statistics

Residents of transition countries have lower evaluative and positive hedonic well-being and experience more anger than those in the EU-15 and LAC but report lower stress levels (Table 1.2).¹⁶ Transitional citizens are also less likely to report that they are healthy, believe in hard work, and are less likely to be satisfied with

¹⁶The EU15 countries are: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden, and United Kingdom. The transition economies are: Albania, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Estonia, Georgia, Hungary, Kazakhstan, Kosovo, Kyrgyz Republic, Latvia, Lithuania, Macedonia FYR, Moldova, Mongolia, Montenegro, Poland, Romania, Russian Federation, Serbia, Slovak Republic, Slovenia, Tajikistan, Turkmenistan, Ukraine, and Uzbekistan. The twenty-five LAC countries are: Argentina, Belize, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Guatemala, Guyana, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Puerto Rico, Trinidad and Tobago, Uruguay, and Venezuela.

their freedom than respondents in other regions. The result that the residents of ex-communist countries report lower satisfaction with freedom than Latin Americans resonates with Inglehart et al.'s (2008) finding that 21 percent of transitional citizens responded that they had a great deal of choice, compared with 45 percent of Latin Americans. In terms of objective capabilities and means, transitional citizens are slightly less educated than respondents in the EU-15, but are more educated than those in LAC. There is a big household income disparity between the EU-15 countries and transition economies: incomes in the EU-15 are more than 3 times higher than those in transition economies (in PPP terms).

1.7 Results

1.7.1 Evaluative Well-being (BPL) and Positive Hedonic Well-being (Experienced Happiness) in Transition Economies

Table 1.3 demonstrates the main findings regarding the association of the different objective and perceived capabilities and evaluative well-being (*BPL*) and positive affect (*experienced happiness yesterday*) in transition economies. The table shows the unstandardized OLS coefficient estimates, the fully standardized coefficients, and the percentage contribution of each included variable to the total explained variance. This discussion will focus on the decomposition results. The interpretation of the standardized coefficients is in terms of standard deviations. For example, based on Table 1.3, one standard deviation increase in log income is associated with a 0.199 standard deviations increase in the predicted value of BPL.

The R^2 value indicates that the included variables explain about a quarter in the variation in both *BPL* and *experienced happiness yesterday*.¹⁷ First, demographic variables (age, age squared, gender, marital status, religiosity, household size, child in the household, and urban/rural location) constitute about one tenth of the explained variation in both hedonic and evaluative well-being. Second, country and time differences explain 22 percent of the variation in BPL, but 14 percent of the variation in happiness. Third, regarding the relative importance of objective and subjective capabilities, Table 1.3 demonstrates that both objective and subjective capabilities are relatively more important for BPL than for hedonic happiness, while affect (i.e., smiling yesterday) is more important for hedonic happiness.¹⁸ Capabilities (both objective and perceived) explain about 52 percent of the variation in BPL but only 9 percent of the variation in happiness (while positive affect explains 47 percent of the latter variation). Objective capabilities (education, income, and employment) explain 31 percent of the variation in BPL, with income's share being 25 percent. However, learning (or doing something interesting) is a stronger predictor of hedonic than evaluative well-being, likely because it allows respondents a diversion from the difficulties and stress of daily life or deepens their knowledge

¹⁷As Tay and Diener (Tay & Diener, 2011) advise, random measurement error might lower the total amount of the variance in Y explained if the underlying true well-being scores were perfectly measured.

¹⁸Tables A.2 - A.3 show the main results without the smiling control and with a control for optimism, respectively. While the relative influence of the variables in the models changes, the main conclusions still hold: capabilities of both kinds are relatively more important for evaluative well-being (BPL) than for hedonic well-being.

of how to better navigate their lives. If we compare the standardized coefficient estimates (within regressions only), income, smiling, health, and hard work have the largest coefficient estimates in the BPL regression, while smiling has the largest coefficient in the happiness regression.

The evidence thus far suggests that evaluative well-being (BPL) is strongly correlated with both types of capabilities, most notably income, while learning and positive affect are more relevant for hedonic well-being. These results are in keeping with the understanding that evaluative well-being better reflects autonomy (i.e., agency) (Graham, 2011, 2012). While these conclusions are based on the sub-sample of transition economies, similar patterns emerge within other world regions as well (Tables A.4-A.6).

1.7.2 Comparing Transition Economies with Other World Regions

While table 1.3 showed the relative importance of capabilities for hedonic and evaluative well-being, Table 1.4 compares the capabilities-well-being relationship across different world regions. Specifically, we conjecture that there may be cultural differences or regional disparities in the perceptions of opportunities and means and the rates at which people "convert" capabilities to well-being. Some of this variation may result from language and cultural differences in the interpretation of attitudinal questions related to the importance of hard work or freedom to choose. To compare the relative importance of factors across regions we follow a methodology suggested by Tay and Diener (2011) and exclude the country dummies (but keep a linear time

trend variable).

First, the same set of included variables explain as much as 23 percent of the variation in BPL in the world sample and as low as 10 percent of the variation in LAC. Demographic variables contribute to about a fifth of the explained variation in BPL in LAC and as low as 6 percent of the variation in the EU-15. The most notable result relates to the relationship between income and evaluative well-being. While income is the most important predictor of BPL in all regions, it is relatively more important in the world sample (53 percent of the total explained variance) and in transition economies (35 percent) compared with EU-15 and LAC (26 and 28 percent, respectively). While respondents in LAC likely focus less on income because they have less of it to begin with, those in the wealthier EU-15 context have likely shifted their emphasis "from survival values toward self-expression values and free choice" (Inglehart et al., 2008). Moreover, health is equally important in all three regions, accounting for about 10 percent of the total variation but belief in hard work has a greater importance in the transition economies in the EU-15 than in LAC. Notably, freedom is much more relevant for the evaluative well-being of the more advanced EU-15 region (16 percent) than for transition countries (8 percent) and LAC (4 percent).

The right panel of Table 1.4 shows the association between capabilities and means and hedonic well-being (experiencing happiness yesterday). It is immediately obvious that smiling yesterday is the most important predictor of hedonic happiness in all regions, most notably in LAC (where it predicts 72 percent of the variation in happiness). In transition economies, smiling is not as important for happiness as in

other regions but demographic variables and learning are more important than in other regions.

To further explore the influence that the European Union (EU) might have had on the ex-communist EU members, we split the sample of transition economies according to EU membership. Table 1.5 shows several differences between the two groups. First, while income is the most important factor for BPL in both sets of countries, it is much more important in the EU transition members. This could be because of the relative income comparisons that ex-communist EU members make with their wealthier EU-15 counterparts and the focus on economic convergence with the EU-15. On the other hand, demographics, freedom, employment, education, learning, and smiling matter much more in the non-EU countries, which are relatively less developed. The EU and non-EU countries seem much more similar with respect to the determinants of hedonic happiness.

The regional results suggest a pattern across development levels, with respondents in the wealthier EU-15 countries putting a smaller emphasis on income but a higher emphasis on freedom than respondents in transition economies and Latin America and the Caribbean (LAC). This result is in keeping with research suggesting that beyond a certain level of development, income matters less to happiness but freedom matters more (Inglehart et al., 2008). In contrast, smiling and personal characteristics have a great importance for the hedonic and evaluative well-being of respondents in poorer regions. Twenty-five years after the fall of the Berlin Wall, citizens in the ex-communist states value belief in hard work when they think about their lives as a whole as much as those in the rich EU-15 countries, and value freedom

more than those in the less-developed LAC context. The results suggest, moreover, that the ex-communist EU members value freedom and income even more than those in the non-EU transition countries.

1.7.3 Eudaimonic Well-being

Table 1.6 shows novel evidence related to the determinants of eudaimonic happiness (defined here as having meaning and purpose in life). The results cannot be directly compared horizontally as the two regressions contain a different number of country dummies. The interpretations will focus on transition economies, in which between-country and over-time differences contribute to over a fifth of the variation in meaning and purpose in life.

First, the included variables explain only about 12 percent of the total variation in eudaimonic well-being and demographic variables account for over a quarter (29 percent) of that variation; smiling accounts for another 13 percent. Capabilities (both objective and perceived) explain about 31 percent of the total variation in eudaimonic well-being in transition economies, with perceived means and freedoms accounting for 26 percent of the total variance. In short, perceived capabilities, personal and family characteristics, and between-country differences are the most important factors associated with meaning and purpose in life in transition economies.

1.7.4 Quantile Regression Results

To explore whether the same tools and capabilities have a different association with well-being for the happiest and unhappiest individuals, we employ quantile regressions (with BPL as the dependent variable). We use quantile regressions with bootstrapped standard errors and report detailed results for five quantiles: 0.10, 0.25, 0.50 (median), 0.75, 0.90. We expect that individuals put different weights on the same capabilities and means depending on their position in the well-being distribution. Based on prior research (Binder & Coad, 2011; Graham & Nikolova, 2013b), we conjecture that while income and capabilities are likely important for subjective well-being overall, the happiest individuals are happy regardless of income, capabilities, and autonomy and are less likely to emphasize them when they think about their lives as a whole compared with relatively unhappier respondents.

In general, we find that the associations between evaluative well-being and capabilities and means are driven by the tails of the well-being distribution (i.e., the happiness and unhappiest respondents), which is unsurprising. In particular, we find that the absolute magnitudes of the coefficient estimates decrease from the 10th percentile (unhappiest) to the 90th percentile (happiest) for belief in hard work, income, and voluntary part-time employment. The rest of the variables show more nuanced patterns, although the absence of a health problem, education, self-employment, and unemployment are less important for the happiest quantiles than for the unhappiest ones. Full-time employment is positive and marginally significant for the unhappiest quantile, not significant for Q25-Q75, and is negatively associated

with evaluative well-being at the top of the distribution. The freedom variable is of interest as it has the highest coefficient estimate for Q25 but the coefficient estimate is roughly the same for the rest of the quantiles. Finally, the importance of learning and smiling generally increases along the quantiles, suggesting that learning (and perhaps creativity) is very important for the happiest people (Table 1.7).

1.7.5 Negative Hedonic Affect

Country and year dummies explain half of the variation in stress and 58 percent of the variation in experiencing anger (Table 1.8). Learning, smiling, and capability variables, except the employment variables, are negatively correlated with stress and anger in transition economies, with smiling having the greatest importance (after the country and year dummies). All employment categories, including full-time employment, self-employment, and part-time work are positively correlated with stress and anger in transition economies (the reference group is "out of the labor force"). Finally, while education is positively associated with stress, it is negatively correlated with anger, though this variable's contribution to the total explained variance is negligible. Our evidence suggests some capabilities, namely employment status, can enhance well-being in some aspects but also contribute to stress and anger, which has implications for public policy.

1.8 Conclusion and Policy Implications

The well-being "science" has the potential to inform us about the complexities of the human condition and mechanisms to enhancing human welfare. In this paper, we contributed to the understanding of the most multifaceted, and yet, in our view, pivotal well-being determinants, namely, people's capacity to exercise choice and pursue fulfilling lives. We capture this construct through objective and perceived variables related to opportunities and means. This paper explored subjective well-being and capabilities in the context of transition economies. Specifically, we sought answers to three separate but related research questions: (i) Are *perceived* or *actual* opportunities and means more important for life evaluations or emotional states? (ii) Does the subjective well-being-opportunities link in transition economies differ from the one in other regions? (iii) Do the same tools and capabilities have the same association with evaluative well-being for the happiest and unhappiest citizens in transition economies?

First, we provided evidence that capabilities and well-being are related, though people weight differently the same set of capabilities when they think about their lives as a whole and when they think about experienced happiness. As expected, we find that both objective and subjective capabilities are more important for the evaluative well-being dimension than for the hedonic one, which is a result that can be generalized beyond transition economies. This result may be due to the more framed nature of the BPL question or could be attributed to unobserved heterogeneity. While we control for personality traits and affect, our controls are imprecise.

Positive affect (i.e., smiling), meanwhile, is the most relevant predictor of hedonic happiness. Second, we demonstrated that the same set of capabilities and means has a slightly different relative importance for hedonic and evaluative well-being across different regions. Specifically, when they think about their best possible life, respondents in transition economies (and the post-communist EU members in particular) place a higher value on income than those in the wealthier EU-15 countries, the non-EU transition economies, and Latin America and the Caribbean. Belief in hard work is relatively more important for evaluative well-being in transition economies and the EU-15 countries than in other regions. Importantly, freedom is more important for the best possible life of respondents in the EU-15 and the EU-10 (the ex-communist EU members) than in other regions. Positive affect is the most important predictor of hedonic happiness across nations, but more important in LAC than in the transition economies. Third, we show new evidence related to the least well-understood subjective well-being dimension: eudaimonic happiness, measured by a variable about the purpose and meaning in life. Personality traits, positive affect, health, and belief in hard work are the biggest determinants of this well-being dimension. Fourth, we also show that most perceived and actual capabilities and means are less important to well-being at the highest levels of the well-being distribution. Fifth, while some capabilities such as employment may be positive for well-being (in both its hedonic and evaluative dimensions), they may also contribute to negative affect such as stress and anger in transition economies. While the effects of employment on stress and anger are relatively small, this result is especially important for public policy, it may be important to address job-related

stress and anger, which may not only improve the well-being of employees but may also enhance their productivity.

We focused on transition economies, where, following the fall of the communist regimes, people deemphasized external authority and focused on individual choice and opportunity. Transition economies provide a context of changing norms, expectations, volatility, and rapid change. Arguably, during transition, people changed the way in which they pursue happiness, from being provided goods and services at the expense of freedoms to being in charge of their own lives at the cost of economic insecurity and volatility. Of course, as Inglehart et al. (2008) point out, "[t]he fact that people change the way in which they pursue happiness does not necessarily mean that they will attain it." (p. 266). This quote is especially relevant in the context of transition economies, which have been torn between the communist past on the one hand and the realities of transition, democracy, and market economy, on the other. The transition from the notion of happiness as life full of guarantees and securities (but little individual freedom) to a life where happiness is a function of individual effort, hard work, entrepreneurship, and human capital, is a difficult and, often, frustrating process. While we have no counterfactual, our results indicate, that 25 years after the fall of the Berlin Wall, citizens in the ex-communist states value belief in hard work when they think about their lives as a whole as much as those in the rich EU-15 countries, and value freedom more than those in the less-developed LAC countries.

Given that public policy has a role in assisting those lacking choice and freedoms by providing them with equal opportunities, our results may ultimately have

some utility in that arena. They suggest that what constitutes equal opportunities may have different meaning and value in different contexts or among different cohorts, and thus policies which aim to enhance capabilities may have a differential impact on the well-being across them. For example, if policymakers aim to enhance evaluative well-being, they may choose to invest in objective capabilities and means (such as income, employment, and education). Alternatively, for normative reasons, decision-makers may choose to equalize capabilities of all kinds for all citizens despite the differential weights that different put on them and the differential impact on subjective well-being. In both cases, the associated changes may be linked with lower well-being for some groups, at least in the short-run. We view paper this as a first step towards understanding a complex question that is fundamental to human well-being and flourishing. Our results are as complex as the propositions we make, yet we hope that they are promising enough to spur further exploration.

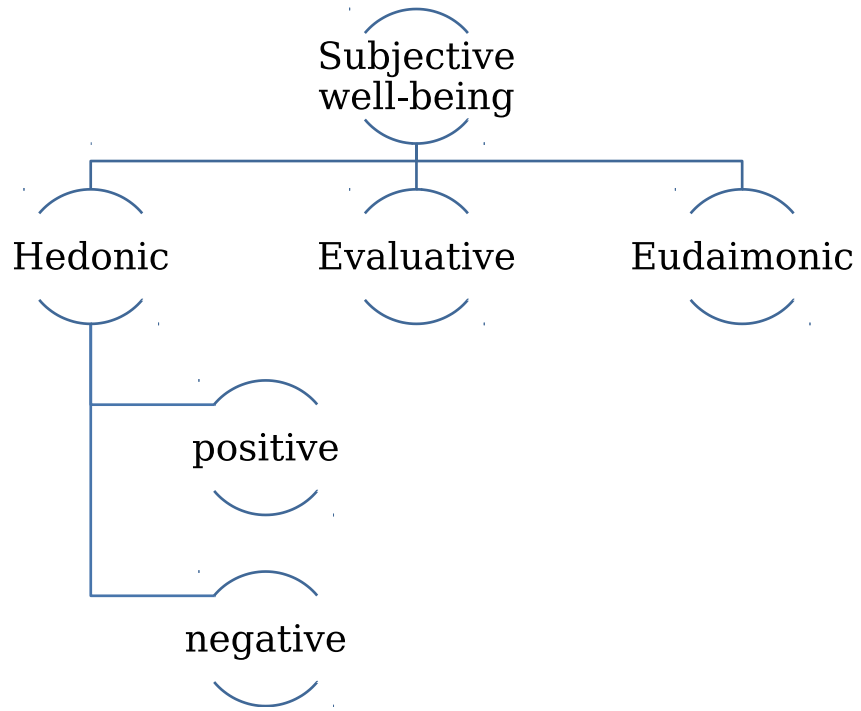


Figure 1.1: Subjective Well-being Dimensions

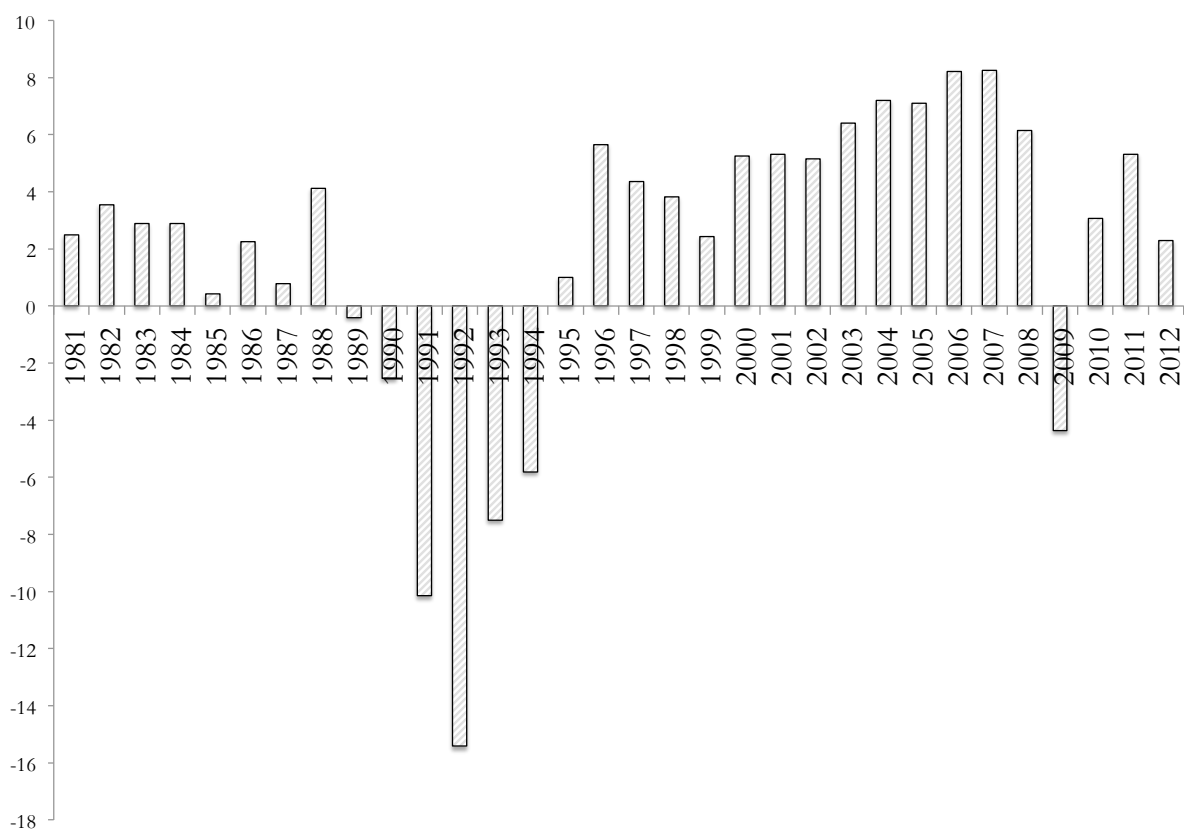


Figure 1.2: Annual Real GDP Per Capita Growth, Transition Economies, 1981-2012

Notes: The per capita growth variable is calculated using GDP per capita, PPP (constant 2005 international dollars) from the World Development Indicators. Not all transition countries are available in all years.

Table 1.1: GDP and Voice and Accountability, Transition Economies, 1980s-2012

Country	Earliest GDP Data	GDP Per Cap Earliest Estimate	GDP Per Cap 2012	1996 Voice	2012 Voice
Albania	1980	4,143	8,123	-0.76	0.01
Armenia	1990	2,938	7,374	-0.73	-0.57
Azerbaijan	1990	4,754	8,871	-1.12	-1.26
Belarus	1990	6,434	13,427	-1.07	-1.54
Bosnia and Herzegovina	1994	1,254	7,356	-0.18	-0.14
Bulgaria	1980	5,827	12,178	0.37	0.38
Croatia	1995	9,925	16,005	-0.16	0.48
Czech Republic	1990	16,361	23,815	1.00	0.93
Estonia	1995	7,938	18,927	0.87	1.09
Georgia	1980	6,859	5,086	-0.40	-0.02
Hungary	1980	11,347	17,033	1.01	0.72
Kazakhstan	1990	7,089	11,973	-1.01	-1.15
Kosovo				-1.77	-0.22
Kyrgyz Republic	1986	2,145	2,077	-0.82	-0.64
Latvia	1980	8,272	15,826	0.63	0.74
Lithuania	1990	12,500	18,799	0.94	0.91
Macedonia, FYR	1990	8,097	9,323	-0.50	0.00
Moldova	1980	3,865	2,951	-0.09	-0.09
Mongolia	1981	1,999	4,708	0.35	0.02
Montenegro	1997	7,486	10,602	-0.65	0.23
Poland	1990	8,182	18,304	1.01	1.06
Romania	1980	7,624	11,444	0.24	0.30
Russian Federation	1989	13,066	15,177	-0.30	-0.96
Serbia	1990	11,602	9,683	-1.32	0.17
Slovak Republic	1984	11,827	21,175	0.63	0.96
Slovenia	1990	16,455	24,483	1.32	0.98
Tajikistan	1985	3,242	1,920	-1.65	-1.37
Turkmenistan	1987	4,594	9,121	-1.51	-2.21
Ukraine	1987	8,175	6,394	-0.50	-0.29
Uzbekistan	1987	1,876	3,095	-1.52	-1.98

Source: World Bank Development Indicators, World Bank Governance Indicators

Notes: GDP per capita is in PPP, 2005 constant international dollars. The latest GDP per capita data are for 2012. The Voice and Accountability Index measures perceptions about the extent to which a country's citizens are able to participate in selecting their government, freedom of expression, freedom of association, and a free media. The earliest estimates for Voice and Accountability are from 1996 except for Montenegro, which is for 2000. The latest Voice and Accountability estimates are for 2012.

Table 1.2: Summary Statistics

Variable	World, N=339,933		Transition, N=61,436		EU-15, N=33,117		LAC, N=49,849	
	Mean	Std.Dev.	Mean	Std.Dev.	Mean	Std.Dev.	Mean	Std.Dev.
Dependent Variables								
Best Possible Life (0=Worst, 10=Best)	5.398	2.200	5.177	2.055	6.881	1.915	6.159	2.405
Experienced Happiness Yesterday	0.711	0.453	0.566	0.496	0.772	0.420	0.811	0.392
Experienced Stress Yesterday	0.282	0.450	0.223	0.416	0.335	0.472	0.319	0.466
Experienced Anger Yesterday	0.186	0.389	0.198	0.398	0.158	0.364	0.168	0.374
Perceptions of Capabilities and Means								
No Health Problem	0.756	0.430	0.694	0.461	0.785	0.411	0.771	0.420
Belief in Hard Work for Getting Ahead	0.808	0.394	0.591	0.492	0.800	0.400	0.871	0.335
Satisfied with Freedom in Life	0.725	0.447	0.639	0.480	0.840	0.366	0.776	0.417
Objective Capabilities and Means								
Some College/College Diploma	0.136	0.343	0.199	0.399	0.255	0.436	0.106	0.308
Household Income (in ID)	14,571	23,750	12,419	13,231	41,667	39,817	10,003	11,031
Employment Categories								
Employed Full-Time	0.264	0.441	0.338	0.473	0.389	0.488	0.254	0.435
Self-Employed	0.146	0.353	0.083	0.277	0.057	0.232	0.123	0.328
Voluntarily Employed Part-Time	0.073	0.260	0.060	0.237	0.075	0.264	0.064	0.246
Unemployed	0.063	0.243	0.060	0.237	0.047	0.213	0.073	0.261
Employed Part-Time, Wants Full-Time	0.074	0.262	0.051	0.220	0.046	0.210	0.084	0.278
Out of the Labor Force	0.379	0.485	0.408	0.492	0.384	0.486	0.402	0.490
Control Variables								
Age	40.337	16.968	44.847	17.930	49.632	16.171	40.490	17.514
Female	0.534	0.499	0.589	0.492	0.562	0.496	0.568	0.495
Married	0.594	0.491	0.582	0.493	0.615	0.487	0.538	0.499
Urban Area	0.406	0.491	0.384	0.486	0.427	0.495	0.578	0.494
Child in Household	0.555	0.497	0.387	0.487	0.278	0.448	0.583	0.493
Household Size	3.235	1.883	2.789	1.426	2.186	1.062	2.933	1.462
Religion Important	0.740	0.439	0.577	0.494	0.382	0.486	0.813	0.390
Smiled Yesterday	0.717	0.450	0.596	0.491	0.777	0.416	0.845	0.362
Learned Yesterday	0.515	0.500	0.399	0.490	0.589	0.492	0.648	0.478

Source: Gallup World Poll, 2010-2013

All statistics are for 2009-2012 and show the number of observations, means, and standard deviations for each variable. Best Possible Life measures the respondent's assessment of her current life relative to her best possible life on a scale of 0 to 10, where 0 is the worst possible life, and 10 is the best possible life. Experienced Happiness Yesterday, Experienced Stress Yesterday, Experienced Anger Yesterday, and Smiled Yesterday are binary variables coded as 1 if the respondent experienced this type of affect the day before and 0 otherwise. Household income is in international dollars (ID), which allows comparisons across countries and time.

Table 1.3: Main Results, Relative Influence and Relative Importance, Best Possible Life and Happiness, Transition Economies

	BPL, $R^2=0.2564$				Happiness Yesterday, $R^2=0.2529$			
	Unstd. Coeff.	t-stat	Std. Coeff.	Contribution to Variance (%)	Unstd. Coeff.	t-stat	Std. Coeff.	Contribution to Variance (%)
No Health Problem	0.447	25.250	0.100	8.582	0.060	14.122	0.056	3.820
Belief in Hard Work	0.408	25.186	0.098	6.280	0.049	12.53	0.049	2.641
Freedom	0.396	24.541	0.093	6.604	0.067	16.978	0.065	3.699
Some College/Diploma	0.356	18.576	0.069	3.483	0.013	2.781	0.011	0.151
Log Household Income	0.365	32.062	0.199	24.961	0.021	10.311	0.048	2.257
Full-Time Employee	0.023	1.142	0.005	0.297	-0.010	-2.139	-0.01	-0.171
Self-Employed	0.103	3.556	0.014	0.060	0.011	1.558	0.006	0.078
Voluntary Part-Time	0.185	5.799	0.021	0.219	0.024	3.086	0.011	0.074
Unemployed	-0.417	-12.006	-0.048	1.612	-0.047	-5.852	-0.022	0.301
Involuntary Part-Time	-0.130	-3.712	-0.014	0.115	0.003	0.314	0.001	0.007
Smiled Yesterday	0.457	28.469	0.109	10.280	0.305	73.911	0.302	47.355
Learned Yesterday	0.328	20.444	0.078	6.870	0.142	35.764	0.141	15.320
Demographic Variables	Yes	Yes	Yes	9.127	Yes	Yes	Yes	10.150
Country and Year Dummies	Yes	Yes	Yes	21.511	Yes	Yes	Yes	14.320

Source: Gallup World Poll, 2010-2013

Notes: $N=61,436$. All regressions are for 2009-2012. BPL measures the respondent's assessment of her current life relative to her best possible life on a scale of 0 to 10, where 0 is the worst possible life, and 10 is the best possible life. Happiness yesterday is coded as 1 if the respondent experienced this type of affect the previous day and 0 otherwise. Household income is log-transformed and is in international dollars (ID), which allows comparisons across countries and time. Total R-squared represents the total amount of variance in the dependent variable explained by the independent variables. Relative importance values sum to 100 percent, representing the proportional contribution of each variable.

Table 1.4: Main Results, Relative Importance of Capabilities and Means Across Regions

	BPL			Happiness Yesterday				
	World	Transition	EU-15	LAC	World	Transition	EU-15	LAC
No Health Problem	4.519	10.155	9.845	11.935	3.519	4.791	2.124	4.039
Belief in Hard Work	2.473	7.701	8.916	1.542	3.582	2.880	4.074	1.611
Freedom	5.670	8.457	15.814	4.334	5.466	4.586	6.867	4.691
Some College/Diploma	4.341	3.144	4.110	4.150	-0.016	-0.020	-0.104	0.141
Log Household Income	53.357	34.895	25.597	27.987	3.567	2.291	3.186	1.561
Full-Time Employee	1.136	1.136	0.664	2.927	-0.189	-0.522	-0.426	-0.016
Self-Employed	0.616	0.096	0.023	1.401	0.010	0.110	-0.013	0.002
Voluntary Part-Time	0.053	0.295	1.575	0.089	0.012	0.030	0.433	0.011
Unemployed	1.065	1.971	4.431	4.175	0.331	0.511	0.734	0.314
Involuntary Part-Time	0.598	0.120	0.286	1.969	0.005	0.002	0.011	0.003
Smiled Yesterday	8.377	11.965	13.362	11.053	66.964	53.254	63.670	72.432
Learned Yesterday	7.013	9.386	9.405	8.375	14.293	17.841	14.152	11.317
Time Trend	0.247	0.557	-0.041	0.776	0.013	0.250	0.066	0.003
Demographic Variables	10.537	10.122	6.016	19.551	2.446	13.997	5.224	3.893
R^2	0.231	0.219	0.220	0.103	0.216	0.220	0.183	0.160

Source: Gallup World Poll, 2010-2013

Notes: The table shows the percentage contribution to the total explained variance of each explanatory variable. All results are for 2009-2012. Best Possible Life measures the respondent's assessment of her current life relative to her best possible life on a scale of 0 to 10, where 0 is the worst possible life, and 10 is the best possible life. Happiness yesterday is coded as 1 if the respondent experienced this type of affect the previous day and 0 otherwise. Household income is log-transformed and is in international dollars (ID), which allows comparisons across countries and time. Total R-squared represents the total amount of variance in the dependent variable explained by the independent variables. Relative importance values sum to 100 percent, representing the proportional contribution of each variable. LAC= Latin America and the Caribbean. The number of observations is as follows: World: 339,933; Transition Economies: 61,436; EU-15: 33,117; LAC: 49, 849.

Table 1.5: Relative Importance of Capabilities EU and Non-EU members, Transition Countries

	BPL		Happiness Yesterday	
	EU	Non-EU	EU	Non-EU
No Health Problem	8.173	0.020	3.556	5.423
Belief in Hard Work	7.980	7.696	2.127	2.660
Freedom	9.659	7.268	4.499	4.904
Some College/Diploma	2.824	3.458	-0.222	-0.016
Log Household Income	40.324	31.609	6.589	2.115
Full-Time Employee	0.494	1.234	-0.151	-0.424
Self-Employed	0.174	0.107	0.163	0.015
Voluntary Part-Time	0.391	0.295	0.206	-0.016
Unemployed	2.152	1.731	0.175	0.608
Involuntary Part-Time	0.060	0.120	0.015	-0.031
Smiled Yesterday	10.253	13.198	54.168	53.477
Learned Yesterday	8.876	9.028	20.752	16.611
Time Trend	0.130	0.999	0.081	0.421
Demographic Variables	8.511	11.807	8.044	14.255
R^2	0.287	0.187	0.246	0.208

Source: Gallup World Poll, 2010-2013

N=19,980 for EU transition countries. N=41,456 in the non-EU transition countries. All regressions are for 2009-2012. Best Possible Life measures the respondent's assessment of her current life relative to her best possible life on a scale of 0 to 10, where 0 is the worst possible life, and 10 is the best possible life. Happiness yesterday is coded as 1 if the respondent experienced this type of affect the previous day and 0 otherwise. Household income is log-transformed and is in international dollars (ID), which allows comparisons across countries and time. Total R-squared represents the total amount of variance in the dependent variable explained by the independent variables. Relative importance values sum to 100 percent, representing the proportional contribution of each variable.

Table 1.6: Relative Influence and Relative Importance, Meaning and Purpose in Life

	All Available Countries, $R^2=0.0939$					Available Transition Economies, $R^2=0.1205$				
	Unstd. Coeff.	t-stat	Std. Coeff.	Contribution to Variance (%)		Unstd. Coeff.	t-stat	Std. Coeff.	Contribution to Variance (%)	
No Health Problem	0.031	6.218	0.050	5.856		0.056	7.465	0.084	11.914	
Belief in Hard Work	0.053	10.908	0.094	16.570		0.040	7.016	0.068	8.285	
Freedom	0.031	7.367	0.057	6.585		0.040	7.040	0.068	6.077	
Some College/Diploma	0.011	1.754	0.012	0.415		0.003	0.479	0.004	0.186	
Log Household Income	0.013	6.058	0.058	1.571		0.023	6.251	0.074	5.297	
Full-Time Employee	0.010	1.838	0.016	0.579		-0.006	-0.866	-0.010	-0.487	
Self-Employed	0.009	1.519	0.012	0.559		-0.002	-0.265	-0.003	-0.076	
Voluntary Part-Time	0.012	1.257	0.009	0.088		-0.023	-1.509	-0.014	0.045	
Unemployed	0.017	1.855	0.013	0.141		0.011	1.051	0.009	0.194	
Involuntary Part-Time	0.016	2.462	0.019	0.456		-0.005	-0.473	-0.004	-0.058	
Smiled Yesterday	0.039	8.608	0.069	10.611		0.052	8.521	0.088	13.237	
Learned Yesterday	0.026	6.444	0.048	5.529		0.027	5.138	0.046	5.138	
Demographic Variables	Yes	Yes	Yes	21.628		Yes	Yes	Yes	28.666	
Country and Year Dummies	Yes	Yes	Yes	29.412		Yes	Yes	Yes	21.582	

Source: Gallup World Poll, 2010-2012

Notes: All regressions are for 2009-2011. Meaning and purpose in life is a binary variable. Household income is log-transformed and is in international dollars (ID), which allows comparisons across countries and time. Total R-squared represents the total amount of variance in the dependent variable explained by the independent variables. Relative importance values sum to 100 percent, representing the proportional contribution of each variable. The number of observations is 19,288 for the full sample and 10,970 for the available transition countries.

Table 1.7: Quantile Regression Results, Transition Economies

	(1)	(2)	(3)	(4)	(5)
	Q10	Q25	Q50	Q75	Q90
No Health Problem	0.516*** (0.033)	0.502*** (0.024)	0.387*** (0.018)	0.390*** (0.021)	0.392*** (0.038)
Belief in Hard Work	0.503*** (0.026)	0.458*** (0.018)	0.412*** (0.017)	0.375*** (0.022)	0.300*** (0.038)
Freedom	0.388*** (0.028)	0.435*** (0.023)	0.364*** (0.019)	0.367*** (0.019)	0.385*** (0.021)
Some College/Diploma	0.272*** (0.034)	0.336*** (0.016)	0.337*** (0.028)	0.374*** (0.018)	0.366*** (0.037)
Log Household Income	0.663*** (0.027)	0.549*** (0.013)	0.430*** (0.011)	0.304*** (0.009)	0.246*** (0.015)
Full-Time Employee	0.067* (0.038)	0.019 (0.027)	0.002 (0.030)	-0.014 (0.026)	-0.059** (0.028)
Self-Employed	0.113** (0.049)	0.080** (0.032)	0.084** (0.036)	0.072 (0.044)	0.038 (0.048)
Voluntary Part-Time	0.265*** (0.036)	0.192*** (0.036)	0.129*** (0.043)	0.154*** (0.039)	0.140** (0.071)
Unemployed	-0.438*** (0.047)	-0.460*** (0.047)	-0.399*** (0.041)	-0.393*** (0.051)	-0.308*** (0.049)
Involuntary Part-Time	-0.035 (0.096)	-0.117** (0.057)	-0.105*** (0.035)	-0.151*** (0.048)	-0.170*** (0.045)
Smiled Yesterday	0.428*** (0.030)	0.438*** (0.025)	0.412*** (0.016)	0.428*** (0.022)	0.518*** (0.038)
Learned Yesterday	0.256*** (0.029)	0.262*** (0.023)	0.314*** (0.013)	0.384*** (0.026)	0.396*** (0.023)
Age	-0.037*** (0.003)	-0.026*** (0.003)	-0.035*** (0.002)	-0.039*** (0.004)	-0.056*** (0.005)
Age Squared/100	0.026*** (0.003)	0.016*** (0.003)	0.025*** (0.003)	0.030*** (0.005)	0.050*** (0.005)
Female	0.066*** (0.021)	0.008 (0.023)	0.021 (0.021)	-0.010 (0.018)	-0.046* (0.027)
Married or in Civil Partnership	0.174*** (0.032)	0.109*** (0.026)	0.131*** (0.018)	0.119*** (0.023)	0.065* (0.036)
Urban Area	0.050 (0.040)	0.087*** (0.013)	0.126*** (0.017)	0.179*** (0.021)	0.204*** (0.024)
Child in Household	-0.141*** (0.039)	-0.115*** (0.020)	-0.109*** (0.016)	-0.079*** (0.012)	-0.034 (0.038)
Household Size	-0.052*** (0.011)	-0.038*** (0.008)	-0.013*** (0.004)	0.000 (0.007)	-0.004 (0.011)
Religion Important	-0.011 (0.027)	0.019 (0.022)	0.005 (0.020)	0.041*** (0.015)	0.055* (0.029)
Year Dummies	Yes	Yes	Yes	Yes	Yes
Country Dummies	Yes	Yes	Yes	Yes	Yes
Observations	61,436	61,436	61,436	61,436	61,436
Pseudo R^2	0.1685	0.1516	0.1089	0.1600	0.1068

Source: Gallup World Poll, 2010-2013

Notes: All quantile regressions are for 2009-2012 and use bootstrapped standard errors (with 100 replications). The dependent variable is BPL, which measures respondents' assessments of their current life relative to the best possible life they can imagine on a scale of 0 (worst possible life) to 10 (best possible life). Q10 corresponds to the 10th percent quantile, Q25 is the 25th percent quantile, Q50 is the 50th percent quantile (median), Q75 is the 75th percent quantile, and Q90 is the 90th percent quantile. Household income is log-transformed and in International dollars (ID), which allows comparisons across countries and time. The table reports the pseudo R^2 for each quantile regression.

*** $p \leq 0.01$, ** $p \leq 0.05$, * $p \leq 0.1$

Table 1.8: Relative Influence and Relative Importance, Stress and Anger, Transition Economies

	Stress, $R^2=0.0939$				Anger, $R^2=0.1205$			
	Unstd. Coeff.	t-stat	Std. Coeff.	Contribution to Variance (%)	Unstd. Coeff.	t-stat	Std. Coeff.	Contribution to Variance (%)
No Health Problem	-0.076	-19.491	-0.084	5.466	-0.052	-13.857	-0.060	3.306
Belief in Hard Work	-0.037	-10.030	-0.043	4.519	-0.036	-10.216	-0.044	4.984
Freedom	-0.047	-12.865	-0.054	5.008	-0.041	-11.426	-0.049	5.718
Some College/Diploma	0.018	4.107	0.017	-0.101	-0.003	-0.768	-0.003	0.074
Log Household Income	-0.012	-6.096	-0.031	-0.111	-0.008	-4.299	-0.022	0.964
Full-Time Employee	0.053	11.920	0.060	2.413	0.023	5.391	0.028	0.120
Self-Employed	0.042	6.680	0.028	-0.182	0.021	3.289	0.014	0.038
Voluntary Part-Time	0.024	3.526	0.014	-0.283	0.009	1.343	0.005	-0.090
Unemployed	0.071	9.081	0.040	1.814	0.056	7.168	0.033	2.009
Involuntary Part-Time	0.032	4.128	0.017	0.031	0.030	3.801	0.016	0.386
Smiled Yesterday	-0.139	-37.831	-0.164	26.851	-0.093	-26.225	-0.115	17.136
Learned Yesterday	-0.007	-2.052	-0.008	0.404	-0.002	-0.490	-0.002	0.084
Demographic Variables	Yes	Yes	Yes	4.609	Yes	Yes	Yes	7.186
Country and Year Dummies	Yes	Yes	Yes	49.563	Yes	Yes	Yes	58.084

Source: Gallup World Poll, 2010-2013

Notes: All regressions are for 2009-2011. Stress and Anger are binary variables coded as 1 if the respondent experienced this type of affect the day before and 0 otherwise. Household income is log-transformed and is in international dollars (ID), which allows comparisons across countries and time. Total R-squared represents the total amount of variance in the dependent variable explained by the independent variables. Relative importance values sum to 100 percent, representing the proportional contribution of each variable. There are 61,436 observations in both regressions.

1.9 Appendix to Chapter 1

Table A.1: Dependent Variables and Focal Independent Variables

Concept	Measure
	Dependent Variables
Evaluative well-being	Please imagine a ladder with steps numbered from 0 at the bottom to 10 at the top. Suppose we say that the top of the ladder represents the best possible life for you, and the bottom of the ladder represents the worst possible life for you. On which step of the ladder would you say you personally feel you stand at this time, assuming that the higher the step the better you feel about your life, and the lower the step the worse you feel about it? Which step comes closest to the way you feel?
Positive hedonic well-being	Did you experience the following feelings during a lot of the day yesterday? How about happiness?
Negative hedonic well-being	Did you experience the following feelings during a lot of the day yesterday? How about stress?
Negative hedonic well-being	Did you experience the following feelings during a lot of the day yesterday? How about anger?
Eudaimonic Well-Being	Do you feel your life has an important purpose or meaning? Proxies for Subjective Capabilities
Absence of a health problem	Do you have any health problems that prevent you from doing any of the things people your age normally can do?
Belief in hard work	Can people in this country get ahead by working hard, or not?
Freedom	In this country, are you satisfied or dissatisfied with your freedom to choose what you do with your life? Proxies for Objective Capabilities and Means
Income	Household Income (International Dollars)
Education	What is your highest completed level of education? Response Categories: Completed elementary education or less (up to 8 years of basic education) Secondary - 3 year Secondary education and some education beyond secondary education (9-15 years of education) Completed four years of education beyond 'high school' and/or received a 4-year college degree
Employment status	Response Categories: Employed full time for an employer Employed full time for self Employed part time do not want full time Unemployed* Employed part time want full time* Out of workforce

Source: <https://wpr.gallup.com/de.fault.aspx>

Table A.2: Relative Importance of Capabilities and Means, All World Regions, Without Control for Smiling

	BPL			Happiness Yesterday				
	World	Transition	EU-15	LAC	World	Transition	EU-15	LAC
No Health Problem	3.551	9.677	10.363	8.093	6.507	7.746	4.417	11.490
Belief in Hard Work	1.698	6.990	5.599	1.025	5.382	5.231	4.825	5.152
Freedom	3.7448	7.474	10.146	2.493	7.893	7.126	6.153	11.183
Some College/College Diploma	3.5362	3.645	3.349	3.523	0.100	0.240	-0.726	0.357
Log Household Income	27.8391	26.827	16.072	13.066	5.369	4.466	3.666	3.581
Full-Time Employee	0.4799	0.245	0.481	1.164	-0.194	-0.319	-0.340	-0.129
Self-Employed	0.1751	0.056	0.038	0.523	-0.017	0.041	0.029	-0.003
Voluntary Part-Time	0.0453	0.230	0.911	0.030	0.012	0.110	0.342	0.009
Unemployed	0.9235	1.787	4.117	2.431	0.557	0.599	1.058	0.875
Involuntary Part-Time	0.3797	0.134	0.362	0.922	0.014	-0.030	-0.026	0.056
Learned Yesterday	5.5285	9.768	8.554	6.486	29.413	34.227	24.480	41.357
Demographic Variables	2.6071	10.707	3.889	12.490	5.080	20.312	7.436	10.132
Country and Year Dummies	49.4921	22.463	36.121	47.753	39.885	20.250	48.686	15.940
R^2	0.2968	0.247	0.258	0.158	0.158	0.177	0.155	0.078

Source: Gallup World Poll, 2010-2013

Notes: The table shows the percentage contribution to the total explained variance of each explanatory variable. All results are for 2009-2012. Best Possible Life measures the respondent's assessment of her current life relative to her best possible life on a scale of 0 to 10, where 0 is the worst possible life, and 10 is the best possible life. Happiness yesterday is coded as 1 if the respondent experienced this type of affect the previous day and 0 otherwise. Household income is log-transformed and is in international dollars (ID), which allows comparisons across countries and time. Total R-squared represents the total amount of variance in the dependent variable explained by the independent variables. Relative importance values sum to 100 percent, representing the proportional contribution of each variable. LAC= Latin America and the Caribbean. The number of observations is as follows: World: 339,933; Transition Economies: 61,436; EU-15: 33,117; LAC: 49, 849.

Table A.3: Relative Importance of Capabilities and Means, All World Regions, Controlling for Optimism

	BPL			Happiness Yesterday				
	World	Transition	EU-15	LAC	World	Transition	EU-15	LAC
No Health Problem	2.745	7.719	7.636	5.851	5.167	3.665	2.938	10.094
Belief in Hard Work	0.960	5.631	5.189	0.453	4.155	5.685	3.917	2.644
Freedom	2.546	4.399	6.069	2.171	7.307	5.575	3.319	10.008
Some College/College Diploma	3.039	3.099	2.606	3.099	0.004	0.005	-0.741	0.257
Log Household Income	32.297	39.508	22.919	14.734	6.129	3.473	6.928	4.478
Full-Time Employee	0.389	-0.245	1.070	1.265	-0.206	-0.143	-0.130	0.124
Self-Employed	0.333	0.019	-0.012	0.460	-0.016	0.310	0.052	-0.007
Voluntary Part-Time	0.022	0.364	0.760	0.006	0.022	0.364	1.265	0.025
Unemployed	1.190	1.411	2.811	3.675	0.544	0.514	1.165	1.515
Involuntary Part-Time	0.360	0.166	0.034	0.642	0.050	0.011	0.139	0.018
Optimism Control	0.948	5.129	5.712	2.500	4.716	11.574	14.250	15.222
Learned Yesterday	5.291	7.814	7.127	6.591	26.853	28.847	21.220	35.414
Demographic Variables	2.512	7.271	2.211	9.231	3.768	20.909	8.722	9.204
Country and Year Dummies	47.367	17.715	35.868	49.320	41.506	19.212	36.957	11.004
Obs.	121,432	14,964	7,462	22,387	121,432	14,964	7,462	22,387
R^2	0.305	0.262	0.292	0.171	0.174	0.213	0.185	0.089

Source: Gallup World Poll, 2010-2013

Notes: The table shows the percentage contribution to the total explained variance of each explanatory variable. All results are for 2009-2012. Best Possible Life measures the respondent's assessment of her current life relative to her best possible life on a scale of 0 to 10, where 0 is the worst possible life, and 10 is the best possible life. Happiness yesterday is coded as 1 if the respondent experienced this type of affect the previous day and 0 otherwise. Household income is log-transformed and is in international dollars (ID), which allows comparisons across countries and time. Total R-squared represents the total amount of variance in the dependent variable explained by the independent variables. Relative importance values sum to 100 percent, representing the proportional contribution of each variable. LAC= Latin America and the Caribbean.

Table A.4: Relative Influence and Relative Importance, Best Possible Life and Happiness, World

	BPL, $R^2=0.3026$				Happiness Yesterday, $R^2=0.2507$			
	Unstd. Coeff.	t-stat	Std. Coeff.	Contribution to Variance (%)	Unstd. Coeff.	t-stat	Std. Coeff.	Contribution to Variance (%)
No Health Problem	0.362	44.746	0.071	3.232	0.059	34.284	0.056	2.912
Belief in Hard Work	0.319	35.842	0.057	1.484	0.051	25.442	0.044	2.314
Freedom	0.320	41.794	0.065	3.364	0.06	35.316	0.059	3.590
Some College/Diploma	0.369	39.150	0.057	3.463	0.008	3.784	0.006	0.080
Log Household Income	0.311	71.632	0.202	26.649	0.019	27.168	0.061	2.553
Full-Time Employee	0.048	5.179	0.010	0.462	-0.01	-5.258	-0.01	-0.080
Self-Employed	-0.045	-4.170	-0.007	0.165	-0.001	-0.293	-0.001	0.000
Voluntary Part-Time	0.110	8.608	0.013	0.033	0.005	1.903	0.003	0.000
Unemployed	-0.345	-22.753	-0.038	0.858	-0.039	-12.593	-0.021	0.279
Involuntary Part-Time	-0.158	-11.654	-0.019	0.363	-0.012	-4.143	-0.007	0.000
Smiled Yesterday	0.407	53.812	0.083	5.211	0.333	178.363	0.331	54.966
Learned Yesterday	0.324	47.222	0.074	4.255	0.102	67.405	0.112	11.009
Demographic Variables	Yes	Yes	Yes	2.672	Yes	Yes	Yes	2.154
Country and Year Dummies	Yes	Yes	Yes	47.790	Yes	Yes	Yes	20.223

Source: Gallup World Poll, 2010-2013

Notes: $N=339,933$. All regressions are for 2009-2012. BPL measures the respondent's assessment of her current life relative to her best possible life on a scale of 0 to 10, where 0 is the worst possible life, and 10 is the best possible life. Happiness yesterday is coded as 1 if the respondent experienced this type of affect the previous day and 0 otherwise. Household income is log-transformed and is in international dollars (ID), which allows comparisons across countries and time. Total R-squared represents the total amount of variance in the dependent variable explained by the independent variables. Relative importance values sum to 100 percent, representing the proportional contribution of each variable.

Table A.5: Relative Influence and Relative Importance, Best Possible Life and Happiness, EU-15

	BPL, $R^2=0.2754$				Happiness Yesterday, $R^2=0.2399$			
	Unstd. Coeff.	t-stat	Std. Coeff.	Contribution to Variance (%)	Unstd. Coeff.	t-stat	Std. Coeff.	Contribution to Variance (%)
No Health Problem	0.361	44.424	0.070	3.223	0.059	34.284	0.056	2.910
Belief in Hard Work	0.322	36.078	0.058	1.534	0.051	25.442	0.044	2.338
Freedom	0.319	41.606	0.065	3.374	0.06	35.316	0.059	3.565
Some College/Diploma	0.370	39.074	0.058	3.485	0.008	3.784	0.006	0.078
Log Household Income	0.310	71.374	0.202	26.669	0.019	27.168	0.061	2.568
Full-Time Employee	0.051	5.512	0.010	0.501	-0.01	-5.258	-0.01	-0.098
Self-Employed	-0.040	-3.742	-0.007	0.159	-0.001	-0.293	-0.001	-0.001
Voluntary Part-Time	0.114	8.864	0.014	0.045	0.005	1.903	0.003	0.011
Unemployed	-0.342	-22.516	-0.038	0.868	-0.039	-12.593	-0.021	0.266
Involuntary Part-Time	-0.153	-11.250	-0.018	0.352	-0.012	-4.143	-0.007	0.005
Smiled Yesterday	0.405	53.369	0.083	5.195	0.333	178.363	0.331	54.853
Learned Yesterday	0.327	47.497	0.074	4.321	0.102	67.405	0.112	11.014
Demographic Variables	Yes	Yes	Yes	2.643	Yes	Yes	Yes	2.118
Country and Year Dummies	Yes	Yes	Yes	47.632	Yes	Yes	Yes	20.374

Source: Gallup World Poll, 2010-2013

Notes: $N=33,117$. All regressions are for 2009-2012. BPL measures the respondent's assessment of her current life relative to her best possible life on a scale of 0 to 10, where 0 is the worst possible life, and 10 is the best possible life. Happiness yesterday is coded as 1 if the respondent experienced this type of affect the previous day and 0 otherwise. Household income is log-transformed and is in international dollars (ID), which allows comparisons across countries and time. Total R-squared represents the total amount of variance in the dependent variable explained by the independent variables. Relative importance values sum to 100 percent, representing the proportional contribution of each variable.

Table A.6: Relative Influence and Relative Importance, Best Possible Life and Happiness, Latin America and the Caribbean

	BPL, $R^2=0.1623$				Happiness Yesterday, $R^2=0.2399$			
	Unstd. Coeff.	t-stat	Std. Coeff.	Contribution to Variance (%)	Unstd. Coeff.	t-stat	Std. Coeff.	Contribution to Variance (%)
No Health Problem	0.502	19.343	0.088	7.445	0.054	12.407	0.058	3.828
Belief in Hard Work	0.219	7.023	0.030	0.899	0.045	8.072	0.038	1.710
Freedom	0.272	11.124	0.047	2.239	0.061	14.309	0.065	4.060
Some College/Diploma	0.447	15.150	0.057	3.429	0.012	2.282	0.009	0.173
Log Household Income	0.186	18.184	0.101	12.387	0.008	5.873	0.028	1.171
Full-Time Employee	0.107	3.865	0.019	1.168	0.000	-0.035	0.000	-0.004
Self-Employed	-0.121	-3.454	-0.017	0.481	0.006	1.033	0.005	-0.010
Voluntary Part-Time	0.041	0.984	0.004	0.032	0.005	0.676	0.003	0.007
Unemployed	-0.506	-11.483	-0.055	2.313	-0.030	-4.353	-0.020	0.320
Involuntary Part-Time	-0.249	-6.203	-0.029	0.866	-0.001	-0.228	-0.001	0.005
Smiled Yesterday	0.474	15.806	0.071	6.059	0.345	56.363	0.319	68.356
Learned Yesterday	0.346	15.578	0.069	5.096	0.079	20.697	0.096	10.816
Demographic Variables	Yes	Yes	Yes	11.897	Yes	Yes	Yes	3.428
Country and Year Dummies	Yes	Yes	Yes	45.688	Yes	Yes	Yes	6.141

Source: Gallup World Poll, 2010-2013

Notes: $N=49,849$. All regressions are for 2009-2012. BPL measures the respondent's assessment of her current life relative to her best possible life on a scale of 0 to 10, where 0 is the worst possible life, and 10 is the best possible life. Happiness yesterday is coded as 1 if the respondent experienced this type of affect the previous day and 0 otherwise. Household income is log-transformed and is in international dollars (ID), which allows comparisons across countries and time. Total R-squared represents the total amount of variance in the dependent variable explained by the independent variables. Relative importance values sum to 100 percent, representing the proportional contribution of each variable.

Chapter 2: In transit: The well-being of migrants from transition and post-transition countries

2.1 Overview

Do migrants gain from moving to another country? Using Gallup World Poll data and a methodology combining statistical matching with difference-in-differences, this paper assesses the effects of migration on the material and non-material well-being of migrants from transition economies living in advanced countries. It contributes to the literature by showing that in addition to increasing household income, migration enhances subjective well-being. While all migrants realize income gains, there is a substantial well-being migration premium for the unhappiest movers. Moreover, by voting with their feet, migrants not only exercise choice but also enhance their perceived opportunities, including satisfaction with freedom, health, and standard of living. The results are robust to sensitivity checks. Estimating the causal effects of migration on income, happiness, and opportunities is crucial for an informed public policy debate and has direct implications for social cohesion and policy.

2.2 Introduction

The recent economic crisis not only increased the demand for social protection but also revived the immigration debate by emphasizing the distributional consequences of immigration on natives in advanced economies.¹ But what about the immigrants at the center of this debate: do they gain from moving to another country? About 3 percent of the world's population lives outside its country of birth and most migrants move from developing to advanced economies hoping for higher incomes, more opportunities, and better quality of life (Hanson, 2010; Stillman, Gibson, McKenzie, & Rohorua, 2012). While migrants improve their material well-being in destination countries (Abramitzky, Boustan, & Eriksson, 2012; Clemens, Montenegro, & Pritchett, 2008; McKenzie, Stillman, & Gibson, 2010), the effects of migration on subjective well-being (SWB) and quality of life are ambiguous.

Estimating migration's impacts on income, happiness, and opportunities is crucial for an informed public policy debate. Comparing the outcomes of migrants and stayers is misleading, however, as well-being gains (or losses) may actually reflect unobserved differences in ability, risk tolerance, and motivation (McKenzie et al., 2010). Causal estimates are difficult to ascertain in the absence of experiments and

¹See De Haas (2010) for a historical perspective of the immigration debate. See Grether et al. (2001) for a political economy perspective on immigration. Following the policy discourse, labor economists have investigated the impact of immigration on natives' objective well-being (Blanchflower & Shadforth, 2009; Borjas, 1999; Card, 2005; Dustmann, Frattini, & Halls, 2010; Ottaviano & Peri, 2012) while development scholars have studied immigration's effects on development in sending countries (Bhagwati & Hamada, 1974; Stark & Wang, 2002).

panel data tracking international migrants before and after moving. Because SWB studies predominantly use cross-sectional data to compare migrants and natives in destination countries (Bălțătescu, 2007; Bartram, 2011; Safi, 2010) or movers and stayers in sending countries (Bartram, 2013), they cannot adequately demonstrate migration's causal impacts on well-being.²

This paper takes a different empirical approach combining propensity score matching (PSM) and difference-in-differences (DID) to explore the well-being-migration link. It studies movers from transition and post-transition societies as they share a common socialist past, recently underwent or are still going through transitions to democracy and market economy, are geographically close, and culturally similar.³

²For an exception, see Stillman et al. (2012)

³While severely restricted during socialism, emigration from Central and Eastern Europe (CEE) and the Former Soviet Union (FSU) rose after 1989. Opening the borders, combined with political and economic instability, and ethnic conflict in some countries, induced many transition citizens to vote with their feet. While about 130,000 emigrants left these socialist states to live in advanced economies between 1980 and 1987, more than 1 million emigrated each year between 1990 and 1994 (UN, 2002). Based on the data from 2000 censuses, the stock of migrants from transition economies in the advanced OECD countries is over 10 million (about 14 percent of all migrants) (OECD, 2008). The transition countries are: Albania, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Estonia, Georgia, Hungary, Kazakhstan, Kosovo, Kyrgyz Republic, Latvia, Lithuania, Macedonia FYR, Moldova, Mongolia, Montenegro, Poland, Romania, Russian Federation, Serbia, Slovak Republic, Slovenia, Tajikistan, Turkmenistan, Ukraine, Uzbekistan. Post transition-countries are the ten member states which joined the EU between 2004-2007 (EU-10): Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia, and Slovenia. Croatia joined the EU in July 2013.

Given that transition countries are quantitatively the most significant migration source for the European OECD countries (OECD, 2007) and are key sending countries of high-skilled migrants for advanced economies, examining these migrants' experiences is important for public policy.⁴

The movement of people from developing and transition countries to rich economies could be seen as a development phenomenon as migrants seek to improve their well-being and the well-being of the families left behind. From a public policy perspective, immigrant well-being is instrumentally important for social outcomes such as public health and productivity (Graham, Eggers, & Sukhtankar, 2004).⁵ Immigrant life dissatisfaction may moreover be symptomatic of lack of assimilation (Safi, 2010) or deeper problems such as social exclusion (Sen, 2000) in the destination countries.

This study makes several contributions. First, unlike other papers which focus on either the monetary or happiness consequences of moving, it estimates migration's effects on a *range* of well-being metrics, including income, subjective well-being, and

⁴This paper uses the list of advanced economies from the International Monetary Fund (IMF). The following 30 countries are included: Austria, Australia, Belgium, Canada, Cyprus, Denmark, Finland, France, Germany, Hong Kong, Greece, Iceland, Ireland, Israel, Italy, Japan, Korea, Luxembourg, Malta, Netherlands, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland, Taiwan, United Kingdom, United States (IMF, 2013). Gallup does not poll San Marino. While the IMF considers the Czech Republic, Estonia, Slovakia, and Slovenia advanced economies, for the purposes of this paper, I include them in the source countries list.

⁵For example, positive affect and happiness have causal impacts on labor market productivity (Oswald, Proto, & Sgroi, 2009), income (De Neve & Oswald, 2012), and health (e.g., happier individuals are less likely to come down with a cold) (Kahneman & Krueger, 2006).

satisfaction with capabilities such as personal health, freedom, and income adequacy. Second, it studies multilateral migration flows. Third, it employs a novel methodology combining propensity score matching (PSM) and difference-in-differences (DID) to discern the causal impact of migration on the *changes* in subjective well-being and perceived capabilities.⁶

Self-selection, i.e., the fact that migrants differ from stayers in terms of risk tolerance, skills, motivation, and wealth, is the main challenge for assessing the impact of migration on well-being (McKenzie, 2012). For example, migrants may be less risk averse than non-migrants and risk-aversion may also be correlated with income, happiness, and perceptions of opportunities. In addition to self-selection, reverse causality is also a methodological challenge. For instance, while migration may affect happiness, those dissatisfied with their lives are more likely to migrate (Chindarkar, 2014; Graham & Markowitz, 2011; Nowok, van Ham, Findlay, & Gayle, 2011; Otrachshenko & Popova, 2014). Moreover, if migration is costly, the rich would be more likely to migrate and a cross-sectional comparison would simply pick the effect of pre-migration status on post-moving income rather than the true effects of migration. While studies have dealt with selection in several ways, including assuming selection on observables, using instrumental variables, and PSM, experimental data are optimal from an internal validity viewpoint. Yet, non-experimental methods such as DID and combining PSM with DID produce results that are reasonably close to experimental findings (McKenzie et al., 2010; Smith & Todd, 2001). In the

⁶ *Capability* refers to "the substantive freedom to achieve alternative functioning combinations" or "the freedom to achieve various lifestyles" (Sen, 1999).

absence of data tracing migrants before and after moving, this study uses PSM to create a two-period synthetic panel of observably similar migrants and non-migrants and then employs DID to assess the effects of migration on well-being. To my knowledge, this is the first paper to employ this methodology in the context of migration, to study migrants from transition and post-transition countries, and to assess the effects on a range of well-being metrics.

The results imply the following insight: dissatisfied with their freedoms, means, and perceived opportunities at home, migrants from transition economies vote with their feet moving to destinations where they gain more opportunities, incomes, and happiness. In addition to increasing household income, migration enhances evaluative well-being, and may improve hedonic well-being. While all migrants realize income gains, there is a substantial well-being migration premium for the unhappiest movers. Importantly, by voting with their feet, migrants enhance their perceived capabilities, including satisfaction with health, freedom, and standard of living.

2.3 Literature and Theory

2.3.1 Well-being and Migration

This research builds on the new SWB "science" and on the literature on the well-being effects of migration. First, SWB studies have burgeoned amidst the growing consensus that income-based metrics are insufficient to understand all aspects of human flourishing, especially given that objective well-being can coexist with un-

happiness and frustration.⁷ These studies show that the key SWB determinants are consistent across different societies and levels of development.⁸ There is, moreover, a consensus that SWB metrics are valid and reliable, psychometrically sound, and comparable across respondents (Diener et al., 2012).

Scholars distinguish between *hedonic* and *evaluative* well-being (Graham, 2011; Kahneman & Deaton, 2010; Kahneman & Krueger, 2006), which are relevant for studying multifaceted processes such as migration. Evaluative well-being relates to how individuals feel about their lives as a whole and their opportunities to exercise choice (Graham, 2012). Evaluative well-being survey questions capture how people assess their lives as a whole such as through general life satisfaction questions or the Cantril ladder question on the best possible life (BPL), which asks respondents to compare their life to the best possible life they can imagine, based on an eleven-point scale, where zero is their worst possible life and ten is their best possible life

⁷While economists prefer studying revealed choice and income as opposed to self-reported subjective states, Easterlin (1974) used self-reported happiness data to examine their relationship with economic growth and income. Building on the early economists' contributions to happiness economics (Morawetz et al., 1977; Oswald, 1997; Tinbergen, 1991; Winkelmann & Winkelmann, 1998), Ng (1996, 1997) proposed that happiness is measurable while Kahneman et al.'s (1997) paper furnished an axiomatic defense of experienced utility and suggested applications to economics (Di Tella, MacCulloch, & Oswald, 2001).

⁸In particular, unemployment, divorce, and economic volatility are negatively associated with SWB, while health and stable partnerships have a positive association with it (Graham, 2011; Kahneman & Krueger, 2006). Furthermore, age has a U-shaped relationship with life satisfaction, with the turning point occurring around age 40 (Frey & Stutzer, 2002); and both absolute and relative income matter for happiness (Clark, Frijters, & Shields, 2008; Easterlin, 1995; Senik, 2009).

(Graham, 2011). Hedonic well-being, in contrast, encompasses day-to-day positive and negative experiences related to work commutes, immediate health state, job quality, and social interactions, among others (Graham, 2012). Hedonic well-being metrics include both positive affect (e.g., smiling, experiencing happiness or joy) and negative affect (e.g., experiencing worry, sadness, anger, stress). Positive and negative affective states are not on a linear continuum (i.e., the two ends of a bipolar scale) but are rather separate SWB dimensions, which coexist with one another.⁹

The income gains of migration could be as high as 260-270 percent (Clemens et al., 2008; McKenzie et al., 2010) although movers often miscalculate them before leaving (McKenzie, Gibson, & Stillman, 2013). Despite this income premium, internal and international migrants experience unhappiness (Bartram, 2011; De Jong, Chamrathirong, & Tran, 2002; Knight & Gunatilaka, 2010; Safi, 2010; Stillman et al., 2012).¹⁰ More generally, the literature finds that immigrants are unhap-

⁹Recently, scholars have also identified a third subjective well-being dimension - eudaimonic well-being - which relates to people's perceptions of having meaning and purpose in life. This dimension is not well-understood and little research exists on its determinants.

¹⁰First, the research finds that some migrant groups are happier than others: in Israel, migrants from Western Europe are happier than those from the former Soviet countries (Amit, 2010; Amit & Litwin, 35). First generation immigrants are happier than their second-generation counterparts, meanwhile (Safi, 2010; Senik, 2011). Second, migrants are less happy than natives in Europe (Bălăţescu, 2007; Safi, 2010; Senik, 2011) and the United States (Bartram, 2011). Third, research on internal migrants shows that East-to-West German migration is associated with happiness (Melzer, 2011) while research on Thailand (De Jong et al., 2002) and Finland (Ek, Koironen, Raatikka, Järvelin, & Taanila, 2008) show the opposite result. Using panel data on British internal migrants Nowok et al. (2011) demonstrate that right before migration, migrants experience

pier than natives in destination countries but the result varies by country of origin (Simpson, 2013). Country of origin is also pivotal for explaining differences between the earnings of migrants with the same skills but coming from different political and economic conditions (Borjas, 1987). Bartram (2013) also finds that after controlling for selection into migration, CEE migrants are not happier than stayers, though there is a positive effect of migration on happiness among migrants from Russia, Turkey, and Romania, and a negative effect for Polish migrants.

Furthermore, the consequences of migration depend on the well-being dimension studied. For example, using experimental data from an immigration lottery of Tongans leaving for New Zealand, Stillman et al. (2012) find complex effects depending on the SWB metric – e.g., hedonic well-being, mental well-being, welfare ladder, self-respect ladder, and others.¹¹ Building on these papers, this study assesses the effect of migration on several well-being dimensions, including evaluative and hedonic well-being, and perceived capabilities such as health, freedom, and income adequacy.

unhappiness, then they experience happiness during the process of migration, but their happiness declines post-migration. Some of the divergent findings in the literature could be explained with the fact that we are measuring migration's effects on well-being at different points in time.

¹¹This analysis sample is substantively different from that in Stillman et al. (2012). First, the sample studies migrants from transition and not developing countries. Second, this paper studies multilateral migration flows. Third, it uses different well-being metrics.

2.3.2 The Migration Decision

The literature shows that migrants from transition economies migrate to improve their household's relative position in the community, i.e., when their income is lower than that of others in the community (Stark, Micevska, & Mycielski, 2009). In fact, Stark et al. (2009) find that inequality is positively related to migration in Poland but absolute income and the poverty rate in the origin have no relationship with the propensity to migrate.¹² Using US data, Berger and Blomquist (1992) also show that wages and moving costs matter for the migration decision and quality of life, wages, and housing prices are relevant for choosing the destination. According to Blanchflower and Shadforth (2009), the propensity to migrate for A8 migrants (those from the ex-communist countries which joined the European Union in 2004) is negatively correlated with GDP per capita in the origin. The authors also find that the migration decision is negatively correlated with life satisfaction and positively associated with unemployment rates but uncorrelated with employment rates or inflation. Finally, Chindarkar (2014) discovers that high human capital respondents from Latin America with low life satisfaction scores are more likely to express an intention to migrate than similarly educated counterparts who have high satisfaction scores. These results suggest that while economic concerns are important, they are not the only considerations in the decision to migrate.

Emigration is an expression of *agency*, i.e., the capacity to pursue a fulfilling

¹²According to the authors, other factors inducing migration are the net interregional migration rate and population density while the unemployment rate has a negative influence.

life and to exercise choice (Graham, 2011; 2012).¹³ As the literature suggests, exercising individual autonomy ranges from participating in community life (Crocker, 2008; Dreze & Sen, 2002), and protesting (Graham & Chattopadhyay, 2011), to migrating (Deneulin, 2006; Graham, 2011).

This section presents a simple model of the individual migration decision (Sjaastad, 1962). Let U_{it} be the individual utility at time t , $U_{it'}$ be the expected utility after migration, and C_i be the monetary and psychological costs of migration. In each time period, U_i is a function of income and consumption (I), subjective well-being (H), and freedoms and capabilities (F). Specifically:

$$U_{it} = U_t(u_1(I_{it}), u_2(H_{it}), u_3(F_{it})) \text{ and}$$

$$U_{it'} = U_{t'}(u_1(I_{it'}), u_2(H_{it'}), u_3(F_{it'}))$$

where $u_1(\cdot)$, $u_2(\cdot)$, and $u_3(\cdot)$ are the respective sub-utility functions for consumption, happiness, and freedom, respectively, and are increasing at a decreasing rate in their argument. Each sub-utility in each time period is conditional on individual characteristics ($u_j(\cdot|X_{it})$ and $u_j(\cdot|X_{it'})$ where $j=1,2,3$).

An individual i living in a transition economy considers whether to relocate to an advanced economy if the expected utility from migration exceeds its pecuniary and psychological costs $U_{it'} - U_{it} > C_i$. The probability of migration $Pr(M|X)$ is

¹³Crocker (2008) defines agency as the state when when a person decides autonomously for herself; when decisions are in pursuit of goals; when she takes an active role, and when she brings about change in the world. The opposite of being an agent is to be forced, oppressed, or passive (Alkire & Deneulin, 2009). For further definitions and distinctions, see Sen (1985). The terms "autonomy" and "agency" are used interchangeably.

$$Pr(M = 1|X_i) = Pr(U_{it'} - U_{it} - C_i > 0|X_i).$$

2.4 Estimation Strategy

The estimation strategy comprises two major steps: (i) identifying migrants and stayers before and after migration (i.e., four analysis groups in total) and (ii) computing the DID for their well-being outcomes.

2.4.1 Propensity Score Matching

PSM pairs stayers with observably similar migrants.¹⁴ Let M be a binary treatment indicator, where $M_i = 1$ if the transition country citizen migrated to an advanced economy and $M_i = 0$ otherwise; $Y_i(M_i)$ is the well-being outcome for each individual $i = 1, \dots, N$, where N is the total population. Let X be a vector of

¹⁴Blundell and Costa Dias (2000), Caliendo and Kopeining (2008), Dehejia and Wahba (2002), Rosenbaum and Rubin (1983), Smith and Todd (2005), Stuart (2010), and Todd (2006) furnish detailed overviews of the theoretical, practical, and methodological aspects of PSM. While it controls for selections on observables and observably heterogeneous impacts, is semi-parametric and does not require assumptions for the outcome equation or the error term (Todd, 2006), PSM has several limitations (Peikes, Moreno, & Orzol, 2008). Using the method requires knowledge of the true experimental findings (so that the researcher knows whether the PSM estimates are unbiased or not); it demands sufficient data to pick the right variables to predict program participation; and it may require a trial-and-error process to create well-matched comparison groups. Moreover, using a small sample may yield incorrect estimates. While PSM matches only on observables, it also matches on unobservables to the extent that they are correlated with the matching covariates (Stuart, 2010).

pre-migration characteristics (i.e., the conditioning variables). The propensity score $P(X)$ is the conditional probability of migrating given the conditioning variables. Given the assumptions of unconfoundedness and common support discussed below, and the propensity score $P(X) = Pr(M = 1|X)$ (i.e., the conditional probability of migrating), the PSM estimator for the average treatment effect (ATT) ($\widehat{\tau}_{ATT}^{PSM}$) is:

$$\widehat{\tau}_{ATT}^{PSM} = \frac{1}{n_1} \sum_{i \in I_1 \cap S_P} [Y_{1i} - \widehat{E}(Y_{0i}|M_i = 1, P_i)] \quad (2.1)$$

where

$$\widehat{E}(Y_{0i}|M_i = 1, P_i) = \sum_{j \in I_0} W(i, j) Y_{0j}$$

and I_1 is the set of migrants, I_0 is the set of non-migrants, S_P is the area of common support,¹⁵ n_1 is the number of migrants in the common support ($I_1 \cap S_P$); also, $i \in I_1 \cap S_P$ denotes each migrant whose match is the weighted average over the well-being outcomes of the non-migrants, where the weights $W(i, j)$ depend on the distance between the propensity scores P_i and P_j (Smith & Todd, 2005), where i indexes migrants and j –non-migrants. The matching estimator has two assumptions:

Assumption 1 *Unconfoundedness for controls*

$$Y(0) \perp\!\!\!\perp M | X$$

While untestable, the assumption implies no systematic selection into migration for the controls based on observable covariates (Heinrich, Maffioli, & Vazquez, 2010). In

¹⁵The region of common support excludes migrants whose propensity scores are higher than the highest scores of the non-migrants and non-migrants whose propensity scores are lower than the lowest scores for migrants (Smith & Todd, 2005).

other words, for a set of observable covariates, the well-being scores are independent of migration.

Assumption 2 *Weak overlap/common support*

$$P(M = 1|X) < 1$$

This assumption implies that each participant has a possible non-participant analogue (Smith & Todd, 2005) and that there should be a significant overlap between migrants and stayers to find viable matches (Heinrich et al., 2010). To satisfy this condition, this paper uses the same covariates to compute the propensity scores across all observations and explicitly tests whether the assumption is met.

2.4.2 Analysis Groups

Based on a discussion in Blundell and Costa Dias (2000), for each migrant *after* migration, I use PSM to find an observably similar migrant counterpart *before* migration, and then use PSM again to find observably similar stayers for before and after comparisons, with the end-goal being the creation of a synthetic panel comprising the following analysis groups (Table B.1):

1. Group 1 comprises migrants from transition countries after they moved to advanced economies (i.e., treatment group after migration in time t'). GWP asks respondents whether they were born in the country of interview, and if foreign-born, in which country they were born, allowing to identify immigrants from transition countries.¹⁶

¹⁶GWP questions do not allow to distinguish between temporary or permanent immigrants. Of the 230,246 residents of advanced economies in 2005-2012, 18,988, or 8.25 percent are foreign-born,

2. Group 2 comprises migrants before leaving at time t . For each migrant in Group 1, I identify a migrant before migration using probability matching combined with exact matching. Specifically, I match migrants in Group 1 with respondents who expressed a desire to move permanently to another country using age, age squared, gender, religion, and education as covariates. I use exact matching to ensure that the match is from the same country of origin, will move to the same destination country, and is of the same gender and religion.¹⁷ After matching, I deleted matched pairs if the match's age is greater than the migrant's and if the match was polled after the migrant was polled.
3. Group 3 comprises non-migrants observed at time t' identified by matching Group 1 with Group 3 on age, age squared, gender, religion, and education. I imposed exact matching by country of origin.
4. Group 4 comprises non-migrants at time t (i.e., before migration) matched with migrants before migration in Group 2 using an identical procedure. I imposed exact matching by country of origin.

I explain the matching of migrants and non-migrants as the procedure is analogous for matching potential with actual migrants (Figure 2.1). I estimate the of whom, 1,837, or 9.67 percent, are migrants from transition countries, who are the focus of this paper.

¹⁷As a robustness check, I present results based on GWP's question asking respondents whether they have firm plans for moving, which is potentially a better identification question for the pre-migration group.

propensity scores using a logit model:

$$M_i = \alpha_1 + \beta^M X'_i + \epsilon_i \quad (2.2)$$

where $M = 1$ if the individual from a transition economy migrated to an advanced economy and 0 if he stayed. I excluded stayers in the sending countries who were foreign-born and those who wanted or planned to move. X_i is a vector of socio-demographic characteristics predicting migration. The covariates used are age, age squared, gender, indicators for religious affiliation, country of origin, and an indicator for whether the respondent has some college education or a college degree. Note that the treatment (i.e., migration) cannot influence the matching variables (Heinrich et al., 2010; Smith & Todd, 2005) which is why I exclude variables such as marital status and income. All matching covariates except education are independent of migration. I included education as it is an important proxy for ability, intelligence, and skills. After computing the propensity score, I used one-to-one nearest neighbor matching without replacement with a caliper (i.e., maximum allowable distance between the propensity scores) of 0.01.¹⁸ I excluded migrants without a match within the caliper, which increases the confidence that the matching is balanced but reduces the number of observations.¹⁹ I use exact matching within country of birth and by year to ensure that migrants and non-migrants are observed in the same year of interview.

¹⁸I used the `-psmatch2-` module in Stata developed by Leuven and Sianesi (2003). The results are insensitive to the caliper choice. Results available upon request.

¹⁹As explained above, the caliper avoids bad matches but increases the variance (as fewer matches are available).

Next, I checked whether the balancing property was satisfied using t-tests for the equality of means in the treated and non-treated groups after matching. The differences are statistically insignificant for all matching covariates, indicating that the balancing property is satisfied (See Appendix Tables B.3-B.4). I also estimated the standardized bias after matching (Rosenbaum & Rubin, 1985b). The mean bias after matching Groups 1 and 2 is 0.1 with a maximum of 4.1. The mean bias after matching for migrants and non-migrants is 1.5 with a maximum of 10. In the end, I only kept exact matches to create a synthetic panel of migrants and non-migrants before and after migration. Each group includes 191 observations (Tables 2.1-2.2).

Considering those who expressed a desire to move permanently to another country "migrants before migration" requires the assumption that they will in fact subsequently move to the destination they indicated. While research on whether potential migrants end up migrating is scarce for the international context, research suggests that intentions are good predictors of actual migration (Dalen & Henkens, 2008). While this may be a reasonable assumption, I offer a robustness check by matching actual migrants with respondents with concrete migration plans.

2.4.3 Difference-in-Differences Estimators

After creating the synthetic panel, I calculated the difference-in-differences (DID) using both parametric and non-parametric approaches.²⁰

²⁰I used Stata's -diff- user-written package (Villa, 2012).

2.4.3.1 Difference-in-Differences Matching Estimator

While migrant self-selection on unobservables is likely, assuming that the unobservables driving migration are time-invariant (e.g., risk aversion or ability do not change over time), the Difference-in-Differences Matching Estimator (DDM) estimator conveniently relaxes the unconfoundedness assumption. The estimator also allows for differences in the earnings and well-being between the places in which migrants and non-migrants live (Smith & Todd, 2005). Instead of conditioning on a set of pre-treatment variables as with the parametric version, the DDM estimator matches individuals in the treatment group to those in the control group based on the propensity score.

While typically applied to panel data, as defined by Heckman, Ichimura, Smith, and Todd (1996) and Heckman, Smith, and Todd (1997) and presented in Smith and Todd (2005), the *pooled cross-sectional* DDM estimator $\widehat{\tau}_{DDM}$ is:

$$\begin{aligned} \widehat{\tau}_{DDM} = & \frac{1}{n_{1t}} \sum_{i \in I_{1t} \cap S_P} \{Y_{1ti} - \sum_{j \in I_{0t} \cap S_P} W(i, j) Y_{0tj}\} \\ & - \frac{1}{n_{1t'}} \sum_{i \in I_{1t'} \cap S_P} \{Y_{0t'i} - \sum_{j \in I_{0t'} \cap S_P} W(i, j) Y_{0t'j}\} \end{aligned} \quad (2.3)$$

where I_{1t} , $I_{1t'}$, I_{0t} , $I_{0t'}$ represent the migrant and non-migrant datasets in each time period t (i.e., before) and t' (i.e., after); as in equation (2.1), S_P is the region of common support, n is the number of observations in the set $i \in I_1 \cap S_P$ in each time period (Smith & Todd, 2005).

The DDM estimator also allows for quantile differences - i.e., assessing the effects of migration at different points of the outcome variable's distribution (e.g.,

the 10th percentile, the median, the 90th percentile). Holding the quantile of interest fixed, the quantile DID (QDID) compares the changes in earnings or BPL around this quantile. As described in Athey and Imbens (2006), the counterfactual value is computed by taking the change in outcomes that occurred over time at the specific quantile of the non-migrant group and adding it to the specific quantile of the first-period migrant group. The effect of migration on well-being or income is calculated by taking the difference between the actual and counterfactual values at the given quantile. We compare therefore individuals across both groups and time according to their quantile. Thus, QDID estimates reveal the differences in the causal effect of migration for the happiest and unhappiest individuals as opposed to just the mean difference in outcomes.²¹ From a public policy perspective, it is important to know not only whether migration improves well-being *on average* but also whether or not it imposes any disproportionate gains or losses for a minority.²² QDID's identifying assumption is that growth in BPL/earnings from the pre-migration to the post-migration cohorts for the particular quantile would have been the same in the migrant and non-migrant cohorts had migration not occurred.²³

²¹The quantile regression model was developed by Koenker and Basset (1978). Binder and Coad (2011) were the first to apply this method to the happiness research. For an overview of the method, see Chapter 7 in Angrist and Pischke (2009), Buchinsky (1998), Cade and Noon (2003), and Koenker and Hallock (2001). See Athey and Imbens (2006) and Imbens and Wooldridge (2008) for an overview of the QDID method and Havnes and Mogstad (2010) for an application.

²²I use kernel propensity score quantile DID with bootstrapped standard errors with 1,000 replications.

²³While I estimate the quantile treatment effects (i.e., the distributional effect of migration on BPL and income), these are not the same as the quantile of the treatment effect (the quantile

2.4.3.2 The Parametric DID Estimator

The parametric DID estimator captures changes in well-being due to migration and assumes that the well-being outcomes depend on migration and additional covariates:

$$Y_i = \beta_0 + \beta_1 T_i + \beta_2 M_i + \beta_3 T_i * M_i + \pi X'_i + \epsilon_i \quad (2.4)$$

where Y_i is the well-being outcome, T_i is coded as 1 after migration and 0 before that; and M_i is coded as 1 for migrants and as 0 for stayers. The pre-treatment covariates (X') control for time-invariant individual attributes affecting well-being outcomes (age, gender, education, religion, and country of origin) and increase the precision of the estimates.²⁴ For example, age affects well-being in addition to influencing the migration propensity. I also include country of origin to capture country-specific time-invariant influences such as culture, language, and social networks.²⁵

The DID estimator's main assumption is that changes which occurred for reasons other than migration impacted the treatment and the control groups in the same way (Abadie, 2005). One such change was the global economic crisis and to the of the difference) unless there is a perfect rank correlation between potential outcomes (Imbens & Wooldridge, 2008). In other words, the QDID methods identify the migration effect on the BPL/earnings distribution which is not the same as the distribution of migration effects.

²⁴I used age dummies as opposed to the continuous age variable as using continuous covariates with a binary or ordered dependent variable in DID leads to overestimation. I estimated the DID without the covariates and obtain similar results (available upon request).

²⁵ $\widehat{\beta}_2$ is the difference in outcomes between movers and stayers pre-migration, while $\widehat{\beta}_2 + \widehat{\beta}_3$ is the difference in their outcomes post-migration. The DID (or the causal effect of migration on the outcome) is measured by $\widehat{\beta}_3$. I used robust standard errors for all estimations.

extent that it affected all analysis countries similarly, the DID estimation allows one to separate its influence from the effect of migration. The parallel trends assumption is unrealistic when pre-treatment characteristics associated with the outcome are unbalanced between the treatment and control groups (Abadie, 2005), which is not the case here.²⁶ Other DID assumptions are that no other program happened during the intervention and that the composition of the two groups remained the same. While the pre-treatment characteristics for the mover and stayer groups are observably similar (Tables 2.2 and B.4), the effect of the global crisis likely varied across the countries in the analysis sample. Given the data limitations, the DID estimator is the best available alternative, which produces defensible results (McKenzie et al., 2010).

2.5 Data and Summary Statistics

2.5.1 Data

The data are from the Gallup World Poll (GWP), which is an annual survey run by the Gallup Organization in about 160 countries, representing about 98 percent of the world's adult population. GWP polled all 30 transition countries at least three times during the 2005-2012 period. GWP is probability-based and nationally representative (of populations aged 15 and over), polling about 1,000 individuals per country (and 4,000 in Russia). While GWP is not specifically designed to study

²⁶Moreover, as Duflo and Kremer (2008) point out, this assumption is untestable but its plausibility could be judged if one has long series of pre-treatment data (p. 96).

migration, its comprehensiveness enables the study of immigrants and their experiences (Esipova, Pugliese, Ray, & Kanitkar, 2013). In addition, Gallup researchers weight the data, so that they are comparable between migrants and non-migrants.²⁷ The data are collected using telephone or in-person interviews using the same survey methodology across countries, ensuring comparability across countries and over time. In most transition countries, the interviews are face-to-face.²⁸ GWP covers a myriad of topics, from SWB to attitudes toward migration, jobs, public goods, civic engagement, and others. Since Gallup polls different individuals each year, the dataset is a collection of cross-sections rather than a panel.

2.5.2 Outcome variables

GWP data allow to assess migration's effects on a range of perceived well-being, capabilities, and means variables, including:

- Objective well-being: household income in international dollars
- Evaluative well-being: Cantril ladder question on the best possible life (BPL), which asks respondents to compare their life to the best possible life they can imagine, based on an eleven-point scale

²⁷First, the data are weighed using base sampling weights to correct for oversampling and household size. Then, post-stratification weights are constructed - population statistics are used to weight the data by gender, age, and in some instances, education and socio-economic status.

²⁸In 2005-2006, in the Czech Republic, Hungary, Poland, Romania, Slovakia, and Slovenia, data were collected using both in person and landline interviews; in Slovenia, in 2009, 2010, 2011, data were collected by telephone, and in 2010, using landline and cell phones.

- Positive hedonic well-being: a binary indicator for whether the respondent experienced happiness yesterday
- Negative hedonic well-being: binary indicators measuring whether the respondent experience (i) stress yesterday and (ii) anger yesterday
- Capability/agency: binary indicators for satisfaction with (i) personal health; (ii) freedom to choose in life; (iii) income adequacy/standard of living.²⁹

2.5.3 Summary Statistics

2.5.3.1 Migrants and Stayers

The analysis sample spans 2008-2012 representing migrants from 21 of the 30 transition economies. The top three sending countries are Albania, Romania, and Poland, while less than half a percent came from the Czech Republic, Armenia, Estonia, and Slovakia. The top destination countries are Greece, Italy, Spain, and Germany (Table 2.1).

Migrants and non-migrants before and after migration are observably similar (Table 2.2).³⁰ Migrants and stayers are on average 39 years old in the "after" period,

²⁹First, health satisfaction is a proxy for "bodily health," which is one of Nussbaum's ten central capabilities (2011) and research shows a strong positive correlation between health and well-being (Graham, 2008; Veenhoven, 2010). Second, satisfaction with income adequacy (i.e., the respondent's standard of living and all the things he can buy) is a proxy for having means and the capabilities they allow. Finally, satisfaction with freedom to choose is a proxy for agency/autonomy (Graham & Nikolova, 2013b; Verme, 2009).

³⁰The migrant groups before and after have identical data for gender and religion (in addition

while their counterparts are about 36-37 years old in the "before" period. Across the board, about 60 percent of migrants and non-migrants are female, about 40 percent are Eastern Orthodox, and over 60 percent are married. The groups in the "after" period have slightly lower educational attainments than the groups pre-migration. About 10 percent of migrants and stayers in the "after" period have at least a high-school degree, compared with 26 percent of migrants and stayers in the "before" period. It is possible that the lower educational attainments compared with the pre-migration period are due to return migration. For example, because of the economic crisis, the most able immigrants may have returned home as they are more likely to find re-employment there. I control for education when computing the DID. Across the board, over 40 percent in all four analysis groups were employed full-time, although non-migrants were more likely than migrants to be self-employed, while the migrant groups were slightly more likely to be unemployed. About half of the movers lived in urban areas post-migration, with lower proportions in the other analysis groups. Migrants and stayers had similar household sizes, ranging between 2.5 and 3 people on average, with about 45 percent reporting having a child in the household.

to origin and destination countries) due to exact matching on these variables.

2.6 Results

2.6.1 Main Results

Table 2.3 demonstrates the average treatment effect on the treated (ATT) from the kernel propensity score difference-in-differences estimation (i.e., the DDM). Migration leads to an unequivocal increase in material well-being: controlling for observable characteristics (including education), the mean household income premium is about 21,000 ID. Migrants' household incomes are on average about 2.5 times higher than those of comparable stayers and migrants before migration. Before moving, the incomes of those expressing a desire to move are about 4,700 ID lower than the incomes of comparable stayers and the difference is marginally statistically significant. Furthermore, prior to moving, migrants are less satisfied with their lives as a whole compared to stayers, which is a result similar to Nowok et al.'s (2011) finding for internal migrants and in line with research showing that potential migrants experience frustration (Graham & Markowitz, 2011). The mean difference in experiencing hedonic happiness between migrants and non-migrants in the "before" period is statistically insignificant. Unlike Graham and Markowitz' potential migrants who have higher than average incomes but also higher than average unhappiness scores, the migrants in this paper's sample have lower household incomes than stayers *before* migration. Therefore, emigration may indeed be a pursuit of alternate ways of being and doing and a search for opportunities and freedoms.

After moving, migrants' SWB is statistically significantly higher than that of

comparable stayers. More importantly, the DID is positive and statistically significant for both SWB metrics: the evaluative SWB gain due to migration is 1.78 (with BPL measured on a scale of 0 to 10) and the hedonic SWB gain is 0.12 (with happy yesterday measured on a 0-1 scale), both of which are substantively significant. The hedonic happiness DID is marginally statistically significant. Moreover, pre-migration, movers have higher stress levels but experience levels similar to stayers after migration. Compared with movers before migration, migrants experience higher levels of stress in the destination countries. Research suggests that the process of acquiring agency is paved with stress and frustration, at least in the short run (Graham, 2011). The stress DID is statistically insignificant, however. Furthermore, migrants experience more anger prior to migration (compared with stayers), though migrants and stayers in the "after" period experience similar levels of anger, on average. The DID is statistically insignificant.

Migration also affects movers' satisfaction with health, freedom, and standard of living. In particular, migrants are less satisfied with their health compared to stayers in the "before" period but are significantly more satisfied after migration, likely because they have access to better healthcare in the destination countries. Importantly, migration significantly improves movers' perception of autonomy (i.e., satisfaction with freedom). As in Stillman's et al. (2012), movers also experience improvements in the perceived satisfaction with income, which is another proxy for their expanded opportunities after moving.

Table 2.4 shows the parametric DID results. The results are substantively similar and have the same magnitudes as those presented in Table 2.3. The in-

come premium from migration is about 19,900 ID and migrant incomes are about 1.5 times higher than those of comparable stayers and migrants in the "before" period. The evaluative well-being (i.e., BPL) ATT is 1.76. As in Table 2.3, there is a marginally significant hedonic happiness gain, as well as a gain in terms of the perceived capabilities. The stress and anger DIDs are not statistically significant. Table B.2. in the Appendix demonstrates that the main results and conclusions hold if the top sending and destination countries are excluded and if the analysis is based only on the top sending and destination countries.

2.6.2 QDID Results

While the findings thus far suggest that migration improves well-being, the QDID results show that the positive effect of migration on SWB differs along the SWB distribution (Table 2.5). Specifically, the positive effect of migration on evaluative well-being is only from the 15th percentile until the median: migration improves the well-being of those in the bottom up to the middle of the well-being distribution and these migrants are happier than they would have been had they not migrated. There are no impacts for the unhappiest 10 percent of the sample and after the median, suggesting that these cohorts do not realize happiness gains. The well-being of those at the extremes of the distribution (i.e., the happiest and the unhappiest) may be innate and/or insensitive to objective and subjective influences.

Table 2.6 shows that the effect of migration on earnings holds throughout the entire income distribution. Figure 2.2 plots income ratios of migrants in the destina-

tion countries relative to stayers and potential migrants for each quantile (based on the data from Table 2.6). Evidently, migrants in the lower income quantiles realize the highest income gains relative to stayers and migrants prior to migration, while those at the highest end of the income distribution (Q90) realize lower gains (relative to their counterparts). For example, the household incomes of migrants at the 10th percentile of the income distribution are 3.9 times higher than those of comparable migrants before migration, 2.7 times higher than those of comparable stayers. The incomes of the richest migrants (Q90), in contrast, are about 2.3 times higher than those of migrants before migration and about 2.4 times higher than those of comparable stayers. In short, while the effects of migration on happiness are primarily driven by the relatively unhappy migrant cohorts, the poorest migrants have the highest relative income gains.

2.7 Robustness Checks

2.7.1 Does Changing the Definition of Migrants Before Moving Alter the Results?

Between 2010-2012, about 19 percent of citizens from transition countries expressed a desire to emigrate, only 1.23 percent made emigration plans for the next year, and 0.60 percent prepared for this move (Figure 2.3). As a robustness check, I matched migrants in Group 1 with those *planning* to move (as opposed to *willing* to leave in the main analysis) using the same matching covariates and procedures. Gallup started asking the question about migration plans in 2010, which limits the

number of observations. However, I used a less strict caliper of 0.5 to ensure about 30 observations per group for the DID in the end. The final group includes 27 observations per group (108 observations in total).³¹

Tables B.5 -B.6 present the summary statistics for this robustness check. Only 13 transition countries are represented, compared with 21 in the main analysis. The top sending countries are Poland, Bulgaria, and Romania, while the top destinations are France, Italy, and Ireland. The migrants and stayers post-migration are in their early forties, while their counterparts pre-migration are about 30 years old, on average. Over 40 percent of the migrants in the "after" period have some college education or college diploma, compared with about a quarter of the other groups. The DID estimations control for education. The migrant and non-migrant groups in this sample are observably comparable and are similar to those in the main sample. See Table B.6 for further comparisons.

Table 2.7 shows the results from the kernel propensity score difference-in-differences estimation for the robustness check. As expected, some of the differences are either marginally significant or statistically *insignificant* because of the small sample size. Importantly, the results for evaluative well-being and perceived capabilities still hold. First, the income premium from migration is non-statistically significant and smaller in magnitude for the robustness check (9,823 ID). In addition, after migration, migrants in the destination countries have household incomes that are about 1.7 times higher than those of migrants in sending countries; and

³¹The mean bias after matching is 3.2 with a maximum of 25. Tables with balancing tests are available upon request.

about 1.8 times higher than the incomes of stayers in sending countries.

Second, post-migration, migrants' evaluative well-being (BPL) is higher than that of stayers. The DID is statistically significant and the migration gain in BPL is 1.98, compared with 1.78 for the main sample. Third, the hedonic happiness DID is statistically insignificant but is substantively significant, indicating that migration *may* increase positive affect. Fourth, the finding that migrants experience more anger pre-migration still holds. The DID is statistically significant for both the stress and anger variables, suggesting that migration may lower negative affect.

The health satisfaction DID is statistically insignificant and its magnitude is very small. Importantly, migration increases satisfaction with standard of living, suggesting that migration enhances agency outcomes. The ATT for satisfaction with freedom is positive but not statistically significant. Furthermore, the parametric DID results for the Robustness Check in Table 2.8 show a statistically significant income premium of about 17,000 ID, an evaluative well-being premium of 1.53, and increases in the satisfaction with standard of living and freedom. The rest of the differences are not statistically significant. These results indicate that migration has a positive causal influence on capabilities and agency and that migrants from transition countries vote with their feet searching for freedom and opportunities, as well as income, and gain these in destination countries.

2.7.2 Migrants from Transition Economies Living in Europe

The main empirical strategy assumes that potential migrants expressing a desire to move to a particular country do in fact migrate to that particular country. In reality, migrants expressing willingness to move to Germany, for example, may be indifferent between moving to Germany and Austria.³² To allow for this possibility, I matched Groups 1 and 2 by forcing exact matching by gender, religion, and country of birth (as before) but not by destination country. Instead, the destination is all European countries. This relaxes the assumption that potential migrants necessarily move to the countries which they indicated and increases the number of observations. However, this strategy ignores migration regimes and barriers to labor mobility.

The main sending and destination countries are similar to those in the main analysis. The top source economies include Albania (n=106), Romania (n=82), Poland (n=58), Russia (n=36), the Ukraine (24), and Bulgaria (23). The top five destinations are Greece (n=161), Italy (n=56), Spain (n=44), Austria (n=35), and Germany (n=52). The summary statistics and the composition of the four groups is similar to that in the main sample.³³

Table 2.9 shows the results from this alternative specification. The main conclusions still hold, albeit with some nuances. First, while the income premium is still sizable and statistically significant, the conditional incomes of migrants and stay-

³²I thank Ben Elsner for this insight.

³³Tables available upon request.

ers before migration, and stayers after migration are much lower than in the main analysis. Migrants before migration even have a small negative income (conditional upon the covariates).³⁴ The evaluative well-being (BPL) DID is positive and significant, although it is smaller than that in the main results. The hedonic happiness DID is statistically significant (as opposed to marginally significant in Table 2.3). The rest of the results are similar to the main specification.

2.7.3 Does Changing the Dataset Alter the Results?

The analytical strategy requires data for at least two periods and information allowing to identify actual and potential migrants. I performed a robustness check using data from the 2008 Eurobarometer (EB 70.1) to identify potential migrants pre-migration and the last wave of the European Social Survey (ESS Wave 5) with data from 2009-2011 to identify actual migrants. I exclude from the ESS migrants who arrived prior to 2008.³⁵

³⁴The unconditional incomes are \$13,544 for the stayers before migration, \$11,765 for migrants before migration, \$14,411 for stayers in the after period, and \$27,447 for migrants after migration.

³⁵Several Eurobarometer studies have information about intention to migrate for transition countries. However, CEEB 2002.1 (March - April, 2002) and EB 64.1 (September-October, 2005) do not allow to identify to which country potential migrants intend to move; EB 67.1 (February-March, 2007) does not contain a life satisfaction question; and EB 72.5 (October-November, 2009) and Special Eurobarometer 377 (November-December, 2009) have data for 2009 which is also when ESS polled some of its respondents thus not allowing enough time between the before and after periods. The Eurobarometers lack country of birth information. The World Values Survey, the European Values Survey, and the Life in Transition Survey do not meet the data requirements for this analysis.

The outcome variable is a binary life satisfaction indicator.³⁶ Only migrants from the EU-10 post-transition countries are represented in both surveys (see footnote 2 for the list of countries) and the destination countries include: Belgium, Switzerland, Germany, Denmark, Spain, Ireland, and Norway. There are 63 migrants after and 127 migrants before moving.³⁷ Of the potential migrants, 94 (74 percent) made preparations for the move. Given the two cross-sections and a very limited number of observations, I use PSM only to compare the life satisfaction outcomes of movers and those intending to move using the following matching covariates: age, gender, an interaction term for age and gender, and years of education.³⁸ I do not force exact matching by source and destination countries due to the limited number of control observations.

I used several PSM algorithms given that matching techniques involve trade-offs (Caliendo & Kopeinig, 2008). For example, estimates from matching without replacement depend on the matching order; matching without replacement and adding a caliper decrease the bias but increases the variance as fewer matches are

³⁶There are no other well-being variables in the Eurobarometer. Because the two surveys measure life satisfaction on different scales, I coded "very satisfied" and "somewhat satisfied" as "satisfied" and "not very satisfied" and "not at all satisfied" as "not satisfied" for the Eurobarometer. ESS measures life satisfaction on a scale of 0 to 10 and I combined responses 6-10 into "satisfied" and responses "0-5" into "not satisfied."

³⁷After calculating the propensity scores, I lose an additional 3 treatment and 4 control observations due to missing covariates. Eurobarometer lacks a question regarding religion.

³⁸Using age squared led to poor matches with the mean absolute bias of over 30 percent before and after matching.

available.³⁹ As the caliper is based on judgment, I used several tolerance levels. I also employ radius matching (Dehejia & Wahba, 2002), which considers not only the nearest neighbor but all members within the caliper with as many comparison units as possible. Finally, I use kernel matching, which is a nonparametric matching estimator computing the weighted averages of all individuals in the control group for the counterfactual outcome thus achieving lower variance at the expense of possibly including bad matches (Caliendo & Kopeinig, 2008). Kernel matching requires the specification of the kernel function and the bandwidth parameter. A higher bandwidth involves a tradeoff between variance and bias (with a high bandwidth leading to less variance). While the choice of a matching algorithm is especially important in small samples (Heckman et al., 1997), there is no ideal estimator and all PSM estimators should produce asymptotically similar results (Caliendo & Kopeinig, 2008).

Table 2.10 reports the results from several matching algorithms showing that migrants have higher satisfaction levels after moving.⁴⁰ The ATT ranges from 0.18 to 0.27 on a scale of 0 to 1, which suggests that migration is associated with a life satisfaction increase. The difference is statistically significant in all specifications except the one-to-one matching without replacement and a caliper of 0.001, which is rather conservative. In short, migration improves the subjective well-being of migrants and the result is not sensitive to the choice of the dataset or the matching procedure used.

³⁹I therefore randomly sort the data prior to matching when performing one-to-one matching without replacement.

⁴⁰Balancing tables are available upon request.

2.7.4 Return Migration

Return migration poses a validity threat. Specifically, it is possible that because of the economic crisis or some other circumstances, the unhappiest and the least skilled immigrants left the advanced economies and returned to their home countries. While not causal, research finds that returnees in Romania are unhappier than stayers (Bartram, 2012), for example. Studies suggest that there have been no large outflows of migrants due to the economic crisis. Migrants may actually be unwilling to return to their home countries because they fear barriers to coming back or dread bleak job prospects at home (Awad, 2009; Fix et al., 2009; Green & Winters, 2010).⁴¹

While the GWP does not explicitly inquire about return migration, one particular question asking whether respondents have lived in a foreign country for more than six months could be used to shed some light. I do not have information on the country of residence prior to return, duration of stay, or reason for return. Nevertheless, to glean some insight into whether return migration is driving this paper's results, I matched return migrants in transition economies (the treatment group) with migrants from transition countries still living in the advanced countries (the

⁴¹While return migration as a result of the crisis has been limited, there have been returns from Russia to Tajikistan, Uzbekistan, and Kyrgyzstan (Green & Winters, 2010), Poles returning from the UK, and some forceful deportations from the US, Italy, and France, including those of Bulgarian and Romanian Romas from France (Papademetriou, Sumption, Terrazas, Loyal, & Ferrero-Turrión, 2010). There is little information on the demographic profile of those who left, however.

controls). I used PSM and the same matching procedures as with matching Groups 1 and 2. I used nearest neighbor matching without replacement with two calipers - 0.01 and 0.001 (Table 2.11). The results suggest that return migration is associated with lower incomes, evaluative and hedonic well-being, and lower satisfaction with health, standard of living, and freedom. Return migrants experience less stress than current migrants, however, although their anger outcomes are similar. Despite its limitations, the evidence in Table 2.11 suggests that return migrants are indeed unhappier and earn less than immigrants in advanced countries. We do not know, however, whether this is because of return migration or because of selection issues. In this instance, total bias reduction is impossible as I cannot include a large number of covariates (due the restriction that the treatment cannot influence the matching variables).⁴² However, the QDID results in Tables 2.5-2.6 suggest that the main results are not driven by the happiest and the richest individuals, but the poorest and unhappiest ones. While return migration may be a problem, it is not entirely driving the main results in this paper.

2.7.5 Channels

This paper's empirical strategy is designed to explore the well-being consequences of migration but not *why* we observe them. At least theoretically, sev-

⁴²Total bias reduction with PSM is only possible by including many covariates (not possible due to the restriction that the treatment cannot influence the matching variables) and because I lack knowledge of the exact covariates that influence the selection process (Steiner, Cook, Shadish, & Clark, 2010) .

eral mechanisms could be enhancing the well-being of migrants from transition economies. First, while the literature questions the fact that more income leads to greater happiness in general, in transition economies, income and happiness are positively correlated (Bartram, 2013, 2011; Easterlin, 1974, 2009, 1995). In addition to income, the migration-related life satisfaction boost could be due to the enhancement of various opportunities and freedoms, which is supported by empirical evidence on internal migrants (Nowok et al., 2011). Moreover, the research shows that migrants from CEE migrate to the EU-15 to work (and not to abuse welfare systems abroad) (Kahanec, 2013). Third, while the majority of the literature finds a negative association between happiness and migration, the results depend on country of origin (Simpson, 2013). Research using the Gallup World Poll (based on matching) finds that unlike migrants from other contexts, North-to-North migrants experience gains in various perceived well-being dimensions (Esipova et al., 2013). Transition economies are culturally similar to the destination countries, which facilitates assimilation and adaptation.

In addition to these positive channels, there are several mechanisms that could be decreasing migrant well-being. Psychological distress from separation from one's family and friends (i.e., loss of social capital), culture shock and loss of cultural identity, changing reference norms, and rising expectations likely lower the perceived well-being of migrants. Moreover, time-use data on migrants from Central and Eastern Europe living in the UK and New Jersey demonstrate that immigrant men spent much time working and limited time with their families and immigrant women from Poland spent much time working in low-skilled jobs and less time social-

izing, leading to isolation (Ribar, 2013). Despite these potential negative well-being effects of migration, it seems that the positive impacts dominate for the sample of migrants from transition economies living in advanced economies.

2.7.6 Limitations

I acknowledge several limitations. First, despite the use of matching and DID techniques, my results could suffer from selection bias and endogeneity. While movers and stayers are similar along observable characteristics, a non-experimental technique cannot fully address all sources of heterogeneity. Moreover, the empirical strategy is based on assumptions, some of which are untestable. Second, in the absence of a true panel tracing migrants before and after, the synthetic panel is unlikely to capture all sources of heterogeneity. I show results for alternative matching specifications and demonstrate that the results are robust, though subject to limitations. Therefore, it is likely that immigrants are positively self-selected along a number of characteristics, which is likely positively biasing the results. The gains from migration are likely overstated by at least about 20 percent (McKenzie et al., 2010). In the absence of a true panel tracing migrants before and after migration, it is not entirely clear whether the positive effect between migration and happiness is because migration affects happiness or because happier people are more likely to migrate. The research finds, however, that life dissatisfaction is correlated with the migration decision for migrants from transition economies (Otrachshenko & Popova, 2014).

Third, since the GWP is not specifically designed to study migrants, it has several limitations, although it is nationally representative and is the only data source allowing for the empirical strategy in this paper. For example, the Poll does not distinguish between voluntary and involuntary migrants, does not include year of arrival in the destination country and lacks detailed information on return migration, which could be biasing the results.

Finally, readers should exert caution when extrapolating the results to other countries and contexts. Moreover, the effects of migration on the SWB of migrants likely differ depending on the migrant cohort studied, the destination countries, and the well-being metrics employed. For example, while migrants in this sample are on average in their 30s or 40s, panel data research shows that late-life migration leads to depression (Bradley & Van Willigen, 2010).

2.8 Policy Implications and Conclusion

The former socialist governments in Central and Eastern Europe and the Soviet Union severely restricted freedom of movement, including internal migration. Ordinary citizens could not hold international passports and those who emigrated illegally to advanced economies were deemed enemies of the state. With the opening of the borders after the fall of the Berlin Wall, people from transition countries could (somewhat freely) make migration choices and seek opportunities and better lives abroad.⁴³

⁴³Note that many advanced economies impose immigration restrictions and/or require(d) visas to enter the country.

This study asked whether migration improves the well-being of immigrants from transition economies moving to advanced economies. Using data from the Gallup World Poll (GWP) and a strategy combining statistical matching with difference-in-differences, this paper's findings lead to the following conclusion: dissatisfied with their freedoms, means, and capabilities at home, migrants from transition economies vote with their feet moving to host countries where they gain more opportunities, means, and well-being.

First, the main results demonstrate that immigrants realize large income gains: their average household incomes are higher than those of comparable stayers and migrants before migration (controlling for observable characteristics including education). Second, while migrants are unhappier than stayers pre-migration, they utilize substantial SWB gains post-migration. Third, migration also positively affects these migrants' perceived capabilities - i.e., their satisfaction with living standards, health, and freedom, suggesting that migration not only depends on these migrants' free choice but also further enhances their opportunities. There are modest effects on hedonic well-being (i.e., happiness, stress, and anger), meanwhile. While the earnings gains are universal, the effects of migration on happiness are primarily driven by the relatively unhappy migrant cohorts.

As the "happiness and migration" literature suggests, increases in income post-migration may be accompanied by declining happiness because of adaptation and rising aspirations. Specifically, although migrants' (absolute) incomes increase, so do their expectations as they compare themselves to high-earning natives in the destination countries. Based on the results in this paper, however, migrants from

transition countries are in fact happier after they migrate. This suggests that even if their reference norms and aspirations change, migrants from transition economies gain substantially from moving to advanced economies, both materially, and in terms of life satisfaction and agency.

The voluntary international movement of people from developing and transition countries to rich countries is a development phenomenon (Clemens & Bazzi, 2008). Indeed, the results in this paper show that migration makes migrants from transition countries better off. There are likely additional benefits to their families through remittances, investments, and the spread of information and technology.

Though not specific to transition economies, research suggests that migrants have a positive effect on destination countries' fiscal outcomes (OECD, 2013a) and that migrants positively affect natives' subjective well-being (Akay, Constant, & Giuliatti, 2014; Betz & Simpson, 2013). For example, Dustmann et al. (2010) show that Central and Eastern European migrants from the 2004 EU enlargement are almost 60 percent less likely than natives to receive various forms of public assistance in the UK. Moreover, because of their labor force participation rates and high tax payments, these migrants make a positive contribution to public finances. As this paper discovers, migration also positively affects the material and non-material well-being of migrants from transition economies living in advanced economies. Importantly, it increases their freedoms and opportunities and their ability to live purposeful lives. Taken at face value, these findings imply that migration from transition economies presents substantive development opportunities for both re-

ceiving and sending countries.⁴⁴

This study does not claim to "settle" the immigration debate. It merely hopes to contribute to it by furnishing insights about the effect of migration on the subjective well-being and capabilities of migrants from transition economies and highlight the importance of focusing on the individual-level effects of migration. Based on the results in this paper, migration can be seen as a development mechanism as it enhances migrants' means, well-being, and capabilities. Yet migration is *not* a comprehensive development strategy as it does not solve deeply-rooted social problems such as corruption, misguided economic policies, and other market and government failures in the sending countries (De Haas, 2010). Migration, may only be a mechanism for enhancing *individual* well-being and agency, while it *might* have negative consequences for the happiness of family members left behind (Borraz, Pozo, & Rossi, 2010) and the home community as a whole (Deneulin, 2006). Future research should focus on establishing whether migration can enhance individual well-being while it enhances (or at least does not diminish) the "common good."

⁴⁴Note, however, that the effect *may* be non-linear, i.e., large immigrant inflows (conversely, emigrant outflows) are likely to impose costs on destination (and sending) countries.

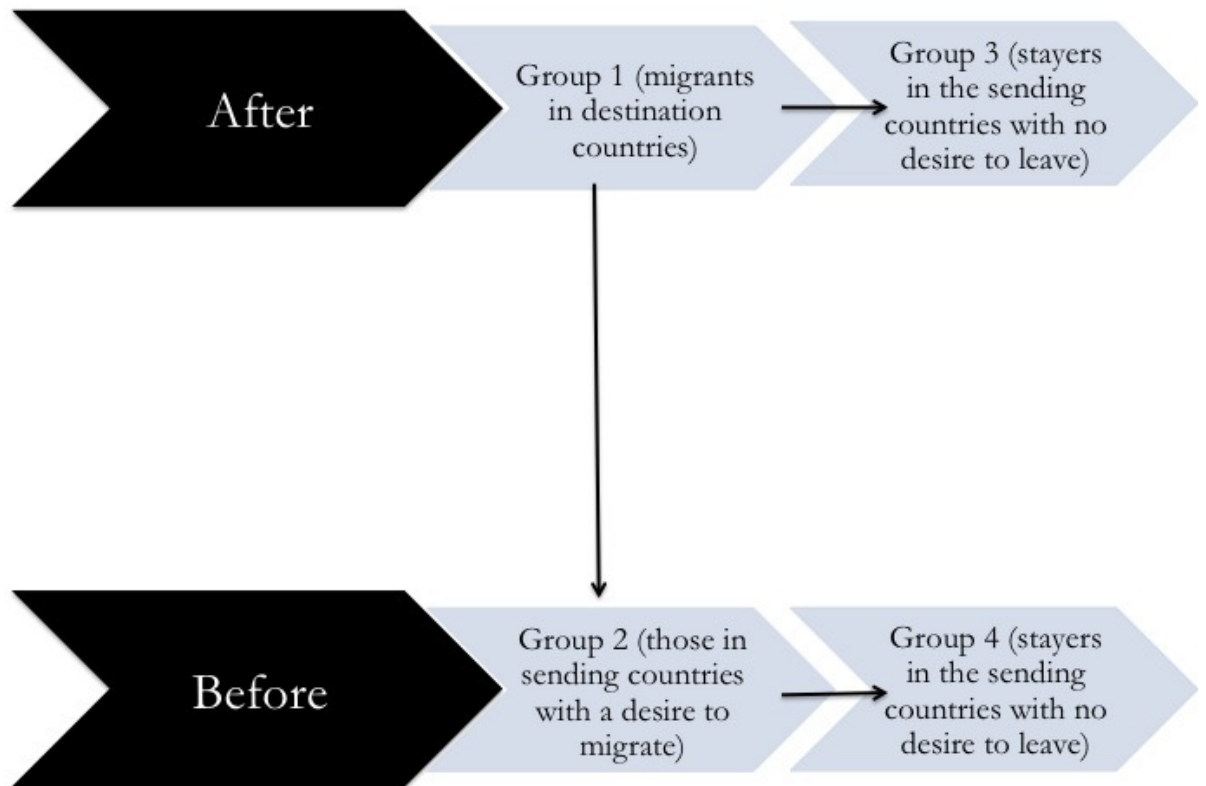


Figure 2.1: Propensity Score Matching Mechanics

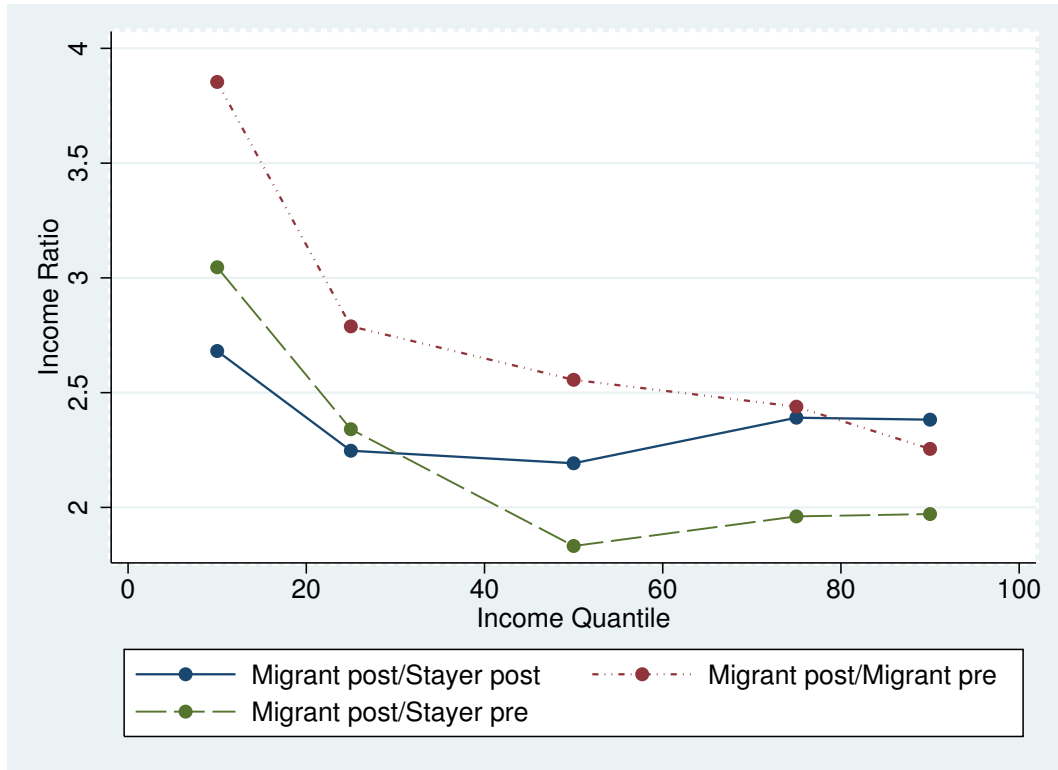


Figure 2.2: Quantile Income Ratios, Migrants and Stayers

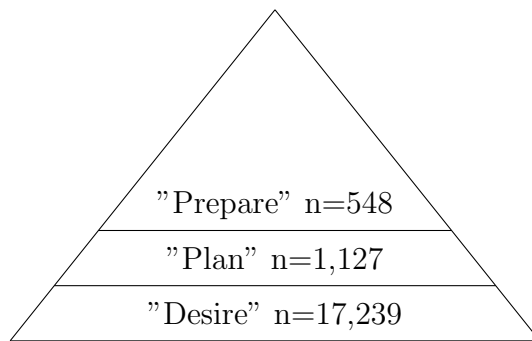


Figure 2.3: Desire for migration versus plan versus preparation, transition countries.

Source: GWP, 2011-2013

Table 2.1: Migrants from Transition Economies, Source and Destination Countries

Birth Country	Number	Percent	Residence Country	Number	Percent
Albania	42	21.99	Greece	45	23.56
Romania	39	20.42	Italy	33	17.28
Poland	30	15.71	Spain	25	13.09
Russia	13	6.81	Germany	22	11.52
Bosnia and Herzegovina	9	4.71	Austria	14	7.33
Bulgaria	7	3.66	Sweden	9	4.71
Croatia	7	3.66	Ireland	8	4.19
Ukraine	6	3.14	Switzerland	7	3.66
Moldova	5	2.62	Canada	6	3.14
Serbia	5	2.62	France	4	2.09
Slovenia	5	2.62	Australia	3	1.57
Kosovo	5	2.62	Finland	3	1.57
Georgia	4	2.09	Norway	3	1.57
Latvia	3	1.57	United States	2	1.05
Macedonia	3	1.57	Netherlands	2	1.05
Hungary	2	1.05	United Kingdom	1	0.52
Lithuania	2	1.05	Belgium	1	0.52
Czech Republic	1	0.52	Denmark	1	0.52
Armenia	1	0.52	Cyprus	1	0.52
Estonia	1	0.52	Portugal	1	0.52
Slovakia	1	0.52			
Total	191	100	Total	191	100

Source: GWP, 2009-2013

Table 2.2: Migrants and Stayers from Transition Economies, Demographics and Socio-Economic Characteristics

Variable	Migrants After			Migrants Before			Stayers After			Stayers Before		
	Num	Mean	Std. Dev..	Num	Mean	Std. Dev..	Num	Mean	Std. Dev..	Num	Mean	Std. Dev..
Age	191	38.63	12.67	191	35.91	12.68	191	38.62	12.44	191	37.49	11.97
Female	191	0.62	0.49	191	0.62	0.49	191	0.64	0.48	191	0.60	0.49
Catholic	191	0.29	0.46	191	0.29	0.46	191	0.28	0.45	191	0.28	0.45
Protestant	191	0.01	0.10	191	0.01	0.10	191	0.03	0.16	191	0.02	0.12
Orthodox	191	0.41	0.49	191	0.41	0.49	191	0.39	0.49	191	0.39	0.49
Muslim	191	0.19	0.39	191	0.19	0.39	191	0.21	0.41	191	0.23	0.42
Muslim: Shiite	191	0.01	0.07	191	0.01	0.07	191	0.01	0.07	191	0.01	0.07
Muslim: Sunni	191	0.02	0.12	191	0.02	0.12	191	0.01	0.10	191	0.01	0.07
No religion/Agnostic	191	0.07	0.25	191	0.07	0.25	191	0.07	0.26	191	0.08	0.27
Christian	191	0.01	0.10	191	0.01	0.10	191	0.00	0.00	191	0.00	0.00
Some College/College Diploma	191	0.10	0.31	191	0.26	0.44	191	0.13	0.34	191	0.26	0.44
Married	190	0.64	0.48	190	0.62	0.49	191	0.62	0.49	189	0.66	0.47
Employed Full-Time	190	0.44	0.50	129	0.46	0.50	179	0.43	0.50	129	0.50	0.50
Self-Employed	190	0.05	0.22	129	0.05	0.23	179	0.11	0.31	129	0.15	0.36
Voluntarily Employed Part-Time	190	0.06	0.24	129	0.04	0.19	179	0.04	0.21	129	0.05	0.23
Unemployed	190	0.13	0.33	129	0.10	0.30	179	0.07	0.26	129	0.06	0.24
Voluntarily Employed Part-Time	190	0.09	0.29	129	0.07	0.26	179	0.06	0.23	129	0.02	0.15
Out of the Labor Force	190	0.23	0.42	129	0.28	0.45	179	0.29	0.46	129	0.21	0.41
Urban Location	191	0.51	0.50	185	0.34	0.48	190	0.37	0.49	185	0.46	0.50
Child in Household	191	0.46	0.50	162	0.43	0.50	181	0.48	0.50	163	0.42	0.50
Household Size	191	2.45	1.12	191	2.92	1.49	191	3.01	1.37	191	2.79	1.16

Source: GWP, 2009-2013

Notes: All statistics are for 2008-2012 and show the number of observations, means, and standard deviations for each variable and for each migrant and non-migrant group. The means of the binary variables show the proportion of respondents in each category.

Table 2.3: Summary of Difference-in-Differences Matching Results (Kernel Propensity Score Difference-in-Differences)

Outcome	Pre-Migration			Post-Migration			DID
	Stayer	Migrant	Diff.	Stayer	Migrant	Diff.	
Household Income (in 1,000s of ID) (n=552)	16.102 (1.542)	11.406 (1.542)	-4.696** (2.180)	11.582 (1.765)	28.214 (1.786)	16.632*** (2.511)	21.328*** (3.326)
Best Possible Life (BPL) (n=750)	5.893 (0.156)	4.962 (0.156)	-0.931*** (0.221)	5.461 (0.156)	6.306 (0.156)	0.846*** (0.221)	1.777*** (0.312)
Experienced Happiness Yesterday (n=702)	0.582 (0.037)	0.514 (0.037)	-0.068 (0.052)	0.585 (0.038)	0.64 (0.037)	0.055 (0.053)	0.124* (0.074)
Experienced Stress Yesterday (n=733)	0.278 (0.035)	0.397 (0.035)	0.118** (0.049)	0.307 (0.035)	0.377 (0.035)	0.07 (0.049)	-0.049 (0.070)
Experienced Anger Yesterday (n=734)	0.15 (0.029)	0.251 (0.029)	0.102** (0.042)	0.195 (0.030)	0.203 (0.030)	0.008 (0.042)	-0.093 (0.059)
Satisfied with Health (n=658)	0.811 (0.030)	0.705 (0.030)	-0.106 (0.042)	0.775 (0.030)	0.888 (0.039)	0.113*** (0.050)	0.219*** (0.065)
Satisfied with Standard of Living (n=593)	0.593 (0.036)	0.33 (0.036)	-0.263*** (0.051)	0.487 (0.037)	0.662 (0.039)	0.175*** (0.054)	0.438*** (0.074)
Satisfied with Freedom in Life (n=662)	0.634 (0.035)	0.55 (0.035)	-0.084* (0.050)	0.662 (0.036)	0.846 (0.036)	0.185*** (0.051)	0.268*** (0.071)

Source: GWP, 2009-2013

Notes: Kernel Propensity Score Difference-in-Differences on the common support, standard errors in parentheses. Best Possible Life (BPL) measures the respondent's assessment of her current life relative to her best possible life on a scale of 0 to 10, where 0 is the worst possible life, and 10 is the best possible life. The other outcome variables are binary variables coded as 1 if the respondent experienced the particular type of affect or is satisfied with the particular aspect of life, and as 0 otherwise. Household income is in 1,000s of international dollars (ID), which allows comparisons across countries and time.
*** $p \leq 0.01$, ** $p \leq 0.05$, * $p \leq 0.1$

Table 2.4: Summary of Parametric Difference-in-Differences Results

Outcome	Pre-Migration			Post-Migration			DID
	Stayer	Migrant	Diff.	Stayer	Migrant	Diff.	
Household Income (in 1,000s of ID) (n=593)	33.492 (11.471)	29.495 (11.146)	-3.997* (2.085)	30.821 (11.021)	46.701 (11.530)	15.88*** (2.271)	19.878*** (2.988)
Best Possible Life (BPL) (n=764)	6.738 (1.776)	5.822 (1.779)	-0.917*** (0.212)	6.525 (1.775)	7.372 (1.793)	0.847*** (0.211)	1.764*** (0.297)
Experienced Happiness Yesterday (n=735)	0.972 (0.267)	0.897 (0.262)	-0.075 (0.052)	0.975 (0.263)	1.035 (0.260)	0.061 (0.051)	0.136* (0.073)
Experienced Stress Yesterday (n=754)	-0.079 (0.377)	0.046 (0.377)	0.125*** (0.047)	-0.057 (0.377)	0.03 (0.377)	0.087* (0.049)	-0.038 (0.067)
Experienced Anger Yesterday (n=755)	-0.086 (0.252)	0.009 (0.254)	0.096** (0.041)	-0.041 (0.258)	-0.04 (0.255)	0.001 (0.042)	-0.095 (0.058)
Satisfied with Health (n=762)	0.731 (0.438)	0.633 (0.437)	-0.099** (0.043)	0.703 (0.436)	0.812 (0.436)	0.110** (0.045)	0.209*** (0.061)
Satisfied with Standard of Living (n=715)	0.611 (0.419)	0.35 (0.420)	-0.261*** (0.048)	0.548 (0.421)	0.714 (0.423)	0.166*** (0.052)	0.426*** (0.070)
Satisfied with Freedom in Life (n=706)	0.453 (0.241)	0.368 (0.239)	-0.086* (0.051)	0.462 (0.239)	0.652 (0.238)	0.189*** (0.045)	0.275*** (0.068)

Source: GWP, 2009-2013

Notes: Difference-in-Differences Estimation using robust standard errors (in parentheses). Best Possible Life (BPL) measures the respondent's assessment of her current life relative to her best possible life on a scale of 0 to 10, where 0 is the worst possible life, and 10 is the best possible life. The other outcome variables are binary variables coded as 1 if the respondent experienced the particular type of affect or is satisfied with the particular aspect of life, and as 0 otherwise. Household income is in 1,000s of international dollars (ID), which allows comparisons across countries and time.
*** $p \leq 0.01$, ** $p \leq 0.05$, * $p \leq 0.1$

Table 2.5: Quantile Difference-in-Differences Results, Best Possible Life

Outcome	Pre-Migration			Post-Migration			DID
	Stayer	Migrant	Diff.	Stayer	Migrant	Diff.	
BPL Q10	3.000 (0.269)	2.000 (0.570)	-1.000 (0.641)	3.000 (0.354)	3.000 (0.656)	0.000 (0.000)	1.000 (0.949)
BPL Q15	4.000 (0.493)	3.000 (0.361)	-1.000 (0.619)	3.000 (0.446)	5.000 (0.464)	2.000*** (0.625)	3.000*** (0.869)
BPL Q25	5.000 (0.460)	4.000 (0.425)	-1.000 (0.630)	4.000 (0.407)	5.000 (0.000)	1.000** (0.407)	2.000*** (0.749)
BPL Q50	6.000 (0.283)	5.000 (0.045)	-1.000*** (0.287)	5.000 (0.348)	6.000 (0.488)	1.000* (0.607)	2.000*** (0.656)
BPL Q75	7.000 (0.492)	7.000 (0.386)	0.000 (0.611)	7.000 (0.159)	8.000 (0.189)	1.000*** (0.251)	1.000 (0.650)
BPL Q90	8.000 (0.342)	8.000 (0.497)	0.000 (0.617)	8.000 (0.157)	9.000 (0.613)	1.000 (0.629)	1.000 (0.888)

Source: GWP, 2009-2013

Notes: Kernel Propensity Score Quantile Difference-in-Differences Estimation, bootstrapped standard errors (with 1,000 replications) in parentheses, N=764. The outcome variable is Best Possible Life (BPL), which measures the respondent's assessment of her current life relative to her best possible life on a scale of 0 to 10, where 0 is the worst possible life, and 10 is the best possible life. Q10 corresponds to the 10th percentile, Q15 is the 15th percentile, Q25 corresponds to the 25th percentile, Q50 corresponds to the 50th percentile, Q75 corresponds to the 75th percentile, and Q90 is the 90th percentile.
 *** $p \leq 0.01$, ** $p \leq 0.05$, * $p \leq 0.1$

Table 2.6: Quantile Difference-in-Differences Results, Household Income (in 1,000s of ID)

Outcome	Pre-Migration			Post-Migration			DID
	Stayer	Migrant	Diff.	Stayer	Migrant	Diff.	
HH Income (in 1,000s of ID) Q10	2.992 (0.411)	2.365 (0.539)	-0.627 (0.665)	3.399 (0.610)	9.114 (0.941)	5.715*** (1.133)	6.343*** (1.307)
HH Income (in 1,000s of ID) Q25	5.202 (0.654)	4.366 (0.468)	-0.835 (0.816)	5.419 (0.379)	12.176 (0.949)	6.757*** (1.013)	7.593*** (1.284)
HH Income (in 1,000s of ID) Q50	10.784 (1.045)	7.729 (0.856)	-3.054** (1.352)	9.011 (0.608)	19.755 (1.466)	10.744*** (1.564)	13.799*** (2.105)
HH Income (in 1,000s of ID) Q75	17.969 (1.693)	14.447 (1.319)	-3.522* (2.078)	14.737 (1.313)	35.234 (3.573)	20.497*** (3.770)	24.018*** (4.352)
HH Income (in 1,000s of ID) Q90	27.457 (3.176)	24.000 (2.826)	-3.457 (4.221)	22.717 (2.761)	54.118 (4.137)	31.400*** (4.985)	34.857*** (6.609)

Source: GWP, 2009-2013

Notes: Kernel Propensity Score Quantile Difference-in-Differences Estimation, bootstrapped standard errors (with 1,000 replications) in parentheses, N=593. The outcome variable is household income in 1,000s of international dollars (ID), which allows comparisons across countries and time. Q10 corresponds to the 10th percentile, Q25 corresponds to the 25th percentile, Q50 corresponds to the 50th percentile, Q75 corresponds to the 75th percentile, and Q90 is the 90th percentile.

*** $p \leq 0.01$, ** $p \leq 0.05$, * $p \leq 0.1$

Table 2.7: Summary of Difference-in-Differences Matching Results (Kernel Propensity Score Difference-in-Differences), Matching with Those Planning to Migrate

Outcome	Pre-Migration			Post-Migration			DID
	Stayer	Migrant	Diff.	Stayer	Migrant	Diff.	
Household Income (in 1,000s of ID) (n=37)	13.372 (3.641)	14.302 (3.641)	0.930 (5.150)	14.193 (4.061)	24.945 (3.838)	10.752* (5.588)	9.823 (7.599)
Best Possible Life (BPL) (n=90)	6.581 (0.436)	5.818 (0.436)	-0.763 (0.617)	5.603 (0.436)	6.818 (0.436)	1.215* (0.617)	1.978** (0.872)
Experienced Happiness Yesterday (n=79)	0.651 (0.105)	0.667 (0.105)	0.015 (0.149)	0.621 (0.107)	0.810 (0.105)	0.188 (0.150)	0.173 (0.211)
Experienced Stress Yesterday (n=88)	0.286 (0.099)	0.455 (0.099)	0.169 (0.140)	0.383 (0.103)	0.182 (0.099)	-0.202 (0.143)	-0.370* (0.200)
Experienced Anger Yesterday (n=89)	0.134 (0.091)	0.409 (0.091)	0.275** (0.129)	0.300 (0.093)	0.182 (0.091)	-0.119 (0.131)	-0.394** (0.184)
Satisfied with Health (n=63)	0.661 (0.105)	0.750 (0.105)	0.089 (0.149)	0.717 (0.105)	0.800 (0.211)	0.083 (0.235)	-0.007 (0.279)
Satisfied with Standard of Living (n=79)	0.558 (0.104)	0.450 (0.104)	-0.108 (0.148)	0.293 (0.107)	0.833 (0.110)	0.540*** (0.153)	0.648*** (0.213)
Satisfied with Freedom in Life (n=83)	0.723 (0.093)	0.571 (0.093)	-0.151 (0.132)	0.792 (0.096)	0.895 (0.098)	0.103 (0.137)	0.254 (0.190)

Source: GWP, 2009-2013

Notes: Kernel Propensity Score Difference-in-Differences on the common support, standard errors in parentheses. Best Possible Life (BPL) measures the respondent's assessment of her current life relative to her best possible life on a scale of 0 to 10, where 0 is the worst possible life, and 10 is the best possible life. The other outcome variables are binary variables coded as 1 if the respondent experienced the particular type of affect or is satisfied with the particular aspect of life, and as 0 otherwise. Household income is in 1,000s of international dollars (ID), which allows comparisons across countries and time.

*** $p \leq 0.01$, ** $p \leq 0.05$, * $p \leq 0.1$

Table 2.8: Summary of Parametric Difference-in-Differences Results, Matching with Those Planning to Migrate

Outcome	Pre-Migration			Post-Migration			DID
	Stayer	Migrant	Diff.	Stayer	Migrant	Diff.	
Household Income (in 1,000s of ID) (n=81)	15.29 (10.171)	16.603 (9.994)	1.313 (3.499)	12.38 (7.735)	30.657 (8.614)	18.277*** (4.738)	16.965*** (5.930)
Best Possible Life (BPL) (n=108)	-3.067 (2.511)	-3.908 (2.547)	-0.842 (0.518)	-3.407 (2.446)	-2.723 (2.440)	0.683 (0.446)	1.525** (0.712)
Experienced Happiness Yesterday (n=102)	-0.088 (0.524)	-0.037 (0.507)	0.051 (0.144)	0.034 (0.488)	0.202 (0.496)	0.168 (0.132)	0.116 (0.192)
Experienced Stress Yesterday (n=105)	-0.408 (0.596)	-0.287 (0.592)	0.121 (0.140)	-0.428 (0.615)	-0.429 (0.591)	-0.001 (0.142)	-0.122 (0.202)
Experienced Anger Yesterday (n=106)	0.546 (0.485)	0.751 (0.514)	0.205* (0.123)	0.639 (0.490)	0.661 (0.475)	0.023 (0.118)	-0.182 (0.167)
Satisfied with Health (n=87)	1.542 (0.382)	1.525 (0.361)	-0.017 (0.127)	1.643 (0.348)	1.592 (0.392)	-0.052 (0.189)	-0.035 (0.240)
Satisfied with Standard of Living (n=99)	2.237 (0.633)	2.013 (0.653)	-0.223* (0.125)	2.049 (0.641)	2.453 (0.649)	0.404*** (0.149)	0.627*** (0.188)
Satisfied with Freedom in Life (n=101)	0.268 (0.688)	0.136 (0.716)	-0.132 (0.150)	0.436 (0.693)	0.629 (0.682)	0.194* (0.114)	0.325* (0.192)

Source: GWP, 2011-2013

Notes: Difference-in-Differences Estimation using robust standard errors (in parentheses). Best Possible Life (BPL) measures the respondent's assessment of her current life relative to her best possible life on a scale of 0 to 10, where 0 is the worst possible life, and 10 is the best possible life. The other outcome variables are binary variables coded as 1 if the respondent experienced the particular type of affect or is satisfied with the particular aspect of life, and as 0 otherwise. Household income is in 1,000s of international dollars (ID), which allows comparisons across countries and time.

*** $p \leq 0.01$, ** $p \leq 0.05$, * $p \leq 0.1$

Table 2.9: Summary of Parametric Difference-in-Differences Results, Pooled Destination Sample

Outcome	Pre-Migration			Post-Migration			DID
	Stayer	Migrant	Diff.	Stayer	Migrant	Diff.	
Household Income (in 1,000s of ID) (n=1,436)	2.136 (2.871)	-0.206 (2.822)	-2.342*** (0.868)	3.215 (3.133)	16.044 (3.214)	12.829*** (1.576)	15.171*** (1.786)
Best Possible Life (BPL) (n=1,820)	3.836 (1.216)	3.372 (1.215)	-0.463*** (0.132)	3.923 (1.212)	4.256 (1.215)	0.334** (0.143)	0.797*** (0.195)
Experienced Happiness Yesterday (n=1,744)	0.313 (0.326)	0.241 (0.325)	-0.073** (0.034)	0.319 (0.325)	0.406 (0.325)	0.087*** (0.032)	0.160*** (0.046)
Experienced Stress Yesterday (n=1,800)	0.159 (0.226)	0.280 (0.226)	0.121*** (0.031)	0.209 (0.226)	0.371 (0.227)	0.162*** (0.032)	0.040 (0.044)
Experienced Anger Yesterday (n=1,801)	0.185 (0.275)	0.210 (0.275)	0.025 (0.027)	0.184 (0.275)	0.178 (0.275)	-0.006 (0.026)	-0.031 (0.037)
Satisfied with Health (n=1,634)	0.854 (0.156)	0.829 (0.154)	-0.025 (0.027)	0.858 (0.154)	0.971 (0.155)	0.113*** (0.027)	0.137*** (0.038)
Satisfied with Standard of Living (n=1,739)	0.972 (0.188)	0.895 (0.187)	-0.077** (0.031)	0.997 (0.188)	1.122 (0.187)	0.126*** (0.033)	0.202*** (0.045)
Satisfied with Freedom in Life (n=1,436)	0.634 (0.180)	0.527 (0.179)	-0.108*** (0.033)	0.636 (0.177)	0.795 (0.176)	0.159*** (0.030)	0.267*** (0.044)

Source: GWP, 2009-2013

Notes: Difference-in-Differences Estimation using robust standard errors (in parentheses). The destination countries are the advanced European economies. Best Possible Life (BPL) measures the respondent's assessment of her current life relative to her best possible life on a scale of 0 to 10, where 0 is the worst possible life, and 10 is the best possible life. The other outcome variables are binary variables coded as 1 if the respondent experienced the particular type of affect or is satisfied with the particular aspect of life, and as 0 otherwise. Household income is in 1,000s of international dollars (ID), which allows comparisons across countries and time.

*** $p \leq 0.01$, ** $p \leq 0.05$, * $p \leq 0.1$

Table 2.10: Effect of Migration on Life Satisfaction, Average Treatment Effect using Propensity Score Matching, Robustness Check 3

Outcome	N Treat.	N Control	Average Outcome		ATT	S.E	t-stat
			Treatment	Control			
Nearest Neighbor Matching without replacement, no caliper	56	122	0.768	0.589	0.179	0.087	2.040
Nearest Neighbor Matching without replacement, caliper=0.1	44	122	0.818	0.568	0.250	0.096	2.610
Nearest Neighbor Matching, with two neighbors, caliper= 0.08	41	122	0.829	0.610	0.220	0.105	2.080
Nearest Neighbor Matching, without replacement, caliper= 0.001	14	122	0.786	0.571	0.214	0.178	1.200
Radius Matching with a radius of 0.005	33	122	0.788	0.532	0.256	0.114	2.250
Kernel Matching, epanechnikov type, bandwidth of 0.01	43	122	0.837	0.624	0.214	0.093	2.290
Kernel Matching, normal type, bandwidth of 0.01	59	122	0.746	0.479	0.267	0.100	2.660

Sources: Eurobarometer (EB 70.1 October-November, 2008) for the controls and European Values Survey (ESS) Wave 5 (2010) for the treatment

Notes: Summary of results from propensity score matching, various techniques. N refers to the number of observations in the common support region. The treatment group is the migrants after migration. The control group is respondents expressing willingness to migrate. Covariates used for matching are: age, an interaction for age and gender, gender, and number of years of schooling. The outcome is a dichotomous life satisfaction variable.

Table 2.11: Return Migration and Well-being, Average Treatment Effect using Propensity Score Matching

Outcome	N Treat.	N Control	Average Outcome		ATT	S.E	t-stat
			Treatment	Control			
Nearest Neighbor Matching without replacement, caliper=0.01							
Household Income (in 1,000s of ID)	881	881	15.191	30.945	-15.754	1.007	-15.650
Best Possible Life (BPL)	1,170	1,170	5.602	6.175	-0.574	0.086	-6.630
Experienced Happiness Yesterday	1,165	1,165	0.579	0.666	-0.087	0.020	-4.330
Experienced Stress Yesterday	1,175	1,175	0.289	0.409	-0.120	0.020	-6.150
Experienced Anger Yesterday	1,171	1,171	0.184	0.174	0.009	0.016	0.590
Satisfied with Health	892	892	0.768	0.842	-0.074	0.019	-3.960
Satisfied with Standard of Living	1,086	1,086	0.509	0.678	-0.169	0.021	-8.110
Satisfied with Freedom in Life	1,097	1,097	0.603	0.805	-0.201	0.019	-10.590
Nearest Neighbor Matching without replacement, caliper=0.0001							
Household Income (in 1,000s of ID)	639	639	12.671	29.935	-17.264	1.110	-15.550
Best Possible Life (BPL)	884	884	5.467	6.176	-0.709	0.100	-7.120
Experienced Happiness Yesterday	871	871	0.538	0.668	-0.130	0.023	-5.580
Experienced Stress Yesterday	886	886	0.290	0.419	-0.129	0.023	-5.710
Experienced Anger Yesterday	881	881	0.169	0.174	-0.005	0.018	-0.250
Satisfied with Health	680	680	0.712	0.850	-0.138	0.022	-6.250
Satisfied with Standard of Living	817	817	0.450	0.677	-0.226	0.024	-9.470
Satisfied with Freedom in Life	816	816	0.641	0.805	-0.164	0.022	-7.540

Source: Gallup World Poll 2009-2013

Notes: Summary of results from propensity score matching. N refers to the number of observations in the common support region. The treatment group is return migrants. The control group is immigrants in advanced countries. Best Possible Life (BPL) measures the respondent's assessment of her current life relative to her best possible life on a scale of 0 to 10, where 0 is the worst possible life, and 10 is the best possible life. The other outcome variables are binary variables coded as 1 if the respondent experienced the particular type of affect or is satisfied with the particular aspect of life, and as 0 otherwise. Household income is in 1,000s of international dollars (ID), which allows comparisons across countries and time.

2.9 Appendix to Chapter 2

Table B.1: Analysis Groups

Time period/ Location	Before	After
In home country	<p>Group 2 (identified in the sample of transition economies, among those expressing a desire to move; in a separate analysis, among those with a plan to move; statistical matching with Group 1)</p> <p>Group 3 (identified in the sample of transition economies, among those expressing <i>no</i> desire or plans to move; statistical matching with Group 1)</p>	<p>Group 4 (identified in the sample of transition economies, among those expressing <i>no</i> desire or plans to move; statistical matching with Group 2)</p>
In destination		<p>Group 1 (identified in the sample of advanced economies through a survey question on country of birth)</p>

Table B.2: Parametric DID, Without Top Source and Destination Countries

Outcome	Without Albania, Romania, Poland		Albania, Romania, Poland Only		Without Greece, Italy, Spain		Greece, Italy, Spain Only	
	N	DID	N	DID	N	DID	N	DID
Household Income (in 1,000s of ID)	542	27.238*** (4.511)	464	13.871*** (2.821)	438	27.650*** (4.314)	454	12.060*** (2.500)
Best Possible Life (BPL)	542	2.440*** (0.389)	604	1.243*** (0.346)	558	1.927*** (0.379)	588	1.579*** (0.357)
Experienced Happiness Yesterday	517	0.246*** (0.094)	580	0.069 (0.084)	533	0.324*** (0.088)	564	-0.023 (0.088)
Experienced Stress Yesterday	534	0.055 (0.088)	595	-0.109 (0.081)	549	0.032 (0.084)	580	-0.098 (0.084)
Experienced Anger Yesterday	534	-0.103 (0.074)	598	-0.092 (0.071)	550	-0.065 (0.071)	582	-0.123* (0.073)
Satisfied with Health	496	0.305*** (0.081)	549	0.144** (0.072)	504	0.219** (0.087)	541	0.197*** (0.070)
Satisfied with Standard of Living	516	0.583*** (0.088)	570	0.309*** (0.084)	531	0.511*** (0.087)	555	0.338*** (0.086)
Satisfied with Freedom in Life	501	0.344*** (0.087)	560	0.231*** (0.079)	513	0.300*** (0.082)	548	0.261*** (0.083)

GWP, 2011-2013

Notes: Parametric DID Results. The top source countries are Albania Romania, and Poland. The top destination countries are Greece, Italy, and Spain
*** $p \leq 0.01$, ** $p \leq 0.05$, * $p \leq 0.1$

Tables B.3-B.4 below show the balancing tests for the covariates used to compute the propensity scores when matching the migrant groups into the main analysis. The formula for the standardized bias is given by Rosenbaum and Rubin (1985a):

$$sb = 100 * \frac{\bar{x}_{e=0} - \bar{x}_{e=1}}{\sqrt{\frac{s_{e=0}^2 + s_{e=1}^2}{2}}}$$

where the numerator is the difference in means of covariate x between the treatment and control samples, and the s^2 are the respective variances. The goal of matching is to create statistically insignificant differences between the before and after samples and a mean bias of 0 (Wunder, Schwarze, Krug, & Herzog, 2008).

Table B.3: Balancing Tests, Matching Migrants Before and After

	Treatment	Control	Standardized		
			Bias	t-stat	p-value
Age	37.275	37.491	-1.4	-0.25	0.802
Age squared (divided by 100)	1545.800	1577.200	-2.2	-0.45	0.653
Female	0.635	0.635	0	0	1
Some College/College Diploma	0.200	0.182	4.1	0.68	0.496
Poland	0.140	0.140	0	0	1
Hungary	0.034	0.034	0	0	1
Czech Republic	0.007	0.007	0	0	1
Romania	0.182	0.182	0	0	1
Belarus	0.005	0.005	0	0	1
Georgia	0.025	0.025	0	0	1
Kazakhstan	0.007	0.007	0	0	1
Moldova	0.020	0.020	0	0	1
Russia	0.063	0.063	0	0	1
Ukraine	0.020	0.020	0	0	1
Albania	0.223	0.223	0	0	1
Armenia	0.007	0.007	0	0	1
Bosnia and Herzegovina	0.045	0.045	0	0	1
Bulgaria	0.036	0.036	0	0	1
Croatia	0.027	0.027	0	0	1
Estonia	0.007	0.007	0	0	1
Latvia	0.011	0.011	0	0	1
Lithuania	0.020	0.020	0	0	1
Macedonia	0.020	0.020	0	0	1
Montenegro	0.002	0.002	0	0	1
Serbia	0.041	0.041	0	0	1
Slovakia	0.005	0.005	0	0	1
Slovenia	0.023	0.023	0	0	1
Kosovo	0.032	0.032	0	0	1
United States	0.016	0.016	0	0	1
United Kingdom	0.011	0.011	0	0	1
France	0.014	0.014	0	0	1
Germany	0.133	0.133	0	0	1
Netherlands	0.011	0.011	0	0	1
Belgium	0.011	0.011	0	0	1
Spain	0.101	0.101	0	0	1
Italy	0.131	0.131	0	0	1
Sweden	0.038	0.038	0	0	1
Greece	0.252	0.252	0	0	1
		...			
Catholic	0.300	0.300	0	0	1
Protestant	0.018	0.018	0	0	1
Eastern Orthodox	0.401	0.401	0	0	1
Islam/Muslim	0.194	0.194	0	0	1
Islam/Muslim: Shiite	0.009	0.009	0	0	1
Islam/Muslim: Sunni	0.014	0.014	0	0	1
Judaism	0.011	0.011	0	0	1
Nonreligious	0.045	0.045	0	0	1
Christian	0.009	0.009	0	0	1
Average Bias	before	83.321			
	after	0.104			

Table B.4: Balancing Tests, Matching Migrants and Non-Migrants

	Treatment	Control	Standardized		
			Bias	t-stat	p-value
Age	37.260	37.992	-4.7	-0.81	0.417
Age squared (divided by 100)	1549.200	1593.500	-3	-0.61	0.539
Female	0.625	0.602	4.8	0.67	0.505
Some College/College Diploma	0.182	0.188	-1.3	-0.19	0.853
Poland	0.156	0.156	0	0	1
Hungary	0.010	0.010	0	0	1
Czech Republic	0.005	0.005	0	0	1
Romania	0.203	0.203	0	0	1
Georgia	0.021	0.021	0	0	1
Moldova	0.026	0.026	0	0	1
Russia	0.068	0.068	0	0	1
Ukraine	0.031	0.031	0	0	1
Albania	0.221	0.221	0	0	1
Armenia	0.005	0.005	0	0	1
Bosnia and Herzegovina	0.047	0.047	0	0	1
Bulgaria	0.036	0.036	0	0	1
Croatia	0.036	0.036	0	0	1
Estonia	0.008	0.008	0	0	1
Latvia	0.016	0.016	0	0	1
Lithuania	0.010	0.010	0	0	1
Macedonia	0.016	0.016	0	0	1
Serbia	0.026	0.026	0	0	1
Slovakia	0.005	0.005	0	0	1
Slovenia	0.026	0.026	0	0	1
Kosovo	0.026	0.026	0	0	1
Catholic	0.297	0.284	2.9	0.4	0.691
Protestant	0.010	0.018	-3.8	-0.91	0.363
Eastern Orthodox	0.406	0.396	2.1	0.29	0.769
Islam/Muslim	0.188	0.219	-9.3	-1.08	0.282
Islam/Muslim: Shiite	0.005	0.005	0	0	1
Islam/Muslim: Sunni	0.016	0.003	10.7	1.9	0.058
Non-religious	0.068	0.076	-3	-0.42	0.675
Christian	0.010	0.000	6.9	2.01	0.045
Average Bias	before	19.333			
	after	1.547			

Table B.5: Source and Destination Countries for Migrants from Transition Economies, Matching with Those Planning to Migrate

Birth Country	Number	Percent	Residence Country	Number	Percent
Poland	5	18.52	France	3	11.11
Bulgaria	5	18.52	Italy	3	11.11
Romania	4	14.81	Ireland	3	11.11
Lithuania	3	11.11	Spain	2	7.41
Estonia	2	7.41	Canada	2	7.41
Hungary	1	3.7	Australia	2	7.41
Czech Republic	1	3.7	Austria	2	7.41
Moldova	1	3.7	Finland	2	7.41
Albania	1	3.7	Switzerland	2	7.41
Bosnia and Herzegovina	1	3.7	United States	1	3.7
Macedonia	1	3.7	United Kingdom	1	3.7
Slovakia	1	3.7	Netherlands	1	3.7
Kosovo	1	3.7	Belgium	1	3.7
			Denmark	1	3.7
			Cyprus	1	3.7
Total	27	100	Total	27	100

Source: GWP, 2011-2013

Table B.6: Migrants and Stayers from Transition Economies, Demographics and Socio-Economic Characteristics, Matching with Those Planning to Migrate

Variable	Migrants After			Migrants Before			Stayers After			Stayers Before		
	Num	Mean	Std. Dev.	Num	Mean	Std. Dev.	Num	Mean	Std. Dev.	Num	Mean	Std. Dev.
Age	27	42.63	15.70	27	30.26	9.76	27	40.59	14.42	27	29.85	9.21
Female	27	0.59	0.50	27	0.59	0.50	27	0.48	0.51	27	0.52	0.51
Catholic	27	0.41	0.50	27	0.41	0.50	27	0.41	0.50	27	0.41	0.50
Protestant	27	0.04	0.19	27	0.04	0.19	27	0.00	0.00	27	0.07	0.27
Orthodox	27	0.37	0.49	27	0.37	0.49	27	0.37	0.49	27	0.41	0.50
Muslim	27	0.11	0.32	27	0.11	0.32	27	0.15	0.36	27	0.07	0.27
No religion/Agnostic	27	0.07	0.27	27	0.07	0.27	27	0.07	0.27	27	0.04	0.19
Some College/ College Diploma	27	0.44	0.51	27	0.26	0.45	27	0.22	0.42	27	0.26	0.45
Married	26	0.62	0.50	26	0.23	0.43	27	0.59	0.50	27	0.44	0.51
Employed Full-Time	26	0.46	0.51	27	0.30	0.47	27	0.41	0.50	27	0.52	0.51
Self-Employed	26	0.08	0.27	27	0.04	0.19	27	0.15	0.36	27	0.04	0.19
Voluntarily Employed Part-Time	26	0.12	0.33	27	0.15	0.36	27	0.04	0.19	27	0.07	0.27
Unemployed	26	0.12	0.33	27	0.19	0.40	27	0.07	0.27	27	0.00	0.00
Involuntarily Employed Part-Time	26	0.08	0.27	27	0.04	0.19	27	0.04	0.19	27	0.04	0.19
Out of the Labor Force	26	0.15	0.37	27	0.30	0.47	27	0.30	0.47	27	0.33	0.48
Urban Location	27	0.74	0.45	27	0.59	0.50	27	0.48	0.51	27	0.41	0.50
Child in Household	27	0.33	0.48	26	0.50	0.51	27	0.33	0.48	27	0.44	0.51
Household Size	27	2.07	0.78	27	2.48	1.34	27	2.41	1.15	27	3.11	1.45

Source: GWP, 2011-2013

Notes: All statistics are for 2010-2012 and show the number of observations, means, and standard deviations for each variable and for each migrant and non-migrant group. The means of the binary variables show the proportion of respondents in each category. Household income is in international dollars (ID), which allows comparisons across countries and time.

Chapter 3: Does joining the EU make you happy? Evidence from Central and Eastern Europe

3.1 Overview

Between 2004 and 2007, ten post-communist countries joined the European Union (EU-10), which was the culmination of their transition processes. Using difference-in-differences (DID), this study assesses the perceived well-being effects associated with EU accession in Central and Eastern Europe, with a focus on Bulgaria and Romania (EU-2). The main finding is that joining the EU had no immediate influence on the perceived well-being of Bulgarians and Romanians in 2007 but was positively related to life satisfaction in 2008-2009, with some variation by socio-demographic groups. In addition, with a few exceptions, there were EU-related well-being gains in the EU-8 countries after joining in 2004. Taken at face value, the results imply that EU admission has immediate life satisfaction effects in the more advanced transition countries and is associated with well-being gains only after a lag in the less advanced post-communist members. The paper also finds that the control of corruption and EU aid were associated with higher life satisfaction in Bulgaria and Romania, although a greater share of EU imports had the opposite

influence. In the EU-8, better governance, economic growth, and EU imports had a positive association with life satisfaction, while the control of corruption had a modest negative association.

This chapter's findings are relevant to policymakers in the Western Balkans and the Eastern Partnership countries, which aspire to EU membership. Like Bulgaria and Romania, these candidate countries are less advanced and less prepared for membership than accession countries in previous enlargements. Therefore, if accepted into the EU, citizens in these countries will likely experience the subjective well-being gains from joining the EU after a lag and after adjusting to the new rules of the game. The results also have implications for the EU's enlargement and integration policies.

3.2 Introduction

Since the mid-1990s, the prospect of joining the EU has shaped the socio-economic and political transformations in the post-communist countries in Central and Eastern Europe (CEE) and the Former Soviet Union (FSU). Between 2004 and 2007, ten CEE and Baltic countries (i.e., the EU-10) joined the European Union, which was arguably the culmination of their transition processes.¹ EU accession

¹The EU-8 countries are the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovenia, and Slovakia. The EU-2 countries are Bulgaria and Romania, which joined in 2007. Croatia joined the EU in July, 2013 but is excluded from this analysis due to limited post-accession data. Malta and Cyprus joined the EU in 2004 but are excluded from this analysis as they are not ex-communist countries.

symbolized the "return to Europe" and furnished "the standard of a normal society," open markets, and a transfer of democratic institutions (Åslund, 2007, p. 7). But how did this momentous event affect the perceived well-being of ordinary transitional citizens? While the EU has generally had a positive impact on the macroeconomic and institutional performance in the EU-10, the effects on individual well-being remain largely unexplored.

According to the Treaty of Lisbon, one of the EU's explicit aims is to promote the well-being of its citizens (EU, 2007) in its material and non-material aspects (Somarriba & Pena, 2009). Yet the EU-10 countries face convergence challenges as they are generally poorer and unhappier compared with their EU-15 counterparts (Table 3.1).² Given the disparities in the socio-economic indicators and subjective well-being between the EU-15 and EU-10, closing the quality of life gap between the old and new members is a challenging task.

While joining the EU has had political, social, and economic ramifications for the EU-10 countries, this paper studies the well-being impacts at the *individual* level, with a particular focus on Bulgaria and Romania (EU-2). The main outcome of interest is subjective well-being (SWB), which is a far-reaching (though not exhaustive) welfare concept reflecting not only material well-being but also concerns and worries, work, health, social networks, and others (Easterlin, 2009). SWB metrics are increasingly used in economic and policy analyses and are psychometrically sound and comparable across countries and levels of development. SWB metrics

²The EU-15 countries are: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden, and United Kingdom.

capture the idea that people are the best judges of how different life events and circumstances affect their well-being (OECD, 2011). Although using life satisfaction to evaluate the effects of macro-level factors on well-being is not new (Eggers, Gaddy, & Graham, 2006; Tella, MacCulloch, & Oswald, 2001; DiTella, MacCulloch, & Oswald, 2003; Perovic & Golem, 2010; Welsch & Bonn, 2008), the effects of joining the EU on the life satisfaction of EU-10 citizens have been unexplored.

Measuring the effects of policy-relevant variables on individual outcomes by merging macro- and micro-level data can be misleading, however, because the residuals have a group structure (i.e., Moulton bias) (Moulton, 1990). The problem is most troublesome when the regressor of interest is fixed within groups (Angrist & Pischke, 2009) as is the case in this paper. Ignoring the group structure leads to a downward bias in the standard errors. One solution is to use clustered standard errors. In this paper, standard errors are clustered by time and country as the macro-level controls and the EU variable are at the country-year level.

This paper asks: (i) has joining the EU enhanced or decreased the SWB of Bulgarians and Romanians? and (ii) have different socio-economic and demographic groups experienced disproportionate well-being gains or losses? This paper focuses on Bulgaria and Romania in part due to data limitations, but also shows evidence for the EU-8 countries (i.e., the countries in Central and Eastern Europe which joined in 2004). Bulgaria and Romania are also the EU's poorest and unhappiest members and the accession could be an especially important instrument for improving their quality of life.

To assess socio-economic integration, policymakers need reliable estimates of

the EU's well-being influence at the national level and on different socio-economic strata within countries. Moreover, it is important to understand the mechanisms of EU influence and examine whether they differed between the EU-2 and the EU-8, which can inform the procedures of future enlargement processes. EU funds, economic integration, and improved governance indirectly affect well-being through improving the quality of the social fabric and living conditions (Delhey, 2001).

As a gradual process which started in the 1990s, the accession of the EU-10, is a complex phenomenon. Yet several unifying themes emerge. While the EU is a symbol of political and economic stability for both elites and ordinary transitional citizens, the process invariably had winners and losers as well as benefits and costs (Tucker, Pacek, & Berinsky, 2002). Specifically, those who gained the most from transition - i.e., the educated, the upwardly mobile, and the young - likely also benefited the most from EU membership and the enhanced opportunities that come with it. The benefits of EU membership include economic integration, redistribution, and improved institutions (Delhey, 2001; Doyle & Fidrmuc, 2006). The EU helped post-communist countries improve their governance and tighten the control of corruption but at the cost of making difficult reforms and adopting the 170,000 pages of the *aquis* (i.e., the EU's common body of law). Joining the EU invariably "cost" new members the adoption of norms and regulations, especially in the area of environmental protection, safety standards, and competition policy (whereby national governments cannot aid national industries), which required difficult adjustments (Doyle & Fidrmuc, 2006). In addition, while economic integration implies economic benefits from trade and unfettered factor mobility, competition from EU

imports could disadvantage fledgling domestic industries or businesses which enjoyed import protection (Doyle & Fidrmuc, 2006). While on January 1, 2007, Bulgarians and Romanians celebrated their return to Europe, they soon felt the bane of marginalization by being the poorest, the unhappiest, and the most corrupt in the EU. Unprecedentedly, moreover, Bulgaria and Romania are subject to ex-post monitoring through the Mechanism for Cooperation and Verification (MCV), which negatively affected their European identity.

As will be elaborated throughout the paper, all of these themes appear in this study's results, which can be summarized as follows: the simplest specifications collapsing the data into two time periods (before and after accession) show that joining the EU was associated with higher life satisfaction in Bulgaria but had no effects in Romania (Tables 3.3 and 3.10). The over-time analyses indicate that the EU had no effect on life satisfaction in Bulgaria and Romania immediately post-accession in 2007 but had positive effects on life satisfaction in 2008-2009 (Table 3.4). In the EU-8 countries, there were well-being gains associated with joining the EU, with a few exceptions. In addition, a simple before-and-after analysis shows that the increased control of corruption and EU aid were associated with higher life satisfaction in Bulgaria and Romania, although a greater share of EU imports had the opposite influence. In the EU-8, better governance, economic growth, EU imports, and joining the EU had a positive influence on life satisfaction, while the control of corruption had a marginally significant negative association.

While the difference-in-differences results can in theory be interpreted as causal, readers should exert caution when doing so. The DID strategy relies on the use of

counterfactual countries - i.e., countries that are similar to the countries which joined the EU except that they are not members. Of course, it is highly speculative what the EU-10 would have looked like economically or politically without the EU's influence (Levitz & Pop-Eleches, 2010). Due to data limitations, the comparison countries in the main models include Croatia and Turkey, which have been on a path to EU membership, with Croatia joining the EU in 2013. In the analyses using data from the Gallup World Poll, several counterfactuals are constructed using European Neighborhood Policy transition countries. Yet, caution should be exerted as because it is non-experimental, the DID strategy cannot completely eliminate all sources of bias and cannot control for time-variant unobservable differences.

3.3 Historical Background

Shortly after the end of the Cold War, it became clear that the countries in Central and Eastern Europe (CEE) would "return to Europe," which marked their transition and reform processes. On the one hand, Europe embraced the CEE countries, the Baltic states, and after much hesitation, Bulgaria and Romania, but on the other, it showed no interest in including the the Commonwealth of Independent States (CIS) as part of the European project (Åslund, 2007). CEE countries signed association agreements between 1992-1995 and became EU members in 2004 (EU-8) and 2007 (EU-2).³ Estonia, Latvia, Slovakia, and Slovenia are members of the Eurozone, moreover. The EU furnished "the standard of a normal society,"

³Poland, the Czech Republic, Hungary, and Estonia started membership negotiations in 1997 and Bulgaria, Romania, Latvia, Lithuania and Slovakia started in 1999.

open markets, and a transfer of democratic institutions (Åslund, 2007, p. 7). However, the new members had to adopt the 170,000 pages of the EU legal framework (*acquis communautaire*) and the Western market economic and legal systems with high taxes, large social transfers, and overregulation of labor markets and agriculture, which hinder economic growth (Åslund, 2007). Many of these transition and post-transition countries are, meanwhile, the poorest members of a rich club, which fosters the perception of second-class citizens. For example, Table 3.1 shows that in 2012, the GDP per capita of the EU-15 was about 80 percent higher and evaluative well-being (BPL) was about 25 percent higher than that of the EU-10. In relative terms, the poorest Danes are richer than 85 percent of Bulgarians (Milanovic, 2011).

Russia and the former Soviet Republics in Central Asia had a different experience. Early on, there was a consensus that Russia is non-Western and that will never be an EU member - it had a big population and a crumbling economy and with the military threat gone, it received little financial support from the West. The EU countries feared the cheap agricultural, steel, and chemical goods from Russia, the Ukraine, Moldova, and Kazakhstan. Receiving little attention from the EU, these countries turned to Russia and to each other and set up the Commonwealth of Independent States (CIS) in 1991 to replace the Soviet Union (Åslund, 2007). Some of the CIS countries became a part of the European Neighborhood Policy (ENP) after 2003.⁴ In 2011, Russia, Kazakhstan, and Belarus signed an agreement estab-

⁴The ENP provides financial assistance, economic integration, easier travel, and support for civil society in the 16 ENP countries, conditional upon completing economic and political reforms (EU, 2013).

lishing the Eurasian Union, with Russia insistently inviting other CIS members to join. The dilemma between choosing the West or Russia is still ongoing in some of these countries, most notably, the Ukraine.

In short, the EU played a significant role in shaping the post-socialist transitions in the CEE and CIS countries and the divergent outcomes in the two regions. On the one hand, the EU has helped the CEE countries to return to Europe. Since the free trade agreements in the early and mid-1990s, the EU offered technical assistance and modest pre-accession financial assistance. On the other hand, the EU has applied a different policy instrument to the CIS and Western Balkans - the ENP, which provides partnership benefits without promise of accession.

3.4 Literature Review

New research suggests that the GDP per capita gains of joining the EU are relatively large and that EU-8 countries experienced similar gains to those in previous enlargements: about 13 percent (and even 53 percent in Latvia's case) relative to the counterfactual case (Campos, Coricelli, & Moretti, 2014). The convergence literature shows that the EU accession has led to an economic catch-up in Ireland, Greece, Portugal and Spain as well as the CEE countries which joined in 2004 (Kaitila, 2004). Moreover, Cavenaile and Dubois (2011) find evidence for β -convergence (i.e., poorer EU members growing faster than the richer EU members) between the CEE members and the rest of the EU.⁵ Trade and Foreign Direct In-

⁵Pastor and Serrano (2012) show that a 2 percent annual convergence in income will decrease permanent income inequality in an enlarged EU by more than two thirds of what it is now.

vestment (FDI) have been important drivers of convergence: the trade agreements between the EU-15 and the EU-10 (i.e., the Interim Agreements and the Europe Agreements) led to substantive contributions to GDP and welfare (Egger & Larch, 2011).⁶ Welsch and Bonn (2008) bridge the gap between the economic convergence literature and life satisfaction studies by showing that macroeconomic convergence (and the convergence in inflation rates in particular) played a substantial role for the convergence in life satisfaction in the EU in the 1990s.

Starting with Easterlin's (1974) seminal paper, scholars have used SWB metrics to assess human welfare. Subjective well-being has three distinct dimensions: evaluative, hedonic, and eudaimonic (Durand & Smith, 2013; OECD, 2013b; Stone & Mackie, 2013). While little research has been done on eudaimonic well-being, which is about perceptions of meaning and purpose in life, researchers have focused on the distinctions between *affect* (i.e., hedonic well-being) and *evaluative* well-being.⁷ Positive affect relates to emotions such as happiness, joy, and smiling at a point in time, while negative affect captures worry, sadness, stress, or anger. Life satisfaction is a "reflective assessment" of one's own life and complements objective well-being indicators by providing an overall assessment of individual preferences

⁶Other papers examine convergence in living standards between old and new EU members (Cornelisse & Goudswaard, 2002; Giannias, Liargovas, & Manolas, 1999; Neumayer, 2003).

⁷As explained in Chapter 1, eudaimonic well-being is about people's perceptions of meaning and value of their life and reflects the ancient Greek notion of happiness as life purpose, challenges, and growth (Stone & Mackie, 2013). This subjective well-being concept goes beyond the reflections of life as a whole and emotional states and focuses on flourishing and the realization of human potential (OECD, 2013b).

rather than an externally chosen well-being criterion (OECD, 2011). There are two main challenges related to the use of well-being scores (OECD, 2011). First, people may adapt to bad circumstances and learn to be happy or take pleasure in immoral behavior. As a result, SWB metrics should complement rather than substitute objective metrics. Second, SWB indicators may be non-comparable across individuals and may be affected by transient external factors (OECD, 2011). The literature shows, however, that the latter concern is largely unjustified and that SWB metrics are comparable across individuals, countries, and time, are psychometrically sound, and predict behavior reasonably well (OECD, 2011). Scholars have used the life satisfaction approach to study the well-being effects of various macroeconomic policies and phenomena, including inflation and unemployment (Di Tella & MacCulloch, 2006), the welfare effects of the Euro introduction (Wunder et al., 2008), and the impact of the recent financial crisis (Graham, Chattopadhyay, & Picon, 2010a), among others.

The literature on the impacts of joining the EU on the EU-10 members is still in its infancy and few studies attempt to tackle issues of causality. In one exception, using difference-in-differences, Popova (2012) finds that the Euro adoption led to life satisfaction declines for females, the elderly, the unemployed, and the poorest in the EU countries which adopted the euro in 2002. Again, the losers of transition appear to be the the losers of the Euro adoption as well. In most new member states (except Slovenia), however, the Euro adoption was positive for life satisfaction. In another exception, Wunder et al. (2008) find that the Euro adoption had a negative impact on satisfaction with income in Germany and the UK. Levitz and Pop-Echeles

(2010) use a 2SLS strategy to examine the impact of the EU on the governance and democracy in the 2004 enlargement countries and conclude that there has been a reform slowdown (though not backlash) post-accession. Finally, using a regression discontinuity design, Becker et al. (2010) find that the EU's structural funds have had a positive effect on GDP growth in EU-25.

Notwithstanding their limitations, several studies examine the association between macro-level conditions and individual SWB in the enlarged EU (Abbott & Wallace, 2012; Böhnke, 2008; Fahey & Smyth, 2004; Rodriguez-Pose & Maslauskaitė, 2012). Abbott and Wallace (2012) investigate the link between life satisfaction and economic conditions in the EU-10 using the Social Quality Model and data for 2003 and 2007 from the European Quality of Life Surveys. The authors find that economic security is the most important factor for life satisfaction. Using data from the 2008 and 1999 Eurobarometers, Rodriguez-Pose and Maslauskaitė (2012) discover that while similar to the EU-15 in terms of individual life satisfaction determinants, CEE countries differ along macroeconomic and institutional determinants. GDP growth is a source of increasing well-being though with diminishing returns. Corruption, government spending, and decentralization are the main correlates of individual life satisfaction in the EU-10, meanwhile. Moreover, using 2003 data, Böhnke (2008) finds that life satisfaction varies between new and old EU member states. Moreover, the less affluent and politically stable the country, the more important the standard of living and perceptions of society.⁸ Fahey and Smyth (2004)

⁸The author defines "standard of living" as an index of variables measuring problems with accommodation, affordability of basic goods, making ends meet, and solvency problems." Perceived

look at life satisfaction for 33 European Societies using the 1999-2000 Eurobarometer and conclude that per capita GDP, GDP growth, and income inequality account for 90 percent of the life satisfaction differences between countries in life satisfaction and that relative differences between countries matter more than relative differences within countries.

3.5 Empirical Strategy

Like Popova (2012) and Wunder et al. (2008), this paper uses difference-in-differences (DID) to study whether and how the EU influenced life satisfaction in Bulgaria and Romania (i.e., EU-2). It compares the before-and-after SWB outcomes of the EU-2 (and in some instances, the EU-8) to those of counterfactual economies which did not join the EU in 2007. The DID method assumes that no other major event significantly affected subjective well-being during the accession period. While other events such as elections, impeachments, and protests happened in the EU-10 countries in the years of accession, joining the EU is arguably the most significant national event for the EU-10 during the accession years. For example, Eurofound considered EU accession the most important event in 2004 in the Czech Republic (Eurofound, 2005c), Hungary (Eurofound, 2005a), and Poland (Eurofound, 2005b). Similarly, for Bulgaria (Eurofound, 2008) and likely for Romania, joining the EU was the main political event in 2007. As explained below, the Standard Eurobarometer (EB) surveys are collected at least twice a year, thus providing observations immediate to the event. The “quality of society” is captured by an index of trust variables, tensions in society, and quality of public services (Böhnke, 2008).

diately before and after joining the EU. In the case of Bulgaria and Romania which joined on January 1, 2007, EB data were collected in September-October, 2006 and then again in April-May, 2007, thus minimizing the influence of intervening events.

The DID estimator is:

$$Y_{ict} = \alpha + \beta EU_c + \gamma D_t + \lambda EU_c * D_t + X'_{ict} \kappa + \epsilon_{ict} \quad (3.1)$$

where i indexes individuals, c - countries, and t - years, Y is the outcome variable (life satisfaction); EU is an EU membership dummy, and D is a dummy for individuals observed after EU accession. The average treatment effect (ATT) of EU accession on life satisfaction is given by λ ; X is a vector of individual and household-level characteristics (age, age squared, gender, education, employment, community size, household size, children in the household, etc.), κ is a coefficient vector, ϵ_{ict} is the stochastic error term. Individual-level variables in the covariate vector increase precision (Angrist & Pischke, 2009). The conditioning variables in X must be independent of the treatment, i.e., individuals should not change their behavior in anticipation of EU accession (Lechner, 2011). The DID estimator assumes that the treatment had no impact on the treated in the pre-treatment period (Lechner, 2011). To account for anticipation and adaptation effects, as well as take advantage of the time-series data, I adapted Acemoglu and Angrist's model (2001):

$$Y_{ict} = \alpha + \beta EU_c + \pi Year_t + \lambda EU_c * Year_t + X'_{ict} \kappa + \epsilon_{ict} \quad (3.2)$$

where the variables are defined as in equation (3.1) above. $Year$ is year effects and $\lambda EU_c * Year_t$ is the full set of year*EU status interactions. Anticipation effects are captured by the year*EU status variables prior to 2007 and adaptation effects are shown in the post-2007 interactions. All models are estimated using OLS with standard errors clustered by country and year, allowing the error terms of individuals within the same country and time period to be arbitrarily correlated with one another. The choice of OLS is due to the problematic interpretation of the interaction term (i.e., the average treatment effect) in non-linear models with a monotonic transformation functions (Ai & Norton, 2003). In addition, ignoring the ordinality of subjective well-being data has little effect on the results (Ferrer-i Carbonell & Frijters, 2004), providing another justification for the OLS estimator.

The DID estimator mitigates endogeneity related to time-invariant unobserved heterogeneity (Bertrand, Duflo, & Mullainathan, 2004). Therefore, to the extent that unobservable differences between individuals that affect their well-being perceptions are time-invariant, they should cancel out in a DID model. The estimator's main assumption is that changes which occurred for reasons other than the program affected the treatment and the control groups in the same way (i.e., the common trends assumption) (Abadie, 2005). This assumption implies that if the EU-10 had not joined the EU, they would have experienced the same well-being trends as the non-EU transition countries, conditional upon the covariates (Lechner, 2011). Of course, this assumption is highly speculative and it is difficult to imagine what the EU-10 countries would have looked like politically and economically had they not been on a path to EU membership.

3.6 Data and Control Countries

The individual-level data in this paper are from Eurobarometer (EB) and the Gallup World Poll (GWP), which, to my knowledge, are the only available datasets allowing the reliable comparison of subjective well-being before and after the 2004 and 2007 enlargements. In addition, macro-level data are collected from Eurostat, the World Development Indicators (WDI), and the World Governance Indicators (WGI), among several others.

3.6.1 Eurobarometer

EB is the only available source with time series life satisfaction data a few months before and after Bulgaria's and Romania's EU admission. Prior to 2004, the data are from Candidate Countries Eurobarometer (CCEB), which was conducted in 13 countries applying for membership between October, 2001 and May, 2004.⁹ CCEB excludes Croatia, meanwhile. Starting with Eurobarometer (EB) 62, conducted in October-November, 2004, the Central and Eastern European Countries (and Croatia and Turkey) are polled as part of the standard EB. The dataset has consistent information information about gender, age, years of education, em-

⁹EB data were downloaded from GESIS [http : //www.gesis.org/en/eurobarometer/data – access](http://www.gesis.org/en/eurobarometer/data-access). The following CCEBs have a life satisfaction question: 2001.1, 2002.1, 2002.2, 2003.4, 2004.1. CCEB 2003.5 is excluded as its life satisfaction question has two categories (as opposed to four) and about 61 percent of observations are not applicable or refusals, making the question incompatible with the rest of the waves.

ployment status, household size, marital status, and household location. There are no consistent income or expenditure variables, however.

The EB life satisfaction question asks respondents how satisfied they are on the whole with the life they lead. The scale ranges from 1, "not at all satisfied" to 4 "very satisfied" with no "neutral" category. In four instances, namely CCEB 2004.1; EB 63.1; EB 72.1; EB 71.4, the life satisfaction scale was recoded from 1-5 and 1-10 to a 1-4 scale, respectively. All control variables were recoded so that they are consistent across the waves.

The DID strategy requires a reliable counterfactual: i.e., identical non-EU countries demonstrating what would have happened to life satisfaction in the EU-10 had they not become EU members. Unfortunately, Eurobarometer does not cover the transition countries in Central Asia and Albania, and polls for Serbia, Montenegro, and Macedonia are available only post-2007. Therefore, the only available control countries are Croatia (starting in 2004) and Turkey. While Croatia joined the EU in 2013, it did not sign an Accession Treaty until December 9, 2011 and can therefore be used as a control country until then. Bulgaria and Romania signed their accession treaties on April 25, 2005 and can only be used as control countries for the EU-8 countries until 2005, meanwhile. Given these data limitations, this chapter focuses on the well-being effects of EU membership on Bulgarians and Romanians but also presents some evidence for the EU-8.

3.6.2 Gallup World Poll Data and Macro-Level Sources

Gallup World Poll (GWP) data complement the main analyses. GWP first polled Romanians in 2005-2006 and surveyed them in all years except 2008. GWP has only one year of pre-treatment data as the 2005-2006 wave is considered jointly. Bulgaria is excluded from the DID analysis with GWP as the earliest data are from January, 2007. GWP is an annual survey run by the Gallup Organization in about 160 countries worldwide. Polling about 1,000 respondents per country, the survey is nationally representative (of populations aged 15 and over). Because different individuals are interviewed each year, the dataset presents pooled cross-sections rather than a panel. The surveys are conducted face-to-face in most transition countries.

In addition to the micro-level variables, the specifications include objective macro-level controls from the World Bank's World Development Indicators: annual inflation, GDP per capita (PPP, 2005 constant international dollars) and unemployment (% of the labor force).¹⁰

3.7 Summary Statistics

Figure 3.1 demonstrates that Bulgaria and Romania have lower life satisfaction levels than the EU-8 and Turkey and Croatia. All countries experienced an increase in well-being around October, 2004, with the most pronounced increase in Romania. This could be due to the NATO accession of Bulgaria, Romania, the Baltic States, Slovakia, and Slovenia in March, 2004; joining the EU of the EU-8

¹⁰Available at: <http://data.worldbank.org/data-catalog/world-development-indicatorslog>.

countries in May, 2004 (and the optimism it created in Bulgaria and Romania); or the signing of the treaty to establish the European Constitution in October, 2004. Life satisfaction in Bulgaria and Romania remained stable immediately after admission in 2007. Life satisfaction in Croatia did not change post-2007 but was volatile in Turkey. Life satisfaction in Bulgaria, Croatia, Turkey, and the EU-8 remained relatively stable during the economic crisis. However, life satisfaction in Romania dropped from October, 2009 until mid-2010, likely due to the economic crisis.

Table 3.2 collapses the data into two periods: before and after 2007. Life satisfaction in Bulgaria rose by about 0.1 post-accession (a scale of 1 to 4), while it declined by 0.6 in Romania, 0.17 in Turkey, and by 0.02 in Croatia. All life satisfaction changes except that in Croatia are statistically significant. The rest of the table summarizes the main socio-demographic variables included in the regressions. Results from EB 79.3 (May, 2013) show that life satisfaction was 2.05 in Bulgaria and 2.31 in Romania compared with 3.66 in Denmark (the happiest EU member) and an EU-15 average of 3.00 (on a scale of 1-4).

3.8 Results

3.8.1 Main Results

Table 3.3 reports the OLS estimates of Equation (1). The outcome is life satisfaction (measured on a 1-4 scale) and treatment variable the EU membership interacted with an indicator for observations post-accession(2007 and after). The treatment countries are Bulgaria and Romania and the controls are Turkey and Croatia.

The models include individual-level controls (age, age squared, gender, an indicator for whether the respondent is married or in a civil partnership, married*gender interaction, employment indicator, household size, household size squared, whether there are any children in the household, an indicator for a large or small town, and education categories). The macroeconomic indicators are annual inflation, log GDP per capita, and unemployment. The standard errors are clustered by country and year allowing the error terms of individuals within the same country and time period to be arbitrarily correlated with one another (Conley & Taber, 2010).

In all models, the EU dummy is negative and significant, indicating that Bulgaria and Romania have lower baseline life satisfaction than Turkey and Croatia, which is also evident from Figure 3.1. In particular, even after controlling for individual and country-level differences, life satisfaction in Romania is 0.56 lower and Bulgaria's is 0.79 lower compared to Turkey and Croatia. The life satisfaction gap in both Romania and Bulgaria is higher when compared with Turkey (Models (3) and (6)).

The coefficient estimate of interest is that of the interaction term, which captures the effects of joining the EU. Models (1)-(3) show that the 2007 accession is associated with no change in the life satisfaction in Romania, regardless of whether Turkey or Croatia (or both) are the counterfactual. While there is no "life satisfaction premium" from EU accession in Romania, that in Bulgaria is between 0.10 and 0.21 (on a scale from 1 to 4) based on Models (4)-(6) (Table 3.3).

The models in Table 3.4 delve deeper into the temporal effects of joining the EU on the life satisfaction in Romania and Bulgaria (Equation (3.2)). The coefficient

estimates of interest are the year*EU status interactions (2004 is the base period.) These interactions describe the change in relative life satisfaction in Bulgaria and Romania, with 2004-2006 as the pre-treatment and 2007-2011 as the post-treatment period. The pre-2007 interactions capture anticipation effects related to joining the EU, which in theory should be zero and the EU should have no impact on happiness in Bulgaria and Romania prior to accession. The post-2008 interactions account for adaptation effects. Models (1) and (3) include individual-level controls only, and models (2) and (4) contain the same macro-level variables as in Table 3.3. The preferred specification is the one with macro-level variables, which account for economic differences between the treatment and control.

As in Table 3.3, the EU indicator shows that Bulgaria and Romania's baseline perceived well-being level is between 0.43 and 0.74 lower than that in the control countries, respectively. Furthermore, the results imply limited anticipation effects in 2005 and 2006. There is a marginally significant and positive effect of the EU in 2005 in Romania, likely because of the signing of the EU association agreement, and a negative anticipation effect in Bulgaria in 2006, likely because of the negative image of Bulgaria as a corrupt country which was not ready for accession that the western media portrayed. Importantly, the EU had no immediate well-being effects on life satisfaction in 2007 but the accession "life satisfaction premium" was apparent as early as 2008 in Romania, where life satisfaction increased by about 0.2 on average. There were no effects in Bulgaria in 2008 (after controlling for macroeconomic conditions). In 2009, being an EU member was associated with a life satisfaction increase of 0.18 in Romania and 0.13 in Bulgaria. The post-2009 results likely reflect

adaptation effects but also other developments and effects which cannot be directly attributed to EU accession, but are reported for completeness. The evidence thus far suggests that joining the EU was associated with life satisfaction gains in Romania and Bulgaria after a lag, only after Bulgarians and Romanians adapted to being EU members and the new rules of the game. Given that Bulgaria and Romania had a lukewarm welcome and were frequently scolded for not making progress on reducing corruption and organized crime, acquiring an European identity was likely a gradual process.

3.8.2 Results by Gender, Unemployment Status, Education, and Age Groups, Bulgaria and Romania

The EU benefits and costs are unlikely to be equally distributed among different social groups and the winners and losers of transition in particular. The literature suggests that the elderly, the less educated, and women were among the losers of transition (Easterlin, 2009) and how they experienced transition likely also affected their perceptions of EU membership (Tucker et al., 2002). Tables 3.5-3.7 demonstrate the well-being effects of joining the EU by gender and unemployment status, age, and education, respectively.

The left panel of Table 3.5 demonstrates that the positive anticipation effect in Romania (shown in Table 3.4) is driven by females in 2005, while the negative anticipation effect in Bulgaria in 2006 was experienced by males only. While there

were no well-being effects in 2007, in 2008, the positive EU effect was felt by Romanian women only. In 2009, the positive EU influence was evident among men and women in Romania and Bulgarian women. These results suggest, therefore, that while women may have been the losers of transition (Easterlin, 2009), they were among the winners of EU accession, especially in Romania. According to the Life in Transition Survey II, there are no differences between men and women in transition economies in terms of life satisfaction, job satisfaction, and how they have done relative to others (EBRD, 2010). At the same time, EBRD finds that despite having equal levels of education, skills, and values of the market economy, women face challenges when entering the labor market and are less likely than men to be entrepreneurs and to be actively involved in politics (EBRD, 2010). These problems are more pronounced in south-Eastern Europe, to which Bulgaria and Romania belong, along with the countries in the Western Balkans. The results in this paper suggest, however, that EU membership might have improved the perceived well-being of women (through providing them with more opportunities and choices for employment, travel, and new business options, for example), which is important from a policy perspective and may be particularly relevant for countries in the Western Balkans and the Eastern Partnership Countries (EaP), which are in various stages of their EU application processes.¹¹

Furthermore, from the right panel of Table 3.5 it is evident that the unemployed in Romania experienced negative anticipation effects in 2005-2006, likely because they feared the EU's effects on unemployment (e.g., unemployment stem-

¹¹The EaP countries include Armenia, Azerbaijan, Belarus, Georgia, Moldova and Ukraine.

ming from closing domestic industries facing competition from EU imports). The unemployed in Romania, and in other transition countries, likely experience constraints related to international migration as well (Stark et al., 2009), because their skills acquired during communism and transition are not transferable to the EU context. The negative anticipation effects in Bulgaria in 2006 were in fact among those who were not unemployed (i.e., the employed and those out of the labor force). The unemployed in Romania continued to experience declines in life satisfaction post-accession, while the unemployed in Bulgaria experienced no changes in life satisfaction. Those who are not unemployed saw an increase in life satisfaction in 2008-2009 in Romania, and during 2008-2011 in Bulgaria (marginally significant).

The results by age (Table 3.6) show nuances in the effects of joining the EU. Specifically, there were negative anticipation effects in Romania among the oldest cohorts, which are often thought of as being among the losers of transition. In Bulgaria, the negative anticipation effects were among those under 60 in 2006. Middle-aged respondents, i.e., those aged 36-60, in Romania experienced positive anticipation effects. While there were no immediate effects of joining the EU in general, the 36-60 age group in Romania actually saw an EU-related life satisfaction boost, which persisted in 2008-2009 as well. In neighboring Bulgaria, the 36-60 and 60 and over age cohorts experienced life satisfaction increases but only starting in 2009.

Table 3.7 shows the results according to the age at which the respondents stopped their full-time education. The most educated groups and students in Bulgaria and Romania had the same baseline happiness as their counterparts in the

control countries, which is not true for any other socio-demographic cohort. Again, this result fits with the "winner" of transition story. Furthermore, the most educated in Romania experienced a positive well-being shock pre-accession in 2004-2006, while the least educated had a marginally significant decrease in well-being in 2006. Romania's most educated respondents experienced a well-being premium post -accession until 2009 and so did those with some high school education or a high school diploma. The least educated Romanians experienced a mild negative life satisfaction shock in 2007, no change in well-being 2008 and like all groups, except current students, felt an increase in life satisfaction in 2009. The EU had no effects on the subjective well-being of Romanian students, meanwhile. The most educated groups in Romania, which is a slightly richer and more advanced economy than Bulgaria, likely had the most to gain from EU accession in terms of opportunities, which in turn positively influenced their perceived well-being.

Like in Romania, Bulgarian students experienced minimal or no perceived well-being effects of joining the EU. The rest of the Bulgarian education cohorts experienced negative anticipation effects in 2006. The least educated had a negative anticipation of joining the EU as they had the least to gain in terms of opportunities, while the most educated Bulgarians perhaps feared the negative short-run effects of joining the EU such as inflation, emigration, and the negative image of Bulgarians in Europe, among others. The most educated group continued to experience negative well-being effects in 2007-2008 as well. The least educated Bulgarian cohort also had a "happiness penalty" from joining the EU in 2007 but experienced no life satisfaction changes thereafter. Those with some high school education (or

a diploma) experienced a positive EU-related well-being shock in 2009 but did not experience any changes in 2007-2008.

3.8.3 EU-8 Results

This paper also provides evidence on the EU-related life satisfaction effects in the EU-8 countries. The EU-8 were slightly more advanced and prepared for membership than Bulgaria and Romania. Any differences in the EU-related life satisfaction changes between the EU-2 and the EU-8 are relevant to future EU enlargements.¹² Table 3.8 demonstrates that the baseline life satisfaction is lower in the EU-8 countries than in the counterfactual countries (controlling for macro-level variables). There are positive anticipation effects in 2003 in several countries including the Czech Republic (marginally significant), Poland, Slovakia (marginally significant), and Slovenia. Importantly, EU accession had a positive effect in 2004 in almost all EU-8 countries (except in Latvia and Lithuania).¹³ The positive well-being effects in 2004 ranged from 0.31 in Estonia to 0.96 in Poland. The EU-associated impacts persisted in 2005 for all countries except the Baltic States. These countries were advanced and integrated with the Scandinavian countries, so the EU likely had no additional life satisfaction benefits.

In addition to joining the EU in 2004, along with Bulgaria and Romania, the

¹²The EU-8 analysis excluded CCEB 2004.1 conducted in February-March, 2004. Only EB 62 is included for 2004 (October-November, 2004), which was conducted after the accession on May 1, 2004.

¹³Along with Turkey, Bulgaria and Romania, which did not sign association agreements until 2005, are the control countries. Note that Croatia is excluded due to lack of pre-2004 data.

three Baltic States, Slovakia, and Slovenia joined NATO in March, 2004. Therefore, Bulgaria and Romania are a particularly opportune counterfactual for these EU-8 countries. When Bulgaria and Romania are used as control countries, the main conclusions from Table 3.8 hold, albeit with some nuances (Table 3.9). First, even after controlling for macro-economic differences, all EU-8 countries have much higher baseline life satisfaction levels than Bulgaria and Romania. Second, most EU-8 countries felt positive anticipation effects in 2002 and 2003 (with some exceptions). Second, like in Table 8, most countries experienced a positive well-being effect associated with joining the EU in both 2004 and 2005. The effects ranged between 0.11 to 0.72 in 2004 and between 0.15 to 1.25 in 2005. However, there were negative effects in the Czech Republic (marginally significant) and Slovenia. Campos et al. (2014) find that the Czech GDP per capita would have been slightly higher had it not joined the EU, which could explain this paper's results. Moreover, Popova (2011) finds negative well-being effects of the Euro adoption in Slovenia. In Poland, the EU was associated with small positive effects in 2004 and marginal negative effects in 2005. On the whole, the EU-8 results suggest that the EU had a positive effect on life satisfaction both immediately after joining in 2004 and lasting into 2005 for most countries. The EU-8 experiences differ from these in Bulgaria and Romania, which were less advanced and prepared for EU membership. Taken at face value, the results suggest that EU membership has immediate perceived well-being effects in the more advanced transition countries and is associated with well-being gains only after a lag in their less advanced post-communist counterparts.

3.8.4 Gallup World Poll Results, Romania

As an additional check, I used data from the Gallup World Poll (GWP) for Romania for 2005-2009 (Table 3.10).¹⁴ Bulgaria is excluded as the earliest data are from January, 2007. The dependent variables are Best Possible Life (BPL) and satisfaction with income. BPL measures respondents' assessments of their current life compared with the best possible life they can image on a ladder going from 0 (the worst possible life) to 10 (the best possible life they can imagine). As such, BPL measures global life evaluations and self-referential. Satisfaction with income and the standard of living is a binary variable. All models are estimated using OLS. In Models (1)-(2), the counterfactual is all available non-EU transition countries and Turkey.¹⁵ In Models (3)-(6), Turkey and EaP economies are used as controls.¹⁶ Table 3.10 shows that, Romania has the same baseline BPL and income satisfaction as the control countries, but has a higher income satisfaction when compared with the ENP and Turkey, and higher life evaluation (BPL) when compared with the EaP countries. Importantly, regardless of the control group, the EU had no effect

¹⁴There are no data for Romania for 2008.

¹⁵Croatia is not used as the earliest available data are from 2007.

¹⁶EaP are the transition economies that are part of ENP. ENP is a policy instrument for the EU's southern and eastern neighbors and aims to achieve a degree of political association and economic integration. Specifically, the EU provides financial support, economic integration, easier travel to the EU, technical and policy support. The ENP transition members are Armenia, Azerbaijan, Belarus, Georgia, Moldova, and Ukraine, with Belarus outside most of the ENP structures.

on life evaluations and satisfaction with income in Romania.¹⁷ While not directly comparable with the life satisfaction regressions with EB data, the results in Table 3.10 show consistent results with those in the left panel of Table 3.3. The temporal effects are more nuanced as Tables 3.4-3.7 demonstrate, although the Gallup data do not allow for deeper temporal explorations.¹⁸

The results thus far imply the following insights: joining the EU had complex effects on the subjective well-being of Romania, Bulgaria, and the EU-8 economies. First, Bulgarians and Romanians have lower baseline life satisfaction than the rest of the EU countries and the counterfactual countries (except when compared to EaP countries - Table 3.10). Second, the simplest specifications collapsing the data into two time periods before and after joining the EU show that joining the EU had positive effects for the life satisfaction of Bulgarians but no effects for Romanians (Table 3.3). Analyses of life evaluations (BPL) and income satisfaction from the Gallup World Poll (GWP) confirm the simple two-period DID no-effect result (Table 3.10). More disaggregated analyses show that EU admission was not associated with a life satisfaction change in Bulgaria and Romania immediately post-accession in 2007 but had positive effects on life satisfaction in 2008-2009 (Table 3.4). Third, the analyses show important differences by gender, unemployment, age, and education, with women, the most educated Romanians, and those aged 36-60 in Romania and

¹⁷The regressions exclude the household size variable as there were too few observations and the models could not be estimated. See Table 3.10 for the full list of covariates included.

¹⁸GWP has a life satisfaction question but it was asked only between 2007 and 2010 and only in several countries.

36-60 and 60 and over in Bulgaria emerge as the winners of EU accession. Fourth, there are EU-related well-being gains in the EU-8 countries (with a few exceptions) and unlike in Bulgaria and Romania, the the EU-8 residents experienced a life satisfaction shock immediately after joining.

In Bulgaria and Romania, the positive well-being influence of EU membership was felt only after a lag. Given that Bulgarians and Romanians received a lukewarm welcome to the EU, it likely took them some time to adjust to the feeling of being European. According to Financial Times/Harris Poll in France, Germany, Britain, Italy, and Spain (conducted between January 10 and January 22, 2007), only one in four respondents thought that the EU accession of Bulgaria and Romania was a positive thing (Atkins, 2013). Part of the EU-15 skepticism was due to the enlargement fatigue after the "big bang" accession of the 10 countries in 2004. This "second-class" membership led to frustration and disillusionment in Bulgaria and Romania. In 2008, moreover, the EU frequently scolded Bulgaria and Romania for failure to address corruption and organized crime and ultimately withheld 250m Euro in funding from Bulgaria for the country's failure to address endemic corruption. Bulgarians' and Romanians' trust in the EU also declined immediately post-accession (Figure 2), which could at least partially explain the lack of well-being gains immediately in 2007. Simple correlations show that EU trust and life satisfaction are positively related. Moreover, the regression results in Table C.1 show that while trust and life satisfaction are positively association, EU trust had no additional positive influence on life satisfaction in Bulgaria and Romania post-accession. The next section delves further into the particular channels of the EU's

influence on subjective well-being.

3.9 Channels of EU Well-being Influence

According to Delhey (2001), EU accession influences incoming members' SWB via three mechanisms: (i) EU funds, (ii) economic integration, and (iii) institutional change. First, the EU directly influences quality of life through policy inputs related to regional policy, economic integration, and institutional adjustments. The regional policy instruments comprise pre- and post-accession aid for infrastructure, environmental protection, human resources development, and productive investments to enhance the competitiveness of the least advanced regions and countries. Second, the main driving forces behind economic integration are trade and the flow of capital, technology, and know-how (Delhey, 2001). Third, the institutional adjustments relate to adopting the EU rules and regulations (the *aquis*) and guaranteeing democratic governance, rule of law, transparency, and low corruption. Specifically, EU integration policies directly affect living conditions and the quality of the social fabric (i.e., through creating more transparent institutions) but may influence well-being only after a lag (Delhey, 2001).

EU accession allowed free movement of factors of production, with some temporary restrictions on labor mobility. With factor mobility between a rich and poor country, the Heckscher-Ohlin model predicts that integration benefits the owners of capital and skilled labor in the rich countries (i.e., the more abundant factor in the rich countries) and unskilled labor in less developed countries. This prediction is not

directly applicable to transition economies, however, because, with the exception of Bulgaria and Romania, the rest of the EU-10 are middle income economies. Some EU-10 countries are OECD members (Czech Republic, Estonia, Poland, Slovak Republic, Slovenia) and Eurozone members (Estonia, Latvia, Slovakia, and Slovenia), moreover. Given that labor is highly skilled in the EU-10, EU enlargement likely benefits the owners of capital in the EU-15 and labor in the new member states (Doyle & Fidrmuc, 2006). If factors of production are immobile, the predicted effects differ. EU accession also meant competition for EU-10 industries which are not internationally competitive or which enjoyed protection from imports.

To examine how the three different mechanisms affect well-being in the EU-10 countries, I conducted before-and-after analyses including controls for EU aid, economic integration, and governance pre- and post-accession. EU aid is measured using the total per capita Cohesion Fund (CF) assistance and its pre-accession equivalent (Instrument for Structural Policies for Pre-Accession (ISPA)). Member states with Gross National Income (GNI) per inhabitant of less than 90 percent of the EU average receive CF funds post-accession, while ISPA provided pre-accession funds for EU infrastructure projects in candidate countries.¹⁹ EU aid data were converted to 2005 real Euros using a 2 percent deflator (as officially used by the European

¹⁹The EU has two additional pre-accession instruments SAPARD and Phare and four other post-accession aid instruments: European Regional Development Fund (ERDF), European Social Fund (ESF), European Agricultural Fund for Rural Development (EAFRD), and European Maritime and Fisheries Fund (EMFF). No data exist for total pre-and post-accession assistance for Bulgaria and Romania (Rosenberg & Sierhej, 2007).

Commission). EU integration is measured as the shares of imports from and exports to EU-27 countries (from Eurostat).²⁰ Finally, the six Worldwide Governance Indicators (WGI) (voice and accountability, political stability and absence of violence/terrorism, government effectiveness, regulatory quality, rule of law, control of corruption) were used as proxies for institutional improvements. All indicators were rescaled to range from 0 to 5. Due to lack of data for 2001, observations for 2000 were used as a proxy. In addition to these variables, a variable measuring real GDP growth from Eurostat was included (Tables 11-12).

Table 3.11 indicates that the EU was not associated with life satisfaction in Bulgaria and Romania (in a simple before-and-after comparison). Columns (3) and (4) show that the control of corruption and EU funds had a positive effect on life satisfaction but the share of EU imports had a negative impact. The rest of the channels (and economic growth) had no effect on life satisfaction. The standardized coefficient estimates of Model (4) indicate that the combined positive effect of control of corruption (coeff. 0.07) and EU funds (coeff. 0.05) is offset by the negative effect of the greater share of EU imports (coeff. -0.13). Taken at face value, these results imply that control of corruption and EU funds improved the life satisfaction of Bulgarians and Romanians but economic integration decreased it by the same amount. The effects of these equal yet opposite factors can in part explain the insignificant post-accession dummy. On the one hand, Bulgarians and Romanians benefited from the EU-inspired fight against organized crime and corruption and EU funds at the same time that they suffered well-being losses from imports, likely

²⁰FDI flows were also considered but not included due to data year availability limitations.

due to the increased competition from EU goods.

From a policy perspective, it is important to know whether the channels of EU influence differed between the EU-8 and EU-2. The results demonstrate that life satisfaction was higher in the EU-8 countries after joining the EU (Table 3.12). The preferred specification is model (6), which includes individual controls, country dummies, a time trend, and proxies for all the potential EU channels. The control of corruption had a marginally significant negative effect on the life satisfaction, while voice and accountability, government effectiveness, and EU imports had a positive association with life satisfaction. GWP growth had a small positive association with life satisfaction. In terms of relative influence, the standardized coefficients based on Model (6) suggest that government effectiveness had the strongest positive influence on life satisfaction (coeff. 0.06), followed by imports (0.05), and voice and accountability (0.045), while corruption had a negative influence of 0.05. The standardized coefficient estimate for growth was 0.02. In short, the EU had a positive effect within the EU-8 countries that could be partially explained by better governance and higher economic integration (as measured by imports).²¹

²¹The different signs for the coefficient estimates for EU imports in the EU-2 vs. the EU-10 in Tables 3.11-3.12 are intriguing but could be explained with the predictions of the Heckscher-Ohlin model. For example, it is likely that Bulgarian and Romanian industries were less competitive or more protected from EU competition prior to embarking on an EU path, while the converse could be true for the EU-8.

3.10 EU Membership Support and Endogeneity

The literature shows that the winners of transition are more likely to support EU membership in the EU-10, a result that is consistent across countries and time (Herzog & Tucker, 2010; Tucker et al., 2002), which has implications for the relationship between joining the EU and life satisfaction. This relationship suffers from endogeneity, however: it is possible that perceived well-being and voting during the EU accession referenda are simultaneously determined. For example, Doyle and Fidrmuc (2006) find that higher perceived material well-being is associated with a higher probability to vote in favor of EU accession, controlling for socio-demographic characteristics. A similar relationship is possible between life satisfaction and voting.

While Bulgaria and Romania did not organize EU referenda, it is instructive to examine support for EU membership and life satisfaction. Using data from the 2002 CCEB, Table 13 demonstrates that both in the EU-10 countries as a whole and in Bulgaria and Romania in particular, respondents with higher life satisfaction were also more likely to intend to vote in favor of joining the EU (as opposed to voting against it). In other words, unhappier respondents were more likely to vote against joining the EU, which suggests that EU accession would have made them particularly worse off. Again, the losers theme resurfaces in these results as well. Of course, this CCEB survey was conducted in 2002 and is not indicative of actual voting behavior but is nevertheless suggestive of the positive self-selection in terms EU support. While possible, it is unlikely that this positive relationship between

EU membership support and life satisfaction is driving the main results for the EU-2 countries, especially given that the results show show no immediate well-being effects after joining EU.

3.11 Conclusion and Policy Implications

How the EU influences the well-being of its members is of interest to both policymakers and academics. This study focused on the EU-10, i.e., the countries in Central and Eastern Europe which joined the EU in 2004 and 2007, with an emphasis on Europe's poorest and unhappiest members, Bulgaria and Romania, which face a particular challenge in closing the quality of life gap with the EU-15. This paper's contribution to the literature is the exploration of the EU's influences in the post-communist countries, which is relevant from a convergence standpoint and may also have some utility regarding further EU enlargements.

Using difference-in-differences and data from Eurobarometer and the Gallup World Poll, the paper's key finding is that EU accession had no immediate influence on the well-being of Bulgarians and Romanians in 2007 but was positively associated with life satisfaction in 2008-2009, with some variation by socio-demographic groups. Furthermore, there were EU-related well-being gains in the EU-8 countries promptly after joining. Taken at face value, the results suggest that EU membership has immediate perceived well-being effects in the more advanced transition countries and is associated with well-being gains only after a lag in the less advanced transition economies. From a policy perspective, these results are relevant to the

Western Balkans and EaP countries which aspire to EU membership. Like Bulgaria and Romania, these candidate countries are less advanced and less prepared for membership than the countries that joined during the 2004 enlargement. Therefore, if accepted into the EU, citizens in these countries will likely experience the subjective well-being gains from joining the EU after a lag and after adjusting to the new rules of the game.

Moreover, the result that women benefit from EU accession is also very policy pertinent, especially given the fact that women in transition economies are disadvantaged with respect to employment and active political participation. The findings also allow policymakers to explore how particular EU channels affect subjective well-being. Specifically, the increased control of corruption and EU aid enhanced life satisfaction in Bulgaria and Romania, although a greater share of EU imports decreased it. In the EU-8, better governance, economic growth, EU imports, and joining the EU had a positive influence on life satisfaction. The effects of EU imports appear to be the key difference between the EU-2 and the EU-8, and could be explained by the prediction that less-competitive domestic industries or those enjoying more protection from EU competition will be hurt from EU integration.

As the EU's poorest and unhappiest members, Bulgaria and Romania face challenges in terms of closing the glaring quality of life gap with the EU-15. While the EU has helped its newest members with macroeconomic convergence, this paper contributes to the literature by demonstrating that joining the EU was associated with a life satisfaction increase in the EU-8 and in the EU-2, albeit after a lag. It seems that some of the benefits of EU membership appear only after a lag and

require the commitment to reform and cooperation of national governments and citizens as well.

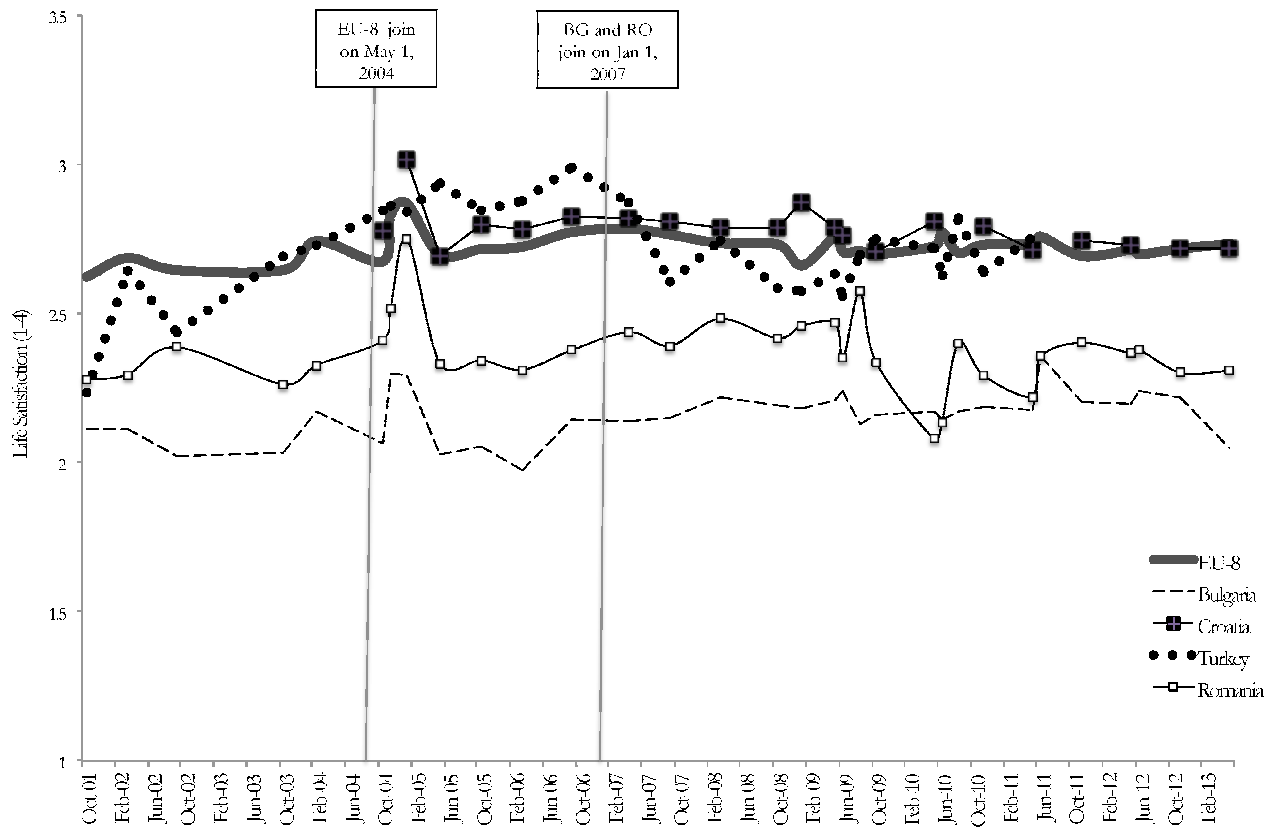


Figure 3.1: Life Satisfaction in Transition Countries and Turkey, Eurobarometer, 2001-2013

Notes: Life satisfaction is measured on a scale of 1 to 4. EU-8 refers to the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia, and Slovenia.

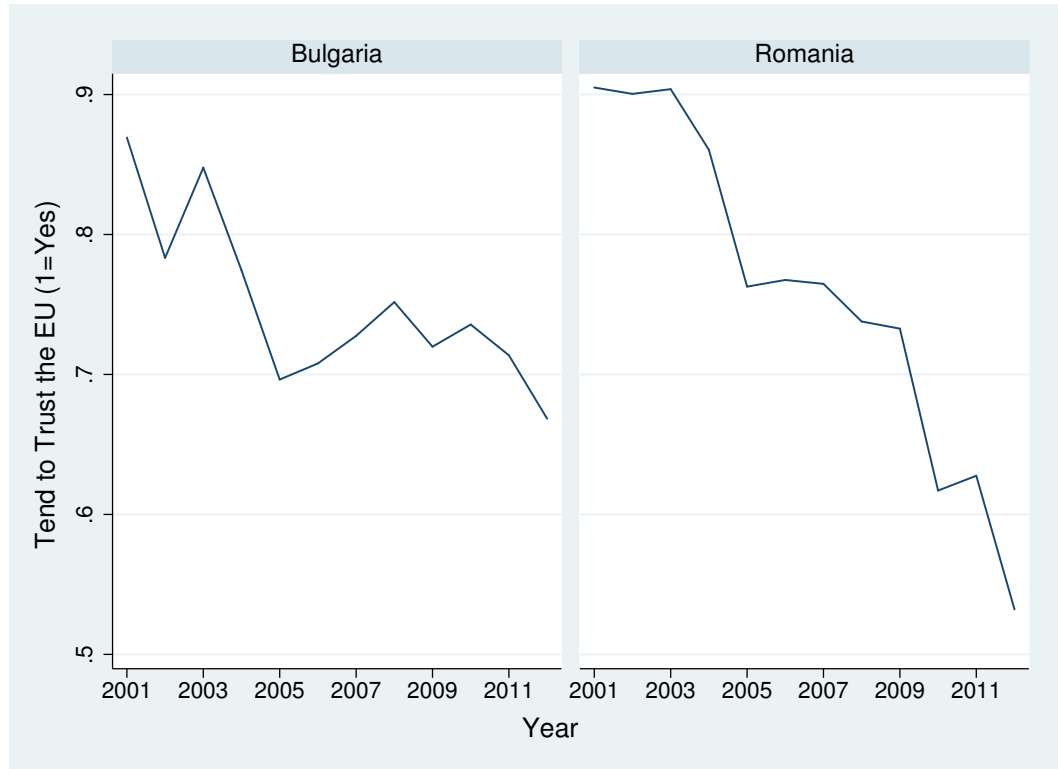


Figure 3.2: Trust in the EU, Bulgaria and Romania, Eurobarometer, 2001-2012

Table 3.1: Income and Subjective Well-being, EU-10 and EU-15, 2005-2012

Year	BPL (1-10)		Happy		Household Income		GDP Per Cap	
	EU-10 Mean	EU-15 Mean	EU-10 Mean	EU-15 Mean	EU-10 Mean	EU-15 Mean	EU-10 Mean	EU-15 Mean
2006	5.544	7.011			15,753	33,469	16,628	34,301
2007	5.218	6.972			12,300	37,854	17,776	35,320
2008	5.336	7.065	0.476	0.773	15,749	38,697	18,204	35,015
2009	5.256	6.748	0.504	0.761	16,014	40,108	16,715	33,116
2010	5.317	6.811	0.524	0.787	16,272	39,858	17,044	33,522
2011	5.334	6.824	0.511	0.814	15,876	42,506	17,936	33,663
2012	5.422	6.798	0.546	0.828	15,608	42,322	18,198	33,242

Sources: Gallup World Poll for BPL, Happy, and Household Income and World Development Indicators for GDP Per Cap.

Notes: Notes: BPL=Best Possible Life; measures the respondent's assessment of her life relative to her best possible life on a scale of 0 (worst possible life) to 10 (best possible life). Happy yesterday is a binary variable coded as 1 if the respondent experienced this type of affect and 0 otherwise. Household income is reported by Gallup in international dollars (2009 PPP). The World Bank reports GDP per capita in 2005 PPP. Year 2006 for the GWP data refers to 2005-2006.

Table 3.3: Impact of Joining the EU on Life Satisfaction, Baseline Estimates, 2004-2011

	(1)		(2)		(3)		(4)		(5)		(6)	
	Control: TR	Control: HR	Treatment: Romania	Control: HR	Control: TR	Control: TR	Control: TR + HR	Control: HR	Control: HR	Control: TR	Control: TR	
EU Country	-0.555*** (0.093)	-0.576** (0.236)		-0.576** (0.236)	-0.903*** (0.199)	-0.903*** (0.199)	-0.786*** (0.054)	-0.767*** (0.070)	-0.767*** (0.070)	-0.789*** (0.063)	-0.789*** (0.063)	
2007 and After	-0.102*** (0.034)	-0.018 (0.033)		-0.018 (0.033)	0.004 (0.093)	0.004 (0.093)	-0.101** (0.039)	-0.003 (0.020)	-0.003 (0.020)	-0.175** (0.068)	-0.175** (0.068)	
EU Country *2007	0.021 (0.056)	-0.019 (0.075)		-0.019 (0.075)	0.034 (0.088)	0.034 (0.088)	0.150*** (0.040)	0.097*** (0.029)	0.097*** (0.029)	0.209** (0.087)	0.209** (0.087)	
Individual Controls	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Macroeconomic Controls	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Observations	50,419	34,157		34,157	33,894	33,894	50,055	33,793	33,793	33,530	33,530	
Adj. R^2	0.101	0.154		0.154	0.088	0.088	0.161	0.238	0.238	0.148	0.148	

Sources: Eurobarometer, 2004-2011 and World Development Indicators

The dependent variable in all models is life satisfaction (1-4). Standard errors clustered by time and country in parentheses. The ATT is the 2007*EU interaction coefficient estimate. The control countries in Models (1) and (4) are Turkey (TR) and Croatia (HR). The individual controls are age, age squared, gender, an indicator for whether the respondent is married or in a civil partnership, married*gender interaction, employment indicator, household size, household size squared, whether there are any children in the household, an indicator for a large or small town, and age-education categories (age at which the respondent stopped her full-time education): no education, still in school, 15 years or younger, 20 years or older; the reference group is 16-19 years. The macroeconomic indicators are log GDP per capita (PPP, 2005 constant international dollars), unemployment (% of the labor force), and annual inflation.

*** $p \leq 0.01$, ** $p \leq 0.05$, * $p \leq 0.1$

Table 3.4: Impact of Joining the EU on Life Satisfaction, Baseline Estimates, Yearly Interactions, 2004 - 2011

	(1)	(2)	(3)	(4)
	Romania		Bulgaria	
EU Country	-0.709*** (0.028)	-0.425*** (0.033)	-0.771*** (0.034)	-0.742*** (0.052)
Before				
EU*2005	0.064 (0.039)	0.138* (0.080)	-0.008 (0.042)	0.003 (0.054)
EU*2006	-0.058 (0.053)	0.063 (0.106)	-0.045 (0.055)	-0.098** (0.035)
After				
EU*2007	-0.038 (0.072)	0.094 (0.141)	0.002 (0.075)	-0.120 (0.086)
EU*2008	0.119** (0.053)	0.202** (0.078)	0.188*** (0.053)	-0.008 (0.095)
EU*2009	0.143* (0.076)	0.178*** (0.053)	0.227*** (0.078)	0.129** (0.056)
EU*2010	-0.153*** (0.038)	-0.093 (0.081)	0.131*** (0.038)	0.113** (0.046)
EU*2011	0.033 (0.046)	0.100 (0.091)	0.209*** (0.048)	0.167** (0.074)
Individual Controls	Yes	Yes	Yes	Yes
Macroeconomic Controls	No	Yes	No	Yes
Time Dummies	Yes	Yes	Yes	Yes
Observations	50,419	50,419	50,055	50,055
Adj. R^2	0.103	0.105	0.162	0.164

Sources: Eurobarometer, 2004-2011 and World Development Indicators

Notes: The dependent variable in all models is life satisfaction (1-4). Standard errors clustered by time and country are reported in parentheses. The control countries in all regressions are Turkey and Croatia. The individual controls are age, age squared, gender, an indicator for whether the respondent is married or in a civil partnership, married*gender interaction, employment indicator, household size, household size squared, whether there are any children in the household, an indicator for a large or small town, and age-education categories (age at which the respondent stopped her full-time education): no education, still in school, 15 years or younger, 20 years or older; the reference group is 16-19 years. The macroeconomic indicators are log GDP per capita (PPP, 2005 constant international dollars), unemployment (% of the labor force), and annual inflation. The omitted year is 2004.

*** $p \leq 0.01$, ** $p \leq 0.05$, * $p \leq 0.1$

Table 3.5: Impact of Joining the EU on Life Satisfaction, By Gender and Unemployment Status, Yearly Interactions, 2004 - 2011

	(1)		(2)		(3)		(4)		(5)		(6)		(7)		(8)	
	Romania		Romania		Bulgaria		Bulgaria		Romania		Romania		Bulgaria		Bulgaria	
EU Country	Male	Female	Male	Female	Male	Female	Male	Female	Unemployed	Not Unemployed	Unemployed	Not Unemployed	Unemployed	Not Unemployed	Unemployed	Not Unemployed
Before																
EU*2005	0.126 (0.098)	0.151** (0.065)	-0.058 (0.065)	0.061 (0.043)	-0.459** (0.198)	-0.800*** (0.131)	-0.331** (0.142)	0.159* (0.096)	-0.459*** (0.131)	-0.271*** (0.096)	0.159* (0.098)	-0.954*** (0.135)	-0.092 (0.098)	-0.001 (0.062)	-0.517** (0.185)	-0.096** (0.038)
EU*2006	0.044 (0.127)	0.086 (0.089)	-0.141*** (0.032)	-0.045 (0.038)												
After																
EU*2007	0.062 (0.174)	0.130 (0.111)	-0.167 (0.106)	-0.068 (0.067)	-0.387*** (0.135)	-0.068 (0.067)	-0.387*** (0.135)	0.113 (0.153)	0.113 (0.153)	-0.387*** (0.135)	0.113 (0.153)	-0.012 (0.118)	-0.128 (0.090)	-0.128 (0.090)	-0.022 (0.110)	-0.118* (0.062)
EU*2008	0.134 (0.095)	0.263*** (0.064)	-0.082 (0.118)	0.063 (0.075)	0.213** (0.089)	0.063 (0.075)	-0.201* (0.102)	0.213** (0.089)	0.213** (0.089)	-0.201* (0.102)	0.213** (0.089)	0.053 (0.096)	-0.022 (0.110)	-0.022 (0.110)	0.053 (0.096)	0.053 (0.096)
EU*2009	0.165** (0.066)	0.195*** (0.043)	0.091 (0.068)	0.176*** (0.045)	0.191*** (0.036)	0.176*** (0.045)	-0.213** (0.095)	0.186*** (0.061)	0.186*** (0.061)	-0.213** (0.095)	0.186*** (0.061)	0.010 (0.097)	0.118* (0.062)	0.118* (0.062)	0.010 (0.097)	0.118* (0.062)
EU*2010	-0.120 (0.103)	-0.060 (0.063)	0.036 (0.059)	0.191*** (0.035)	0.036 (0.059)	0.191*** (0.035)	-0.539*** (0.093)	-0.077 (0.094)	-0.539*** (0.093)	-0.539*** (0.093)	-0.077 (0.094)	0.034 (0.093)	0.107* (0.056)	0.107* (0.056)	0.034 (0.093)	0.107* (0.056)
EU*2011	0.046 (0.110)	0.160** (0.073)	0.088 (0.092)	0.243*** (0.057)	0.088 (0.092)	0.243*** (0.057)	-0.411*** (0.103)	0.124 (0.100)	-0.411*** (0.100)	-0.411*** (0.103)	0.124 (0.100)	0.089 (0.099)	0.171* (0.084)	0.171* (0.084)	0.089 (0.099)	0.171* (0.084)
Individual Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Macroeconomic Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	23,801	26,618	23,213	26,842	23,213	26,842	4,643	45,776	4,643	45,776	5,803	44,252	5,803	44,252	5,803	44,252
Adj. R ²	0.092	0.123	0.146	0.187	0.146	0.187	0.112	0.106	0.112	0.106	0.210	0.154	0.210	0.154	0.210	0.154

Sources: Eurobarometer, 2004-2011 and World Development Indicators

Notes: The dependent variable in all models is life satisfaction (1-4). Standard errors clustered by time and country are reported in parentheses. The control countries in all regressions are Turkey and Croatia. The individual controls are age, age squared, gender, an indicator for whether the respondent is married or in a civil partnership, married*gender interaction, employment indicator, household size, household size squared, whether there are any children in the household, an indicator for a large or small town, and age-education categories (age at which the respondent stopped her full-time education): no education, still in school, 15 years or younger, 20 years or older; the reference group is 16-19 years. The macroeconomic indicators are log GDP per capita (PPP, 2005 constant international dollars), unemployment (% of the labor force), and annual inflation. The omitted year is 2004.

*** $p \leq 0.01$, ** $p \leq 0.05$, * $p \leq 0.1$

Table 3.6: Impact of Joining the EU on Life Satisfaction, By Age, Yearly Interactions, 2004 - 2011

	(1)	(2)	(3)	(4)	(5)	(6)
	Romania				Bulgaria	
	35 and Under	Ages 36-60	Over 60	35 and Under	Ages 36-60	Over 60
EU Country	-0.333** (0.122)	-0.596*** (0.148)	-0.912*** (0.121)	-0.471*** (0.163)	-0.699*** (0.184)	-1.228*** (0.148)
Before						
EU*2005	0.098 (0.084)	0.228** (0.095)	-0.014 (0.075)	-0.084 (0.058)	0.098 (0.063)	0.018 (0.050)
EU*2006	-0.008 (0.107)	0.248* (0.124)	-0.188* (0.098)	-0.128*** (0.035)	-0.093* (0.053)	0.052 (0.036)
After						
EU*2007	-0.048 (0.146)	0.317** (0.146)	-0.066 (0.119)	-0.115 (0.093)	-0.048 (0.074)	-0.007 (0.060)
EU*2008	0.088 (0.082)	0.377*** (0.090)	0.065 (0.084)	0.072 (0.103)	-0.009 (0.103)	0.049 (0.080)
EU*2009	0.097 (0.062)	0.311*** (0.061)	0.071 (0.049)	0.015 (0.067)	0.241*** (0.062)	0.227*** (0.039)
EU*2010	-0.075 (0.097)	-0.016 (0.088)	-0.215*** (0.056)	-0.004 (0.057)	0.234*** (0.049)	0.235*** (0.031)
EU*2011	0.032 (0.076)	0.227* (0.111)	-0.019 (0.089)	0.144 (0.084)	0.261*** (0.081)	0.253*** (0.042)
Individual Controls	Yes	Yes	Yes	Yes	Yes	Yes
Macroeconomic Controls	Yes	Yes	Yes	Yes	Yes	Yes
Time Dummies	Yes	Yes	Yes	Yes	Yes	Yes
Observations	19,837	20,632	9,950	19,046	20,347	10,662
Adj. R^2	0.079	0.089	0.116	0.124	0.140	0.189

Sources: Eurobarometer, 2004-2011 and World Development Indicators
Notes: The dependent variable in all models is life satisfaction (1-4). Standard errors clustered by time and country are reported in parentheses. The control countries in all regressions are Turkey and Croatia. The individual controls are age, age squared, gender, an indicator for whether the respondent is married or in a civil partnership, married*gender interaction, employment indicator, household size, household size squared, whether there are any children in the household, an indicator for a large or small town, and age-education categories (age at which the respondent stopped her full-time education): no education, still in school, 15 years or younger, 20 years or older; the reference group is 16-19 years. The macroeconomic indicators are log GDP per capita (PPP, 2005 constant international dollars), unemployment (% of the labor force), and annual inflation. The omitted year is 2004.
*** $p \leq 0.01$, ** $p \leq 0.05$, * $p \leq 0.1$

Table 3.7: Impact of Joining the EU on Life Satisfaction, By Age at Which Full-Time Education Was Ended, Yearly Interactions, 2004 - 2011

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	15 Yrs. or Less	16-19 Yrs.	20+ Yrs.	In School	15 Yrs. or Less	16-19 Yrs.	20+ Yrs.	In School
		Romania				Bulgaria		
EU Country	-0.806*** (0.089)	-0.344** (0.141)	-0.027 (0.160)	0.008 (0.255)	-1.046*** (0.086)	-0.516** (0.201)	0.110 (0.209)	0.213 (0.322)
Before								
EU*2005	-0.001 (0.060)	0.132 (0.102)	0.374*** (0.111)	0.145 (0.194)	-0.067 (0.057)	0.064 (0.069)	0.055 (0.086)	-0.260 (0.157)
EU*2006	-0.166** (0.080)	0.041 (0.129)	0.438*** (0.128)	0.203 (0.226)	-0.180** (0.076)	-0.083** (0.034)	-0.144*** (0.041)	-0.088 (0.120)
After								
EU*2007	-0.136* (0.075)	0.151 (0.167)	0.498*** (0.152)	0.035 (0.272)	-0.249*** (0.078)	-0.022 (0.097)	-0.279*** (0.067)	-0.284* (0.162)
EU*2008	0.096 (0.057)	0.204* (0.110)	0.360*** (0.108)	0.057 (0.191)	-0.086 (0.088)	0.015 (0.114)	-0.313** (0.114)	-0.245 (0.214)
EU*2009	0.138** (0.059)	0.140** (0.067)	0.195** (0.076)	0.142 (0.157)	0.104 (0.076)	0.124** (0.054)	0.072 (0.071)	-0.100 (0.158)
EU*2010	-0.194*** (0.059)	-0.209*** (0.070)	0.096 (0.082)	-0.035 (0.203)	0.080 (0.056)	0.041 (0.037)	0.080 (0.052)	-0.194 (0.146)
EU*2011	-0.019 (0.056)	0.044 (0.116)	0.236* (0.132)	0.196 (0.198)	0.120* (0.064)	0.111* (0.056)	-0.053 (0.081)	-0.044 (0.189)
Individual Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Macroeconomic Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	14,679	19,878	9,280	4,935	14,352	20,187	9,382	4,426
Adj. R ²	0.098	0.107	0.100	0.084	0.166	0.175	0.155	0.080

Sources: Eurobarometer, 2004-2011 and World Development Indicators

Notes: The dependent variable in all models is life satisfaction measured on a scale of 1 to 4. Standard errors clustered by time and country are reported in parentheses. The treatment groups in the "Overall" regressions are Bulgaria and Romania. The control countries in all regressions are Turkey and Croatia. The individual controls in all models are age, age squared, gender, an indicator for whether the respondent is married or in a civil partnership, married*gender interaction, employment indicator, households size, household size squared, whether there are any children in the household, an indicator for a large or small town. Regressions by "no education" status are available but not reported due to the small number of observations. The omitted year is 2004.

*** $p \leq 0.01$, ** $p \leq 0.05$, * $p \leq 0.1$

Table 3.8: Impact of Joining the EU on Life Satisfaction, EU-8 Countries (Controls: Bulgaria, Romania, Turkey), 2001 - 2005

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
EU8 Country	Czech Republic	Estonia	Hungary	Latvia	Lithuania	Poland	Slovakia	Slovenia
	-3.486*** (0.839)	-2.041*** (0.487)	-2.896*** (0.672)	-0.890*** (0.297)	-1.199*** (0.332)	-1.221*** (0.400)	-1.648*** (0.450)	-3.842*** (0.944)
Before								
EU8*2002	0.022 (0.136)	-0.230 (0.147)	0.053 (0.131)	-0.116 (0.127)	-0.180 (0.153)	0.220 (0.140)	-0.002 (0.134)	0.155 (0.135)
EU8*2003	0.346* (0.190)	0.065 (0.153)	0.316 (0.184)	0.094 (0.162)	-0.034 (0.154)	0.650*** (0.211)	0.352* (0.189)	0.530*** (0.209)
After								
EU8*2004	0.715*** (0.221)	0.313** (0.140)	0.488** (0.202)	0.083 (0.149)	-0.030 (0.139)	0.964*** (0.226)	0.645*** (0.196)	0.687*** (0.210)
EU8*2005	0.772** (0.317)	0.168 (0.198)	0.771** (0.320)	0.021 (0.205)	-0.177 (0.179)	0.905** (0.329)	0.456* (0.251)	0.844** (0.330)
Individual Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Macroeconomic Controls	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	37,536	37,204	37,258	37,198	37,027	37,967	38,430	37,194
Adj. R^2	0.163	0.127	0.109	0.114	0.118	0.152	0.115	0.220

Sources: Eurobarometer, 2004-2011 and World Development Indicators

Notes: The dependent variable in all models is life satisfaction (1-4). Standard errors clustered by time and country are reported in parentheses. The controls in all regressions are Turkey, Bulgaria, and Romania. The individual controls are age, age squared, gender, an indicator for whether the respondent is married or in a civil partnership, married*gender interaction, employment indicator, household size, household size squared, an indicator for a large or small town, and age-education categories (age at which the respondent stopped her full-time education): no education, still in school, 15 years or younger, 20 years or older; the reference group is 16-19 years. The macroeconomic indicators are log GDP per capita (PPP, 2005 constant international dollars), unemployment (% of the labor force), and annual inflation. The omitted year is 2001. The EU-8 analysis excluded CCEB 2004.1 conducted in February-March, 2004. Only EB 62 is included for 2004 (October-November, 2004), which was conducted after the accession on May 1, 2004.

*** $p \leq 0.01$, ** $p \leq 0.05$, * $p \leq 0.1$

Table 3.9: Impact of Joining the EU on Life Satisfaction, EU-8 Countries (Controls: Bulgaria and Romania), 2001 - 2005

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
EU8 Country	Czech Republic	Estonia	Hungary	Latvia	Lithuania	Poland	Slovakia	Slovenia
	5.734*** (0.167)	3.014*** (0.107)	4.057*** (0.149)	1.143*** (0.074)	1.806*** (0.071)	3.485*** (0.075)	4.098*** (0.083)	6.769*** (0.163)
Before								
EU8*2002	-0.194*** (0.013)	0.061*** (0.009)	0.044*** (0.013)	0.148*** (0.020)	0.163*** (0.008)	-0.159*** (0.024)	-0.011 (0.010)	0.063*** (0.020)
EU8*2003	-0.054 (0.042)	0.583*** (0.030)	0.168*** (0.042)	0.665*** (0.038)	0.830*** (0.023)	0.126** (0.051)	0.366*** (0.047)	0.168*** (0.044)
After								
EU8*2004	-0.099* (0.055)	0.632*** (0.035)	-0.048 (0.053)	0.723*** (0.046)	0.791*** (0.025)	0.113* (0.059)	0.236*** (0.051)	-0.156*** (0.041)
EU8*2005	0.068 (0.061)	0.900*** (0.038)	0.052 (0.064)	1.245*** (0.052)	1.026*** (0.026)	-0.115* (0.063)	0.151*** (0.040)	-0.173*** (0.052)
Individual Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Macroeconomic Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	29,390	29,058	29,112	29,052	28,881	29,821	30,284	29,048
Adj. R ²	0.212	0.155	0.126	0.133	0.138	0.194	0.137	0.290

Sources: Eurobarometer, 2004-2011 and World Development Indicators

Notes: The dependent variable in all models is life satisfaction (1-4). Standard errors clustered by time and country are reported in parentheses. The controls in all regressions are Bulgaria and Romania. The individual controls are age, age squared, gender, an indicator for whether the respondent is married or in a civil partnership, married*gender interaction, employment indicator, household size, household size squared, an indicator for a large or small town, and age-education categories (age at which the respondent stopped her full-time education): no education, still in school, 15 years or younger, 20 years or older; the reference group is 16-19 years. The macroeconomic indicators are log GDP per capita (PPP, 2005 constant international dollars), unemployment (% of the labor force), and annual inflation. The omitted year is 2001. The EU-8 analysis excluded CCEB 2004.1 conducted in February-March, 2004. Only EB 62 is included for 2004 (October-November, 2004), which was conducted after the accession on May 1, 2004.

*** $p \leq 0.01$, ** $p \leq 0.05$, * $p \leq 0.1$

Table 3.10: Impact of Joining the EU on Best Possible Life (BPL) and Satisfaction with Income, Romania, 2005-2009

	(1)	(2)	(3)	(4)	(5)	(6)
	Controls: Non EU + TR		EaP + TR		EaP	
	BPL	Sat Income	BPL	Sat Income	BPL	Sat Income
EU Country	-0.142 (0.223)	0.014 (0.047)	-0.309 (0.596)	0.426** (0.164)	2.969*** (0.761)	-0.218 (0.207)
2007 and After	-0.375 (0.256)	-0.003 (0.037)	0.731** (0.339)	-0.086 (0.079)	0.775** (0.347)	-0.079 (0.081)
EU Country*2007	-0.021 (0.146)	-0.030 (0.032)	-0.128 (0.214)	-0.021 (0.038)	-0.147 (0.219)	-0.023 (0.040)
Individual Controls	Yes	Yes	Yes	Yes	Yes	Yes
Macroecon. Controls	Yes	Yes	Yes	Yes	Yes	Yes
Country Dummies	Yes	Yes	Yes	Yes	Yes	Yes
Observations	26,509	24,761	12,055	10,510	11,303	9,761
Adj. R^2	0.172	0.110	0.207	0.095	0.214	0.101

Source: Gallup World Poll, 2005-2013 and World Development Indicators

Notes: BPL=Best Possible Life. EaP=Eastern Partnership Countries (Armenia, Azerbaijan, Belarus, Georgia, Moldova and Ukraine). The dependent variable in all models is best possible life measured on a scale of 0-10. Standard errors clustered by time and country in parentheses. The treatment variable is the EU status*after 2007 interaction. The treatment country is Romania. The control countries are: Turkey for Models (1)-(2), Turkey, Belarus, Georgia, Moldova, Ukraine, Armenia, Azerbaijan for Models (3)-(4); Belarus, Georgia, Moldova, Ukraine, Armenia, Azerbaijan for Models (5)-(6) and Georgia and Ukraine for Models (7)-(8). The individual controls in models (4)-(9) are age, age squared, gender, an indicator for whether the respondent is married or in a civil partnership, married*gender interaction, whether the respondent has some college or college diploma, log household income (in international dollars), whether the respondent is satisfied with the freedom in her life, and whether the respondent smiled the day before. The macroeconomic indicators are log GDP per capita (PPP, 2005 constant international dollars), unemployment (% of the labor force), and an estimate of the control of corruption (rescaled to range from 0 to 5). The omitted year is 2005-2006. There are no data for Romania for 2008.

*** $p \leq 0.01$, ** $p \leq 0.05$, * $p \leq 0.1$

Table 3.11: Channels of EU Influence, Bulgaria and Romania, 2001 - 2012

	(1)	(2)	(3)	(4)
Post-Accession	0.017 (0.052)	0.001 (0.051)	0.063 (0.054)	0.079 (0.051)
Control of Corruption			0.888** (0.353)	1.013*** (0.343)
Voice and Accountability			-0.184 (0.335)	-0.443 (0.327)
Stability			-0.026 (0.163)	0.042 (0.162)
Government Effectiveness			-0.424 (0.364)	-0.454 (0.364)
Regulatory Quality			-0.122 (0.391)	-0.183 (0.356)
Rule of Law			-0.511 (0.535)	-0.539 (0.515)
CF Expenditures Per Capita (2005 Real Euros)			0.005*** (0.001)	0.004** (0.001)
Share of EU Exports			0.009 (0.008)	0.007 (0.007)
Share of EU Imports			-0.016*** (0.004)	-0.017*** (0.003)
Real GDP Per Capita Growth			-0.001 (0.004)	-0.003 (0.003)
Romania	0.202*** (0.032)	0.192*** (0.032)	0.251* (0.123)	0.248** (0.118)
Individual Controls	No	Yes	No	Yes
Time Trend	Yes	Yes	Yes	Yes
Observations	62,309	62,309	62,309	62,309
Adj. R^2	0.015	0.117	0.020	0.121

Sources: Eurobarometer, 2001-2012, Worldwide Governance Indicators, and World Development Indicators, European Commission

Notes: The dependent variable in all models is life satisfaction measured on a scale of 1 to 4. Standard errors clustered by time and country in parentheses. The individual controls in models (2)-(4) are age, age squared, an indicator for whether the respondent is married or in a civil partnership, employment indicator, household size, household size squared, an indicator for a large or small town, and age-education categories (age at which the respondent stopped her full-time education): no education, still in school, 15 years or younger, 20 years or older; the reference group is 16-19 years. The macroeconomic indicators are the real GDP per capita growth, the 6 WGI indicators, real Cohesion Fund (CF) fund expenditures per capita, and share of EU imports and exports.

*** $p \leq 0.01$, ** $p \leq 0.05$, * $p \leq 0.1$

Table 3.12: Channels of EU Influence, EU-8, 2001 - 2012

	(1)	(2)	(3)	(4)	(5)	(6)
Post-Accession	0.130*** (0.031)	0.155*** (0.030)	0.140*** (0.024)	0.163*** (0.023)	0.101*** (0.031)	0.123*** (0.030)
Control of Corruption			-0.303** (0.131)	-0.289** (0.123)	-0.266* (0.135)	-0.249* (0.126)
Voice and Accountability			0.472* (0.261)	0.569** (0.249)	0.466 (0.288)	0.576** (0.277)
Stability			0.167* (0.084)	0.127 (0.078)	0.171* (0.089)	0.129 (0.082)
Government Effectiveness			0.377** (0.166)	0.382** (0.154)	0.446** (0.182)	0.460*** (0.172)
Regulatory Quality			-0.057 (0.181)	-0.083 (0.174)	-0.163 (0.183)	-0.198 (0.179)
Rule of Law			0.095 (0.233)	0.136 (0.215)	0.112 (0.252)	0.146 (0.236)
CF Expenditures Per Capita (2005 Real Euros)			-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)
Share of EU Exports			-0.007*** (0.002)	-0.005** (0.002)	-0.002 (0.002)	-0.000 (0.002)
Share of EU Imports					0.006** (0.003)	0.006** (0.002)
Real GDP Per Capita Growth			0.003* (0.002)	0.002 (0.002)	0.003** (0.001)	0.003** (0.001)
Individual Controls	No	Yes	No	Yes	No	Yes
Country Dummies	Yes	Yes	Yes	Yes	Yes	Yes
Time Trend	Yes	Yes	Yes	Yes	Yes	Yes
Observations	255,053	255,053	255,053	255,053	239,383	239,383
Adj. R^2	0.066	0.149	0.069	0.152	0.069	0.152

Source: Sources: Eurobarometer, 2001-2012, Worldwide Governance Indicators, and World Development Indicators, European Commission

Notes: The dependent variable in all models is life satisfaction (1-4). Standard errors clustered by time and country in parentheses. The individual controls in models (2), (4), and (6) are age, age squared, an indicator for whether the respondent is married or in a civil partnership, employment indicator, household size, household size squared, an indicator for a large or small town, the and age-education categories (age at which the respondent stopped her full-time education): no education, still in school, 15 years or younger, 20 years or older; the reference group is 16-19 years. The macroeconomic indicators are the real GDP per capita growth, the 6 WGI indicators, real (Cohesion Funds) CF fund expenditures per capita, and share of EU imports and exports. Models (3) and (4) exclude the share of EU imports as it is missing for 2008 for some countries. Models (5) and (6) include the share of imports and therefore have a smaller number of observations.

*** $p \leq 0.01$, ** $p \leq 0.05$, * $p \leq 0.1$

Table 3.13: Support for EU Membership, 2002

	EU-10		Bulgaria and Romania	
	(1)	(2)	(3)	(4)
	Vote Yes	No Vote	Vote Yes	No Vote
Life Satisfaction (1-4)	0.415*** (0.046)	0.074 (0.072)	0.483** (0.241)	0.111 (0.226)
Age	-0.038** (0.016)	-0.058*** (0.014)	-0.060 (0.072)	-0.031*** (0.001)
Age Squared/100	0.028* (0.017)	0.053*** (0.014)	0.041 (0.060)	0.036 (0.027)
Male	-0.311*** (0.069)	-0.430*** (0.145)	-0.942*** (0.154)	-0.559** (0.227)
Married or in Civil Partnership	-0.256** (0.106)	-0.401*** (0.136)	-0.334*** (0.056)	-0.458* (0.236)
Married*Male Interaction	0.426*** (0.066)	0.142 (0.191)	0.817*** (0.093)	0.056 (0.624)
Age At Which Stopped Education (Ref. Group: 15 Years or Younger)				
16-19 Years	0.029 (0.164)	-0.618*** (0.145)	-0.000 (0.075)	-0.771*** (0.117)
20 + Years	0.188 (0.168)	-0.825*** (0.192)	0.125*** (0.018)	-0.696*** (0.240)
Still in School	0.171 (0.273)	-0.791*** (0.228)	-0.756 (1.176)	-1.362*** (0.354)
Income Deciles (Ref: Group: Poorest Income Decile)				
2nd Decile	0.114 (0.090)	-0.059 (0.175)	-0.381*** (0.040)	-0.240*** (0.073)
3rd Decile	0.193 (0.132)	-0.042 (0.189)	0.468*** (0.114)	0.390 (0.531)
4th Decile	0.194 (0.156)	-0.348* (0.193)	0.032 (0.554)	-0.215 (0.384)
5th Decile	0.519*** (0.122)	0.250* (0.147)	-0.317*** (0.031)	0.414 (0.269)
6th Decile	0.596*** (0.156)	0.039 (0.136)	1.190*** (0.185)	1.017* (0.552)
7th Decile	0.668*** (0.211)	0.192 (0.240)	0.726 (0.496)	0.395 (1.304)
8th Decile	0.767*** (0.202)	-0.003 (0.296)	0.222 (0.401)	0.309*** (0.097)
9th Decile	0.770*** (0.228)	0.111 (0.271)	0.482*** (0.062)	0.418*** (0.091)
10th Decile (Richest)	0.756*** (0.201)	-0.203 (0.172)	-0.461* (0.277)	-0.967 (0.599)
Employed	-0.171** (0.076)	0.022 (0.113)	0.164 (0.379)	0.541 (0.903)
Has Own Child	0.165** (0.069)	0.247 (0.201)	0.344** (0.156)	0.091 (0.967)
Large Town	0.024 (0.053)	-0.110 (0.081)	0.321 (0.243)	0.075 (0.147)
Household Size	-0.230*** (0.057)	-0.108 (0.091)	-0.017 (0.188)	0.027 (0.332)
Household Size Squared	0.012* (0.007)	0.011 (0.011)	-0.010 (0.032)	-0.003 (0.012)
Observations	7,720	7,720	1,580	1,580
Pseudo R^2	0.119	0.119	0.084	0.084

Source: Candidate Countries Eurobarometer (CCEB) 2002.1

Notes: The dependent variable in all models is based on the following question: "And if there were to be a referendum tomorrow on the question of (country)'s membership, would you personally vote for or against it?". Standard errors clustered by country in parentheses. The models are estimated using a multinomial regression whereby the base outcome is "will vote no." All regressions have country dummies.

*** $p \leq 0.01$, ** $p \leq 0.05$, * $p \leq 0.1$

3.12 Appendix to Chapter 3

Table C.1: Life Satisfaction and EU Trust, 2001-2012

	(1)	(2)
EU Trust	0.275*** (0.016)	0.271*** (0.017)
2007 and After	0.136*** (0.043)	-0.710 (0.444)
Trust*2007 Interaction	0.005 (0.032)	0.006 (0.032)
Age	-0.031*** (0.002)	-0.031*** (0.002)
Age Squared/100	0.029*** (0.002)	0.029*** (0.002)
Male	0.036** (0.017)	0.037** (0.017)
Married or in Civil Partnership	0.126*** (0.014)	0.126*** (0.014)
Married*Male Interaction	-0.053** (0.019)	-0.054*** (0.019)
Age At Which Stopped Education (Ref. Group: 15 Years or Younger)		
No Education	-0.222*** (0.071)	-0.218*** (0.072)
16-19 Years	0.122*** (0.017)	0.122*** (0.017)
20 + Years	0.311*** (0.019)	0.311*** (0.019)
Still in School	0.577*** (0.042)	0.572*** (0.042)
Employed	0.244*** (0.010)	0.241*** (0.010)
Small or Mid-Size Town	-0.027* (0.015)	-0.028* (0.014)
Large Town	0.015 (0.014)	0.015 (0.014)
Household Size	0.015 (0.011)	0.015 (0.011)
Household Size Squared	-0.004*** (0.001)	-0.004*** (0.001)
Romania	0.160*** (0.016)	0.253*** (0.035)
Macroeconomic Controls	No	Yes
Year Dummies	Yes	Yes
Observations	36,344	36,344
Adjusted R-squared	0.135	0.135

Source: Eurobarometer, 2001-2012

Notes: The dependent variable in all models is life satisfaction (1-4). Standard errors clustered by country in parentheses. The macroeconomic indicators are log GDP per capita (PPP, 2005 constant international dollars), unemployment (% of the labor force), and an estimate of the control of corruption (rescaled to range from 0 to 5). The omitted year is 2012.

*** $p \leq 0.01$, ** $p \leq 0.05$, * $p \leq 0.1$

References

- Abadie, A. (2005). Semiparametric difference-in-differences estimators. *The Review of Economic Studies*, *72*(1), 1-19.
- Abbott, P., & Wallace, C. (2012). Rising economic prosperity and social quality the case of new member states of the European Union. *Social Indicators Research*, 1-21.
- Abramitzky, R., Boustan, L. P., & Eriksson, K. (2012). Europe's tired, poor, huddled masses: Self-selection and economic outcomes in the age of mass migration. *American Economic Review*, *102*(5), 1832–1856.
- Acemoglu, D., & Angrist, J. D. (2001). Consequences of employment protection? the case of the Americans with Disabilities Act. *Journal of Political Economy*, *109*(5), 915-957.
- Ai, C., & Norton, E. C. (2003). Interaction terms in logit and probit models. *Economics Letters*, *80*(1), 123-129.
- Akay, A., Constant, A., & Giulietti, C. (2014). The impact of immigration on the well-being of natives. *Journal of Economic Behavior & Organization*. doi: <http://dx.doi.org/10.1016/j.jebo.2014.03.024>
- Alesina, A., Di Tella, R., & MacCulloch, R. (2004). Inequality and happiness: Are Europeans and Americans different? *Journal of Public Economics*, *88*(9-10), 2009-2042.
- Alkire, S. (2002). Dimensions of human development. *World Development*, *30*(2), 181-205.
- Alkire, S. (2005). Subjective quantitative studies of human agency. *Social Indicators Research*, *74*(1), 217-260.
- Alkire, S., & Deneulin, S. (2009). The human development and capability approach. In S. Deneulin & L. Shahani (Eds.), *An introduction to the human development and capability approach: Freedom and agency* (p. 22-48). London, UK and Sterling, VA: Earthscan.
- Amit, K. (2010). Determinants of life satisfaction among immigrants from Western countries and from the FSU in Israel. *Social Indicators Research*, *96*(3), 515-534.
- Amit, K., & Litwin, H. (35). Social integration and identity of immigrants from Western countries, the FSU and Ethiopia in Israel. *Ethnic and Racial Studies*, *7*(1287-310).
- Anand, P., Hunter, G., Carter, I., Dowding, K., Guala, F., & Hees, M. V. (2009). The development of capability indicators. *Journal of Human Development and Capabilities*, *10*(1), 125-152.

- Anand, P., Hunter, G., & Smith, R. (2005). Capabilities and well-being: Evidence based on the Sen-Nussbaum approach to welfare. *Social Indicators Research*, 74(1), 9-55.
- Anand, P., Krishnakumar, J., & Tran, N. B. (2011). Measuring welfare: Latent variable models for happiness and capabilities in the presence of unobservable heterogeneity. *Journal of Public Economics*, 95(3-4), 205-215.
- Anand, P., & van Hees, M. (2006). Capabilities and achievements: An empirical study. *The Journal of Socio-Economics*, 35(2), 268-284.
- Angrist, J. D., & Pischke, J.-S. (2009). *Mostly harmless econometrics: An empiricist's companion*. Princeton, NJ: Princeton University Press.
- Athey, S., & Imbens, G. W. (2006). Identification and inference in nonlinear difference-in-differences models. *Econometrica*, 74(2), 431-497.
- Atkins, R. (2013). *Europeans still take a dim view of the euro*.
- Awad, I. (2009). *The global economic crisis and migrant workers: Impact and response*. Geneva, Switzerland: International Migration Programme, International Labour Organization.
- Bălăţescu, S. (2007). Central and Eastern Europeans migrants' subjective quality of life. a comparative study. *Journal of Identity and Migration Studies*, 1(2), 67-81.
- Bartram, D. (2011). Economic migration and happiness: Comparing immigrants' and natives' happiness gains from income. *Social Indicators Research*, 103(1), 57-76.
- Bartram, D. (2012). Migration, return, and happiness in Romania. *European Societies*(iFirst), 1-15.
- Bartram, D. (2013). Happiness and 'economic migration': A comparison of Eastern European Migrants and stayers. *Migration Studies*, 1(2), 156-175.
- Becker, A., Deckers, T., Dohmen, T., Falk, A., & Kosse, F. (2012). The relationship between economic preferences and psychological personality measures. *Annual Review of Economics*, 4(1), 453-478.
- Becker, S. O., Egger, P. H., & von Ehrlich, M. (2010). Going NUTS: The effect of EU Structural Funds on regional performance. *Journal of Public Economics*, 94(9/10), 578-590.
- Berger, M. C., & Blomquist, G. C. (1992). Mobility and destination in migration decisions: The roles of earnings, quality of life, and housing prices. *Journal of Housing Economics*, 2(1), 37 - 59.
- Bertrand, M., Duflo, E., & Mullainathan, S. (2004). How much should we trust differences-in-differences estimates? *The Quarterly Journal of Economics*, 119(1), 249-275.
- Betz, W., & Simpson, N. B. (2013). The effects of international migration on the well-being of native populations in Europe. *IZA Journal of Migration*, 2(12), 1-21.
- Bhagwati, J., & Hamada, K. (1974). The brain drain, international integration of markets for professionals and unemployment: a theoretical analysis. *Journal of Development Economics*, 1(1), 19-42.

- Binder, M., & Coad, A. (2011). From average Joe's happiness to miserable Jane and cheerful John: Using quantile regressions to analyze the full subjective well-being distribution. *Journal of Economic Behavior & Organization*, 79(3), 275-290.
- Blanchflower, D. G., & Shadforth, C. (2009). Fear, unemployment and migration. *The Economic Journal*, 119(535), F136–F182.
- Blundell, R., & Costa Dias, M. (2000). Evaluation methods for non-experimental data. *Fiscal Studies*, 21(4), 427-468.
- Böhnke, P. (2008). Does society matter? life satisfaction in the enlarged europe. *Social Indicators Research*, 87(2), 189-210.
- Borjas, G. J. (1987). Self-selection and the earnings of immigrants. *American Economic Review*, 77(4), 531-553.
- Borjas, G. J. (1999). *Heaven's door: Immigration policy and the american economy*. Princeton Princeton University Press.
- Borraz, F., Pozo, S., & Rossi, M. (2010). And what about the family back home? International migration and happiness in Cuenca, Ecuador. *Journal of Business Strategies*, 27(1), 7.
- Bradley, D. E., & Van Willigen, M. (2010). Migration and psychological well-being among older adults: A growth curve analysis based on panel data from the health and retirement study, 1996-2006. *Journal of Aging and Health*, 22(7), 882–913.
- Buchinsky, M. (1998). Recent advances in quantile regression models: A practical guideline for empirical research. *The Journal of Human Resources*, 33(1), 88-126.
- Cade, B. S., & Noon, B. R. (2003). A gentle introduction to quantile regression for ecologists. *Frontiers in Ecology and the Environment*, 1(8), 412-420.
- Caliendo, M., & Kopeinig, S. (2008). Some practical guidance for the implementation of propensity score matching. *Journal of Economic Surveys*, 22(1), 31-72.
- Campos, N. F., Coricelli, F., & Moretti, L. (2014). Economic growth and European integration: A counterfactual analysis. *Forthcoming*.
- Cantril, H. (1965). *Pattern of human concerns*. Rutgers University Press, New Brunswick, New Jersey.
- Card, D. (2005). Is the new immigration really so bad? *The Economic Journal*, 115(507), pp. F300-F323.
- Cavenaile, L., & Dubois, D. (2011). An empirical analysis of income convergence in the European Union. *Applied Economics Letters*, 18(17), 1705-1708.
- Chindarkar, N. (2014). Is subjective well-being of concern to potential migrants from Latin America? *Social Indicators Research*, 115(1), 159-182.
- Clark, A. E., Frijters, P., & Shields, M. A. (2008). Relative income, happiness, and utility: An explanation for the Easterlin paradox and other puzzles. *Journal of Economic Literature*, 46(1), pp. 95-144.
- Clemens, M. A., & Bazzi, S. (2008). Don't close the golden door: Our noisy debate on immigration and its deathly silence on development. *Center for Global Development Essay*.

- Clemens, M. A., Montenegro, C. E., & Pritchett, L. (2008). The place premium: Wage differences for identical workers across the US border. *World Bank Policy Research Working Paper No. 4671*.
- Conley, T. G., & Taber, C. R. (2010, 2014/01/21). Inference with "difference in differences" with a small number of policy changes. *Review of Economics and Statistics*, 93(1), 113-125.
- Conti, G., & Pudney, S. (2011, 2014/04/21). Survey design and the analysis of satisfaction. *Review of Economics and Statistics*, 93(3), 1087-1093.
- Cornelisse, P. A., & Goudswaard, K. P. (2002). On the convergence of social protection systems in the European Union. *International Social Security Review*, 55(3), 3-17.
- Crocker, D. A. (2008). *Ethics of global development: Agency, capability, and deliberative democracy* (Kindle ed.). Cambridge: Cambridge University Press.
- Crocker, D. A. (2012). Leadership and global justice. In D. A. Hicks & T. Williamson (Eds.), (p. 41-58). Palgrave Macmillan.
- Crocker, D. A., & Robeyns, I. (2009). Amartya Sen. In C. W. Morris (Ed.), (p. 60-90). Cambridge University Press.
- Dalen, H. v., & Henkens, K. (2008). *Emigration intentions: Mere words or true plans? Explaining international migration intentions and behavior* (Discussion Paper No. 2008-60). Tilburg University, Center for Economic Research.
- De Haas, H. (2010). Migration and development: A theoretical perspective. *International Migration Review*, 44(1), 227-264.
- Dehejia, R. H., & Wahba, S. (2002). Propensity score-matching methods for non-experimental causal studies. *Review of Economics and Statistics*, 84(1), 151-161.
- De Jong, G. F., Chamrathirong, A., & Tran, Q.-G. (2002). For better, for worse: Life satisfaction consequences of migration. *International Migration Review*, 36(3), 838-863.
- Delhey, J. (2001). The prospects of catching up for new EU members: Lessons for the accession countries to the European Union from previous enlargements. *Social Indicators Research*, 56(2), 205-231.
- Deneulin, S. (2006). Individual well-being, migration remittances and the common good. *The European Journal of Development Research*, 18(1), 45-58.
- De Neve, J.-E., & Oswald, A. J. (2012). Estimating the influence of life satisfaction and positive affect on later income using sibling fixed effects. *Proceedings of the National Academy of Sciences*, 109(49), 19953-19958.
- Diener, E., Inglehart, R., & Tay, L. (2012). Theory and validity of life satisfaction scales. *Social Indicators Research*, 1-31.
- Diener, E., Lucas, R., Schimmack, U., & Helliwell, J. F. (2009). *Well-being for public policy*. Oxford University Press, USA.
- Diener, E., Suh, E. M., Lucas, R. E., & Smith, H. L. (1999). Subjective well-being: Three decades of progress. *Psychological Bulletin*, 125(2), 276-302.
- Di Tella, R., & MacCulloch, R. (2006). Some uses of happiness data in economics. *The Journal of Economic Perspectives*, 20(1), 25-46.

- Di Tella, R., MacCulloch, R. J., & Oswald, A. J. (2001). Preferences over inflation and unemployment: Evidence from surveys of happiness. *The American Economic Review*, *91*(1), 335-341.
- DiTella, R., MacCulloch, R. J., & Oswald, A. J. (2003). The macroeconomics of happiness. *The Review of Economics and Statistics*, *85*(4), 809-827.
- Dolan, P., & Kavetsos, G. (2012). Happy talk: Mode of administration effects on subjective well-being. *Centre for Economic Performance Discussion Paper No 1159*, 1-17.
- Doyle, O., & Fidrmuc, J. (2006). Who favors enlargement?: Determinants of support for EU membership in the candidate countries' referenda. *European Journal of Political Economy*, *22*, 520-543.
- Dreze, J., & Sen, A. K. (2002). *India: Development and participation* (2nd ed.). Oxford: Oxford University Press.
- Duflo, E., & Kremer, M. (2008). Use of randomization in the evaluation of development effectiveness. In W. R. Easterly (Ed.), *Reinventing foreign aid* (p. 93-120). Boston, MA: MIT Press.
- Durand, M., & Smith, C. (2013). The OECD approach to measuring subjective well-being. *World Happiness Report 2013*, 112-137.
- Dustmann, C., Frattini, T., & Halls, C. (2010). Assessing the fiscal costs and benefits of a8 migration to the uk*. *Fiscal Studies*, *31*(1), 1-41.
- Easterlin, R. A. (1974). Does economic growth improve the human lot? Some empirical evidence. In P. D. Reeder & M. (Eds.), *Nations and households in economic growth: Essays in honour of moses abramovitz* (p. 89-125). New York and London: Academic Press.
- Easterlin, R. A. (1995). Will raising the incomes of all increase the happiness of all? *Journal of Economic Behavior & Organization*, *27*(1), 35 - 47.
- Easterlin, R. A. (2009). Lost in transition: Life satisfaction on the road to capitalism. *Journal of Economic Behavior & Organization*, *71*(2), 130-145.
- EBRD. (2010). *Life in transition: After the crisis* (Tech. Rep.). European Bank for Reconstruction and Development.
- Egger, P., & Larch, M. (2011). An assessment of the Europe agreements' effects on bilateral trade, GDP, and welfare. *European Economic Review*, *55*(2), 263 - 279.
- Eggers, A., Gaddy, C., & Graham, C. (2006). Well-being and unemployment in Russia in the 1990s: Can society's suffering be individuals' solace? *The Journal of Socio-Economics*, *35*(2), 209-242.
- Ek, E., Koironen, M., Raatikka, V.-P., Järvelin, M.-R., & Taanila, A. (2008). Psychosocial factors as mediators between migration and subjective well-being among young Finnish adults. *Social Science & Medicine*, *66*(7), 1545 - 1556.
- Esipova, N., Pugliese, A., Ray, J., & Kanitkar, K. (2013). World migration report 2013: Migrant well-being and development. In (chap. Chapter 4. Dimensions of Migrant Well-Being: Evidence from The Gallup World Poll). Gráficas Alcoy.
- EU. (2007, 13 December). *European Union. Treaty of Lisbon Amending the Treaty on European Union and the Treaty Establishing the European Community*

- 2007/C 306/01. available at: <http://www.refworld.org/docid/476258d32.html> [accessed 18 November 2013].
- EU. (2013). *European neighbourhood policy (enp) overview*. Retrieved November 24, 2014, from <http://eeas.europa.eu/enp/>
- Eurofound. (2005a). *2004 annual review for Hungary*. Retrieved November 26, 2013, from <http://www.eurofound.europa.eu/eiro/2005/01/feature/hu0501105f.htm>
- Eurofound. (2005b). *2004 annual review for Poland*. Retrieved November 26, 2013, from <http://www.eurofound.europa.eu/eiro/2005/01/feature/pl0501104f.htm>
- Eurofound. (2005c). *2004 annual review for the Czech Republic*. Retrieved November 26, 2013, from <http://www.eurofound.europa.eu/eiro/2005/01/feature/cz0501103f.htm>
- Eurofound. (2008). *Bulgaria: Industrial relations developments in Europe 2007*. Retrieved November 26, 2013, from <http://www.eurofound.europa.eu/eiro/studies/tn0803029s/bg0803029q.htm>
- Fahey, T., & Smyth, E. (2004). Do subjective indicators measure welfare? Evidence from 33 European societies. *European Societies*, 6(1), 5-27.
- Ferrer-i Carbonell, A., & Frijters, P. (2004). How important is methodology for the estimates of the determinants of happiness?*. *The Economic Journal*, 114(497), 641-659.
- Fields, G. (2003). Accounting for income inequality and its change: A new method, with application to the distribution of earnings in the United States. *Research in Labor Economics*, 22, 1-38.
- Fields, G. (2004). Regression-based decompositions: A new tool for managerial decision-making. *Department of Labor Economics, Cornell University*, 1-41.
- Fiorio, C. V., & Jenkins, S. P. (2010). Ineqrbd: Stata module to calculate regression-based inequality decomposition. <http://ideas.repec.org/c/boc/bocode/s456960.html#biblio>.
- Fix, M., Papademetriou, D. G., Batalova, J., Terrazas, A., Lin, S. Y.-Y., & Mittelstadt, M. (2009). *Migration and the global recession: A report commissioned by the BBC World Service*. Washington, DC: Migration Policy Institute.
- Frey, B. S., & Stutzer, A. (2002). What can economists learn from happiness research? *Journal of Economic literature*, 40(2), 402-435.
- Fukuyama, F. (1989). The end of history? *The National Interest*, 16(Summer).
- Giannias, D., Liargovas, P., & Manolas, G. (1999). Quality of life indices for analysing convergence in the European Union. *Regional Studies*, 33(1), 27-35.
- Graham, C. (2008). Happiness and health: Lessons and questions for public policy. *Health Affairs*, 27(1), 72-87.

- Graham, C. (2009). *Happiness around the world: The paradox of happy peasants and miserable millionaires*. New York, NY: Oxford University Press.
- Graham, C. (2011). *The pursuit of happiness: An economy of well-being*. Washington, D.C.: The Brookings Institution Press.
- Graham, C. (2012). *The distinctiveness of hedonic and evaluative well-being. Notes prepared for the NAS panel. Washington, DC: The Brookings Institution*.
- Graham, C., & Chattopadhyay, S. (2011). Did unhappiness cause the Arab Spring? some insights from the economics of well-being. In M. A. et al. (Ed.), *After the spring: Economic transitions in the arab world*.
- Graham, C., Chattopadhyay, S., & Picon, M. (2010a). Adapting to adversity: Happiness and the 2009 economic crisis in the United States. *Social Research: An International Quarterly*, 77(2), 715-748.
- Graham, C., Chattopadhyay, S., & Picon, M. (2010b). The Easterlin and other paradoxes: Why both sides of the debate may be correct. In E. Diener, D. Kahneman, & J. Helliwell (Eds.), *International differences in well-being (positive psychology)* (p. 247-290). Oxford: Oxford University Press.
- Graham, C., Eggers, A., & Sukhtankar, S. (2004). Does happiness pay?: An exploration based on panel data from Russia. *Journal of Economic Behavior & Organization*, 55(3), 319-342.
- Graham, C., & Lora, E. (2009). *Paradox and perception: Measuring quality of life in latin america*. Washington, D.C.: Brookings Institution Press.
- Graham, C., & Markowitz, J. (2011). Aspirations and happiness of potential Latin American immigrants. *Journal of Social Research & Policy*, 2(2), 9-25.
- Graham, C., & Nikolova, M. (2013a). Does access to information technology make people happier? Insights from well-being surveys from around the world. *The Journal of Socio-Economics*, 44(0), 126-139.
- Graham, C., & Nikolova, M. (2013b, September). *Happy peasants and frustrated achievers? Agency, capabilities, and subjective well-being* (Working Papers No. 2013-13). Human Capital and Economic Opportunity Working Group. Retrieved from <http://ideas.repec.org/p/hka/wpaper/2013-13.html>
- Graham, C., & Pettinato, S. (2002a). Frustrated achievers: Winners, losers and subjective well-being in new market economies. *The Journal of Development Studies*, 38(4), 100-140.
- Graham, C., & Pettinato, S. (2002b). *Happiness and hardship: Opportunity and insecurity in new market economies*. Washington, DC: The Brookings Institution Press.
- Green, T., & Winters, L. A. (2010). Economic crises and migration: Learning from the past and the present. *The World Economy*, 33(9), 1053-1072.
- Grether, J.-M., De Melo, J., & Müller, T. (2001). The political economy of international migration in a Ricardo-Viner model. *CEPR Discussion Paper 2714*.
- Guriev, S., & Zhuravskaya, E. (2009). (Un)Happiness in transition. *Journal of Economic Perspectives*, 23(2), 143-168.
- Hall, J. (2013). From capabilities to contentment: Testing the links between human development and life satisfaction. *World Happiness Report 2013*, 138-153.

- Hanson, G. H. (2010). International migration and the developing world. *Handbook of Development Economics*, 5, 4363-4414.
- Havnes, T., & Mogstad, M. (2010). Is universal child care leveling the playing field? evidence from non-linear difference-in-differences. *IZA DP No. 4978*, 1-39.
- Heckman, J. J., Ichimura, H., Smith, J., & Todd, P. (1996). Sources of selection bias in evaluating social programs: An interpretation of conventional measures and evidence on the effectiveness of matching as a program evaluation method. *Proceedings of the National Academy of Sciences*, 93(23), 13416-13420.
- Heckman, J. J., Ichimura, H., & Todd, P. E. (1997). Matching as an econometric evaluation estimator: Evidence from evaluating a job training programme. *The Review of Economic Studies*, 64(4), 605-654.
- Heinrich, C., Maffioli, A., & Vazquez, G. (2010). A primer for applying propensity-score matching: Impact-evaluation guidelines. *Office of Strategic Planning and Development Effectiveness, Inter-American Development Bank*, 1-56.
- Helliwell, J. F., Barrington-Leigh, C., Harris, A., & Huang, H. (2010). International evidence on the social context of well-being. In J. H. E. Diener & D. Kahneman (Eds.), *International differences in well-being*. New York: Oxford University Press.
- Helliwell, J. F., Layard, R., & Sachs, J. D. (2013). Introduction. *World Happiness Report 2013*, 2-7.
- Herzog, A., & Tucker, J. A. (2010, 7). The dynamics of support: the winners-losers gap in attitudes toward EU membership in post-communist countries. *European Political Science Review*, 2, 235-267.
- Imbens, G. M., & Wooldridge, J. M. (2008, August). *Recent developments in the econometrics of program evaluation* (Working Paper No. 14251). National Bureau of Economic Research.
- IMF. (2013). *World economic outlook april 2013: Hopes, realities, risks* (Tech. Rep.). Washington, D.C.: International Monetary Fund.
- Inglehart, R., Foa, R., Peterson, C., & Welzel, C. (2008). Development, freedom, and rising happiness: A global perspective (1981-2007). *Perspectives on Psychological Science*, 3(4), 264-285.
- Inglehart, R., Foa, R., Ponarin, E., & Welzel, C. (2013). *Understanding the Russian malaise: The collapse and recovery of subjective well-being in post-communist Russia* (Tech. Rep.). National Research University Higher School of Economics.
- Kahanec, M. (2013). Labor mobility in and enlarged European Union. In K. F. Zimmermann & A. F. Constant (Eds.), *International handbook on the economics of migration* (p. 137-152). Edward Elgar Publishing Limited.
- Kahneman, D., & Deaton, A. (2010). High income improves evaluation of life but not emotional well-being. *Proceedings of the National Academy of Sciences*, 107(38), 16489-16493.
- Kahneman, D., & Krueger, A. B. (2006). Developments in the measurement of subjective well-being. *Journal of Economic Perspectives*, 20(1), 3-24.
- Kahneman, D., Wakker, P. P., & Sarin, R. (1997). Back to Bentham? explorations of experienced utility. *The Quarterly Journal of Economics*, 112(2), 375-406.

- Kaitila, V. (2004). *Convergence of real GDP per capita in the EU15. how do the accession countries fit in? European network of economic policy research institutes working paper no. 25*. Retrieved November 25, 2004, from http://aei.pitt.edu/1843/1/ENEPRI_WP25.pdf
- Kaufmann, D., Kraay, A., & Mastruzzi, M. (2010). The Worldwide Governance Indicators: Methodology and analytical issues. *World Bank Policy Research Working Paper No. 5430*. Available at SSRN: <http://ssrn.com/abstract=1682130>.
- Knight, J., & Gunatilaka, R. (2010). Great expectations? the subjective well-being of rural-urban migrants in China. *World Development*, 38(1), 113 - 124.
- Koenker, R., & Bassett, J., Gilbert. (1978). Regression quantiles. *Econometrica*, 46(1), 33-50.
- Koenker, R., & Hallock, K. F. (2001). Quantile regression. *The Journal of Economic Perspectives*, 15(4), 143-156.
- Krueger, A. B., & Schkade, D. A. (2008). The reliability of subjective well-being measures. *Journal of Public Economics*, 92(8/9), 1833-1845.
- Lechner, M. (2011). *The estimation of causal effects by difference-in-difference methods*. St. Gallen, Switzerland: Department of Economics, University of St. Gallen.
- Leuven, E., & Sianesi, B. (2003). *Psmatch2: Stata module to perform full mahalanobis and propensity score matching, common support graphing, and covariate imbalance testing*. Statistical Software Components, Boston College Department of Economics. Retrieved from <http://ideas.repec.org/c/boc/bocode/s432001.html>
- Levitz, P., & Pop-Eleches, G. (2010). Why no backsliding? the European Union's impact on democracy and governance before and after accession. *Comparative Political Studies*, 43(4), 457-485.
- McKenzie, D. (2012). *Learning about migration through experiments* (Tech. Rep.). Centre for Research and Analysis of Migration (CReAM), Department of Economics, University College London.
- McKenzie, D., Gibson, J., & Stillman, S. (2013). A land of milk and honey with streets paved with gold: Do emigrants have over-optimistic expectations about incomes abroad? *Journal of Development Economics*.
- McKenzie, D., Stillman, S., & Gibson, J. (2010). How important is selection? Experimental vs non-experimental measures of income gains from migration. *Journal of the European Economic Association*, 8(4), 913-945.
- Melzer, S. (2011). Does migration make you happy? the influence of migration on subjective well-being. *Journal of Social Research & Policy*, 2(2), 73-92.
- Menard, S. (2004). Six approaches to calculating standardized logistic regression coefficients. *The American Statistician*, 58(3), 218-223.
- Milanovic, B. (1998). *Income, inequality, and poverty during the transition from planned to market economy*. Washington, D.C.: The World Bank.
- Milanovic, B. (2011). *The haves and the have-nots: A brief and idiosyncratic history of global inequality*. New York, NY: Basic Books.
- Morawetz, D., Atia, E., Bin-Nun, G., Felous, L., Gariplerden, Y., Harris, E., ... Zarfaty, Y. (1977). Income distribution and self-rated happiness: Some em-

- pirical evidence. *The Economic Journal*, 87(347), pp. 511-522.
- Moulton, B. R. (1990). An illustration of a pitfall in estimating the effects of aggregate variables on micro units. *The Review of Economics and Statistics*, 72(2), 334-338.
- Murrell, P. (1996). How far has the transition progressed? *The Journal of Economic Perspectives*, 10(2), 25-44.
- Neumayer, E. (2003). Beyond income: Convergence in living standards, big time. *Structural Change and Economic Dynamics*, 14(3), 275-296.
- Neumayer, E., Plümpner, T., & Barthel, F. (2014). The political economy of natural disaster damage. *Global Environmental Change*, 24(0), 8 - 19.
- Ng, Y.-K. (1996). Happiness surveys: Some comparability issues and an exploratory survey based on just perceivable increments. *Social Indicators Research*, 38(1), 1-27.
- Ng, Y.-K. (1997). A case for happiness, cardinalism, and interpersonal comparability. *The Economic Journal*, 107(445), 1848-1858.
- Nowok, B., van Ham, M., Findlay, A. M., & Gayle, V. (2011). Does migration make you happy? A longitudinal study of internal migration and subjective well-being. *IZA Working Paper 6140*.
- Nussbaum, M. C. (2011). *Creating capabilities: The human development approach*. Belknap Press of Harvard University Press.
- O'Donnell, G. (2013). Using well-being as a guide to policy. *World Happiness Report 2013*, 98-111.
- OECD. (2007). *Policy coherence for development 2007: Migration and developing countries* (Tech. Rep.). Development Centre of the Organisation for Economic Co-operation and Development.
- OECD. (2008). A profile of immigrant populations in the 21st century. *Data from OECD Countries*.
- OECD. (2011). *How's life?: Measuring well-being*, oecd publishing. Retrieved November 24, 2013, from <http://dx.doi.org/10.1787/9789264121164-en>
- OECD. (2013a). *International migration outlook 2013*, OECD publishing. Retrieved from http://dx.doi.org/10.1787/migr_outlook-2013-en
- OECD. (2013b). *OECD guidelines on measuring subjective well-being*. Retrieved from <http://dx.doi.org/10.1787/9789264191655-en>
- Oswald, A. J. (1997). Happiness and economic performance. *The Economic Journal*, 107(445), 1815-1831.
- Oswald, A. J., Proto, E., & Sgroi, D. (2009). Happiness and productivity. *IZA Discussion Paper No. 4645*, 1-51.
- Otrachshenko, V., & Popova, O. (2014). Life (dis)satisfaction and the intention to migrate: Evidence from Central and Eastern Europe. *The Journal of Socio-Economics*, 48(0), 40 - 49.
- Ottaviano, G. I. P., & Peri, G. (2012). Rethinking the effect of immigration on wages. *Journal of the European Economic Association*, 10(1), 152-197.
- Papademetriou, D. G. ., Sumption, M., Terrazas, A., Loyal, C. B. S., & Ferrero-Turrión, R. (2010). *Migration and immigrants two years after the financial collapse: Where do we stand?* Washington, DC: Migration Policy Institute.

- Pastor, J. M., & Serrano, L. (2012). European integration and inequality among countries: A lifecycle income analysis. *Review of International Economics*, 20(1), 186-199.
- Peikes, D. N., Moreno, L., & Orzol, S. M. (2008). Propensity score matching. *The American Statistician*, 62(3), 222-231.
- Perovic, L. M., & Golem, S. (2010). Investigating macroeconomic determinants of happiness in transition countries. *Eastern European Economics*, 48(4), 59-75.
- Popova, O. (2012). Essays on individual perceptions of economic reforms. *Ph.D. Dissertation. Center for Economic Research and Graduate Education (CERGE). Charles University Prague.*
- Ramos, X., & Silber, J. (2005). On the application of efficiency analysis to the study of the dimensions of human development. *Review of Income and Wealth*, 51(2), 285-309.
- Åslund, A. (2007). *How capitalism was built: The transformation of Central and Eastern Europe, Russia, and Central Asia*. New York, NY: Cambridge University Press.
- Ribar, D. C. (2013). Immigrants' time use: A survey of methods and evidence. In K. F. Zimmermann & A. F. Constant (Eds.), *International handbook on the economics of migration*. Edward Elgar Publishing Limited.
- Robeyns, I. (2005). Selecting capabilities for quality of life measurement. *Social Indicators Research*, 74(1), 191-215.
- Rodriguez-Pose, A., & Maslauskaitė, K. (2012). Can policy make us happier? individual characteristics, socio-economic factors and life satisfaction in Central and Eastern Europe. *Cambridge Journal of Regions, Economy and Society*, 5(1), 77-96.
- Rosenbaum, P. R., & Rubin, D. B. (1983). The central role of the propensity score in observational studies for causal effects. *Biometrika*, 70(1), 41-55.
- Rosenbaum, P. R., & Rubin, D. B. (1985a). The bias due to incomplete matching. *Biometrics*, 41(1), 103-116.
- Rosenbaum, P. R., & Rubin, D. B. (1985b). Constructing a control group using multivariate matched sampling methods that incorporate the propensity score. *The American Statistician*, 39(1), 33-38.
- Rosenberg, C. B., & Sierhej, R. (2007). *Interpreting EU funds data for macroeconomic analysis in the new member states* (Vol. 7). Washington, DC: International Monetary Fund.
- Safi, M. (2010). Immigrants' life satisfaction in Europe: Between assimilation and discrimination. *European Sociological Review*, 26(2), 159-176.
- Selezneva, E. (2011). Surveying transitional experience and subjective well-being: Income, work, family. *Economic Systems*, 35(2), 139-157.
- Sen, A. (1985). Well-being, agency and freedom: the dewey lectures 1984. *The Journal of Philosophy*, 82(4), 169-221.
- Sen, A. (1999). *Development as freedom*. New York, NY: Anchor Books.
- Sen, A. (2000). Social exclusion: Concept, application, and scrutiny. *Social Development Papers No. 1, Office of Environment and Social Development Asian Development Bank*, 1-54.

- Senik, C. (2009). Direct evidence on income comparisons and their welfare effects. *Journal of Economic Behavior & Organization*, 72(1), 408 - 424.
- Senik, C. (2011). The French unhappiness puzzle: The cultural dimension of happiness. *IZA Working Paper No. 6175. Institute for the Study of Labor (IZA), Bonn.*
- Simon, J., Anand, P., Gray, A., Rugkåsa, J., Yeeles, K., & Burns, T. (2013). Operationalising the capability approach for outcome measurement in mental health research. *Social Science & Medicine*, 98(0), 187 - 196.
- Simpson, N. (2013). Happiness and migration. In K. F. Zimmermann & A. F. Constant (Eds.), *International handbook on the economics of migration*. Edward Elgar Publishing Limited.
- Sjaastad, L. A. (1962). The costs and returns of human migration. *The journal of political economy*, 70(5), 80-93.
- Smith, J. A., & Todd, P. A. (2005). Does matching overcome Lalonde's critique of nonexperimental estimators? *Journal of econometrics*, 125(1), 305-353.
- Smith, J. A., & Todd, P. E. (2001). Reconciling conflicting evidence on the performance of propensity-score matching methods. *The American Economic Review*, 91(2), 112-118.
- Somarriba, N., & Pena, B. (2009). Synthetic indicators of quality of life in Europe. *Social Indicators Research*, 94(1), pp. 115-133.
- Stark, O., Micevska, M., & Mycielski, J. (2009). Relative poverty as a determinant of migration: Evidence from Poland. *Economics Letters*, 103(3), 119 - 122.
- Stark, O., & Wang, Y. (2002). Inducing human capital formation: migration as a substitute for subsidies. *Journal of Public Economics*, 86(1), 29 - 46.
- Steiner, P. M., Cook, T. D., Shadish, W. R., & Clark, M. (2010). The importance of covariate selection in controlling for selection bias in observational studies. *Psychological methods*, 15(3), 250.
- Stillman, S., Gibson, J., McKenzie, D., & Rohorua, H. (2012). Miserable migrants? Natural experiment evidence on international migration and objective and subjective well-being. *IZA Discussion Paper No. 6871*, 1-30.
- Stone, A. A., & Mackie, C. (Eds.). (2013). *Subjective well-being: Measuring happiness, suffering, and other dimensions of experience*. Washington, DC: The National Academies Press.
- Stuart, E. A. (2010). Matching methods for causal inference: A review and a look forward. *Statistical science: a review journal of the Institute of Mathematical Statistics*, 25(1), 1.
- Tay, L., & Diener, E. (2011). Needs and subjective well-being around the world. *Journal of Personality and Social Psychology*, 101(2), 354-365.
- Tella, R. D., MacCulloch, R. J., & Oswald, A. J. (2001). Preferences over inflation and unemployment: Evidence from surveys of happiness. *The American Economic Review*, 91(1), 335-341.
- Tinbergen, J. (1991). On the measurement of welfare. *Journal of Econometrics*, 50(1-2), 7-13.
- Todd, P. (2006). *Matching estimators*. Retrieved from <http://athena.sas.upenn.edu/petra/papers/mpalgrave2.pdf>

- Tucker, J. A., Pacek, A. C., & Berinsky, A. J. (2002). Transitional winners and losers: Attitudes toward EU membership in post-communist countries. *American Journal of Political Science*, 46(3), 557-571.
- UN. (2002). *International migration from countries with economies in transition : 1980-1999* (Tech. Rep.). Population Division Department of Economic and Social Affairs United Nations Secretariat.
- Van Ootegem, L., & Spillemaeckers, S. (2010). With a focus on well-being and capabilities. *The Journal of Socio-Economics*, 39(3), 384-390.
- Veenhoven, R. (2000). Freedom and happiness: A comparative study in 46 nations in the early 1990s. In E. Diener & E. M. Suh (Eds.), *Culture and subjective well-being* (p. 257-288). Cambridge, MA: MIT Press.
- Veenhoven, R. (2010). Capability and happiness: Conceptual difference and reality links. *The Journal of Socio-Economics*, 39(3), 344-350.
- Verme, P. (2009). Happiness, freedom and control. *Journal of Economic Behavior & Organization*, 71(2), 146-161.
- Villa, J. M. (2012). Simplifying the estimation of difference in differences treatment effects with Stata. *MRPA Paper No. 43943*.
- Welsch, H., & Bonn, U. (2008). Economic convergence and life satisfaction in the European Union. *The Journal of Socio-Economics*, 37(3), 1153-1167.
- White, M. P., & Dolan, P. (2009). Accounting for the richness of daily activities. *Psychological Science*, 20(8), 1000-1008.
- Winkelmann, L., & Winkelmann, R. (1998). Why are the unemployed so unhappy? Evidence from panel data. *Economica*, 65(257), 1-15.
- Wunder, C., Schwarze, J., Krug, G., & Herzog, B. (2008). Welfare effects of the Euro cash changeover. *European Journal of Political Economy*, 24(3), 571 - 586.