Does joining the EU make you happy? Evidence from Eastern Europe

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Abstract

Using difference-in-differences (DID), we examine the effect of European integration on life satisfaction in the context of the latest enlargement of the European Union, i.e., the accession of Bulgaria and Romania in 2007. We find suggestive evidence that joining the EU increased life satisfaction in Bulgaria, but not in Romania. One possible explanation for this finding is that trust in the EU increased only in Bulgaria after the accession of both countries in 2007. Our evidence further suggests that the younger, employed, and those with a high-school and college education benefited more from EU integration than the older, unemployed, and less educated. The results are robust to two placebo tests in which we use two fake entry dates to the EU and to an estimation based on wild bootstrapped standard errors that are clustered at the country level.

Keywords: subjective well-being, happiness, transition economies, difference-in-differences, European Union, EU enlargement.
JEL Classification Numbers: I31, P20

1. Introduction

On January 1st, 2007, Bulgaria and Romania (EU-2) joined the European Union. Huge celebrations were held in both countries to mark what the Romanian president (at that time) Traian Basescu called the "*road of our future ... the road of our happiness*." Perhaps to reinforce his words, the European flag was raised outside of the government headquarters in Bucharest to the European anthem, Beethoven's *Ode to Joy*. In Sofia, Bulgaria's capital, tens of thousands of people celebrated beneath a shower of fireworks that filled the sky over the Battenberg Square where the old Communist party was once headquartered. In an emotional speech to the nation, Georgi Parvanov, the Bulgarian president at the time, called the event "*among the most important in [Bulgarian's] national history*."

Since the mid-1990s, the prospect of joining the European Union (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 (EU-10) joined the European Union, which was arguably the culmination of their transition processes.[1] EU accession symbolized the "*return to Europe*" and an "*enormous chance for new generations*," as the Romanian president Basescu described the end of a long and painful 17-year transition process. It was a return to "*the standard of a normal society*," open markets, transfer of democratic institutions, and a horizon of new opportunities (Åslund 2007: 7).

But how did this "*heavenly event*," as the Bulgarian president Parvanov called it on the day of accession, affect the subjective well-being (SWB) of ordinary transitional citizens? Did joining the EU improved people's life satisfaction as they were now part of the biggest economy in the world and were able to travel, study, work, invest, and even retire abroad? Or did Bulgarians and Romanians become less happy amidst a long list of accession requirements and restrictions that left many feeling as "*second-class*" citizens compared to other European members? While EU membership has generally had a positive impact on the macroeconomic and institutional outlooks in the EU-10, the effects on individual SWB remain largely unexplored.

[1] The 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.

In this paper, we fill this gap in the literature by studying the impact of European integration on life satisfaction of people in Bulgaria and Romania (EU-2). Studying this topic is relevant for several reasons. First, understanding the well-being effects of integration among the EU member states is especially important as the EU prepares for another round of accessions. Majority of the next seven countries waiting to join the EU—Montenegro, Serbia, Albania, Macedonia, Bosnia, Turkey, and Iceland—are located in CEE and have similar historical, political, and economic backgrounds as Bulgaria and Romania.

Second, according to the Treaty of Lisbon, one of the EU's main goals is to promote the well-being of its citizens (EU 2007) in both its material and non-material domains of life (EU, 2007). Yet, the EU-10 countries face convergence challenges as they are generally poorer and unhappier compared to their EU-15 counterparts. For example, in 2012, the GDP per capita of the EU-15 was about 80 percent higher and life satisfaction about 25 percent higher than that of the EU-10 (Nikolova, 2014). In relative terms, the poorest Danes are richer than 85 percent of Bulgarians (Milanovic, 2011),[2] and Romanians and Bulgarians are often found at the bottom of international rankings on happiness.

Finally, understanding the SWB effect of EU accession is important because numerous cross-sectional, longitudinal, and experimental studies suggest that happier people tend to be more successful in multiple domains of life (De Neve, Diener, Tay, & Xuereb, 2013). The evidence shows that higher levels of SWB precede many outcomes such as better work performance, income, health, innovation, and social capital (for a summary of this literature see Lyubomirsky, King and Diener, 2005). Furthermore, many of the traits of happy people such as optimism, social engagement, creativity, and good health are also the type of traits that could help improve the lives of others and thus the quality of the social fabric. In this sense, if joining the EU increases SWB, it could lead to faster and smoother transition, a win-win situation for both the transitional economies and the rest of the EU block.

This study contributes to the existing literature on the socio-economic effects of EU integration in three ways. First, to the best of our knowledge, this is the first paper that examines the SWB effect of EU membership in the context of the last wave of enlargement. We focus on Bulgaria and Romania in part due to data limitations but also because Bulgaria

[2] The EU15 countries are: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden, and United Kingdom.

and Romania are the EU's poorest and unhappiest nations and EU accession could be an especially important instrument for improving their quality of life.

Second, we investigate if different socio-economic and demographic groups experienced disproportionate SWB gains or losses. 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 the transition—the educated, the upwardly mobile, and the young—likely also benefited the most from EU membership and the enhanced opportunities that came with it.

Finally, we use Eurobarometer data with information on life satisfaction in Bulgaria and Romania before and after their accession to the EU. SWB metrics capture the idea that people are the best judges of their life circumstances (OECD 2011) and provides "*a natural way to aggregate various experiences in a way that reflects people's own preferences*" (Stiglitz et al., 2009, p.145). In this respect, the SWB approach presents an opportunity to inform policy debate from a unique point of view, especially that European integration is a complex process that affects economic, political, and social life in multiple ways. Our dataset further allows us to investigate our research questions using a quasi-experimental methodology that could be interpreted, at least theoretically, as causal. Specifically, we use a Difference-in-Differences (DID) estimation, which has the advantage of taking into account general changes over time that are common to both control and counterfactual countries, i.e., we can difference out omitted variables if they are time invariant.

Our results suggest that joining the EU increased life satisfaction in both Bulgaria and Romania, although the effect was robust only in the case of Bulgaria and occurred after a short lag in time. One possible reason for this could be that trust in the EU increased only in Bulgaria after the accession. Our evidence further suggests that the younger, employed, and those with higher school and college education benefited more from EU integration. The results are robust to placebo tests for two alternative "*fake*" entry years to the EU and to an estimation in which we use wild bootstrapped standard errors that are clustered at the country level.

2. Theoretical Considerations

We propose four different channels through which EU integration can influence the SWB of citizens in transitioning countries: (1) the adoption of shared economic and political institutions (modernization), (2) economic development, (3) perception of freedom of choice and life control, and (4) social identity. Below we summarize the expected effect of each one of these four channels on SWB. We argue that theoretically the relationship between joining the EU and SWB is ambiguous, at least in the short run and in the case of Bulgaria and Romania, which is the focus of this paper.

2.1 Political and Economic Institutions (Modernization)

One of the most anticipated positive effects from EU integration in Bulgaria and Romania was the adoption of EU rules and standards. To join the EU, each country had to fulfill the economic and political criteria set during the Copenhagen European Council in 1993. The criteria specified that membership to the EU requires candidate countries to achieve "*stability of institutions guaranteeing democracy, the rule of law, human rights, respect for and protection of minorities, the existence of a functioning market economy as well as the capacity to cope with competitive pressure and market forces within the Union*" (Presidency Conclusions 1993, p.1).

There is a growing literature in economics and political science that shows that people care not only about different socio-economic outcomes, but also about the processes that generate these outcomes (Frey, Benz, & Stutzer, 2004; Frey and Stutzer, 2010). While the development of political and economic institutions consistent with free markets, democracy and the rule of law started before the accession and still continues today, EU membership provided people in Bulgaria and Romania with a sense that they finally belong to a system in which outcomes are determined by more fair processes. In that sense, the shared political, legal, and economic institutions and the oversight by the EU, provided people with a separate source of utility, *procedural utility*, that we expect to have positively influenced their perception of well-being after the accession in 2007.

While significant improvements in these areas were achieved with the EU's guidance prior to accession, these benefits came at the cost of implementing difficult reforms and adopting the 170,000 pages of the *aquis communautaire* (i.e., the EU common body of law). Joining the EU invariably also "*cost*" new members the adoption of norms and regulations,

especially in the area of environmental protection, safety standards, and competition policy (whereby national governments could not aid national industries), which required difficult adjustments (Doyle & Fidrmuc, 2006). Bulgaria, for example, had to shut down two of its nuclear reactors that generated about one third of its electricity use to comply with conditions for EU membership. Although both countries were recognized as having functioning democratic political systems by 2007, there were increasing concerns about corruption, lack of political leadership, and the existence of only "*weak*" democratic institutions, which were often publicized in the media, and might have affected negatively the SWB of Bulgarians and Romanians.

2.2 Economic Outcomes

The adoption of a common legal and economic framework was expected to stabilize the economic environment, making it more attractive for local businesses and foreign investors. Thus, EU accession was largely anticipated to increase the share of foreign direct investment (FDI) creating more opportunities for Bulgarian and Romanian companies for growth ultimately leading to their faster integration into the global economy. In addition, the access to a huge new market, potential EU economic partners, development funds, and fresh new capital was expected to boost economic development, lower unemployment, and lift the material standards of living of ordinary citizens, which numerous polls prior to accession revealed was perceived as the greatest benefit from joining the EU. At the same time, there were fears that EU integration may lead to a rise in the costs of living, competitive pressures from foreign companies that could lead to local business bankruptcies, and a shortage of qualified labor as more educated people left the country seeking for better job opportunities abroad.

A recent paper 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) relative to the counterfactual case (Moretti, Campos, & Coricelli, 2013). Furthermore, 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). Cavenaile and Dubois (2011) also 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.

Trade and 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).[3] Welsch and Bonn (2008) show 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. Given that increases in GDP are linked to SWB in transition economies (Easterlin, 2001, 2009), we expect that joining the EU positively influenced SWB in Bulgaria and Romania through economic development.

2.3 Perceptions of Freedom of Choice and Life Control

Analyzing the effect on SWB of the first two channels—modernization and economic development— is rather difficult because the process of integration started long before EU accession and still continues today. For many Bulgarians and Romanians, however, the long anticipated EU membership meant that they could now travel, work[4], study, invest, or even retire abroad. These new unparalleled freedoms opened doors to new opportunities for career development, self-expression, and ultimately, for the pursuit of happiness. Indeed, a mid-2006 poll in Bulgaria indicated that 36% of respondents believed that the free movement of people and better job opportunities is the biggest benefit from joining the EU.[5]

A large literature in psychology shows that the extent to which people *believe* they have freedom of choice and control over their lives is a powerful motivator that has implications for health, wealth, and happiness. People who believe that they have control over their life, for example, are more likely to take action and persevere in the face of hardship. They are more likely to save for the future (Cobb-Clark et al., 2013), to develop healthy habits (Cobb-Clark et al., 2014), escape drug addiction (Armitage et al., 1999), or invest more time searching for a job (Caliendo et al. 2010).

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

[4] Some countries such as Germany, Great Britain and France signed a clause keeping tight restrictions on immigration, which was only recently lifted. However, Bulgarians were able to work in 10 out of the 27 EU members including Sweden, Finland, and the Czech Republic, which expanded their opportunity set significantly.

[5] Survey of 16-21 May 2006, conducted by ALPHA Research Agency, "Public Opinion for the Bulgarian accession to the EU, and the readiness of the country for a membership," published on 31.05.2006, available at: http://www.aresearch.org

A number of recent studies have also suggested that the sense of control and freedom people perceive over their lives is one of the most robust determinants of subjective well-being (Verme 2009; Inglehart et al. 2008, Doyle and Youn 2000). Higher level of freedom is also intrinsically valuable because it allows individuals to act in a deliberate and purposeful manner, exert power over their environment, and develop their talents by exercising autonomy and self-expression, two of the most basic human needs. Welzel (2013), for example, develops a theory of emancipation based on the human desire for an existence free from domination. He argues that free agency leads to the emergence of emancipative values, which then lead to higher level of psychological well-being as people gain control over their society's agenda. In this respect, joining the EU provided transitional citizens with a greater sense of freedom of choice and life control, leading to higher levels of SWB.

2.4 Social Identity

The final channel through which EU accession may have affected SWB is what we call social identity. There are three possible mechanisms here. First, "*the return to Europe*" was not only a symbolic event for Bulgarians and Romanians, but also, and more importantly, made these countries part of the largest economy in the world, that of the EU. As a result, people in these countries might have experienced a sense of pride, accomplishment, and belonging, as they were now part of an "*elite*" club of prosperous countries.

Yet, even though Bulgarians and Romanians celebrated their return to Europe in 2007, they soon felt the bane of marginalization by being the poorest, the unhappiest, and the most corrupt in the EU. Unprecedentedly, both countries became subject to ex-post monitoring through the Mechanism for Cooperation and Verification (MCV), which negatively affected their European identity. Corruption scandals froze many of the EU development funds shortly after the accession. Some countries, including major economic powers such as Great Britain, Germany, and France, signed a clause keeping tight restriction on immigration policies for seven years that prevented Bulgarians and Romanian to freely work abroad. Furthermore, both countries suffered from an "*image problem*" as they were often linked with prostitution and crime in the Western media. There is by now some evidence that social capital, measured by the generalized level of trust, declined in Western countries as a result of the Bulgarian and Romanian accession to the EU (Delhey, 2007).

A growing body of literature suggests that the extent to which people feel happy with their lives depends, at least partially, on how they compare to those around them (Duesenberry, 1949; Frank, 1999; Scitovsky, 1976; Veblen, 1899). Joining the EU may have also increased the material aspirations of people as they now had a higher benchmark for social comparison. In this respect, even if European integration was marginally a success in economic and political terms, the negative image of "*second-class*" citizenry, the higher benchmark for social comparison, lower socio-metric status, and the decline of social trust might have negatively affected the perceived well-being of transitional citizens.

To summarize, joining the EU is a gradual process that involves multiple domains of political, economic, and social life. Separating the effect of economic development (growth, investment) from the effect of modernization (changes in the structure of governance, adaptation to new rules and standards) in a before-after comparison based on a specific date is particularly difficult. However, the symbolic "*return to Europe*" on January 1, 2007 was highly anticipated in both countries and welcomed with great enthusiasm. This event represented the beginning of a new era of opportunity, especially for the younger generations, that opened doors to Europe and significantly expanded the capabilities of ordinary transitional citizens. Thus, we expect that, at least in the short run, EU membership had a positive effect on SWB through the channel of perception of freedom of choice and control. However, the lukewarm welcome of both countries to the EU, the mismanagement of EU funds that led to additional restrictions, the decline in social trust, and the image of "*second-class*" citizenry might have completely offset the positive SWB effect from the EU integration in the case of Bulgaria and Romania.

2.5 Previous Empirical Studies

The literature on the SWB of European integration is still in its infancy with only a few studies attempting to tackle issues of causality. In one exception, using DID, Popova (2012) finds that the Euro adoption led to life satisfaction declines for females, the elderly, the unemployed, and the poorest in the advanced countries which joined the Eurozone in 2002. The losers of transition appear to be 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 paper, 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 EU 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.

3. Empirical Strategy

Like Popova (2012) and Wunder et al (2008), this paper uses difference-in-differences to study the relationship between EU integration and life satisfaction in Bulgaria and Romania. Our analysis compares the before-and-after SWB outcomes of these two countries to those in the counterfactual case of Croatia which did not join the EU in 2007. The DID methodology assumes that no other major events significantly affected SWB during the accession period. While other events such as elections, impeachments, and protests happened in the EU-2 countries in the year of accession, joining the EU was arguably the most significant national event in 2007 for both Bulgaria and Romania (Eurofound 2008).

Our data came from the Eurobarometer (EB) survey, which are collected at least twice a year, thus providing observations immediately 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. In this context, the DID estimator is defined as:

$$LifeSat_{ict} = \alpha + \beta EU2_c + \gamma D_t + \lambda EU2_c * D_t + X'_{ict}k + \varepsilon_{ict} \quad (1)$$

where *i* indexes individuals, *c* – countries, and *t* – years, *LifeSat* is the outcome variable (life satisfaction); *EU2* is a dummy equal to 1 if the country is Bulgaria or Romania, and *D* is a dummy for the period after EU accession (2007Q2 and after). The average treatment effect (ATE) of joining the EU 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.), k is a coefficient vector, and ε_{ict} is the stochastic error term. Individual-level variables in the covariate vector increase precision (Angrist and Pischke 20009). 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 also 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, we also use a model adapted from Acemoglu & Angrist (2001):

$$LifeSat_{ict} = \alpha + \beta EU2_c + \pi Year + \lambda EU2_c * Year_t + X'_{ict}k + \varepsilon_{ict} \quad (2)$$

where the variables are defined as above, with *Year* representing a year effects and $\lambda EU2_c$*****$Year_t$ is the full set of *year*EU2 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 robust standard errors. 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 (e.g., logits, probits, tobits) (Ai & Norton, 2003). In addition, ignoring the ordinality of subjective well-being data has little effect on the results (Ferrer-i-Carbonell & Frijters, 2004; Frijters & Beatton, 2012), 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-2 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).

The DID strategy requires a reliable counterfactual, i.e., an identical non-EU country demonstrating what would have happened to life satisfaction in the EU-2 had they not joined the EU. Unfortunately, the EB survey 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 country, which we believe serves as a

reasonable counterfactual, is Croatia (starting in 2004). Like Bulgaria and Romania, Croatia was a socialist republic, part of the former Socialist Republic of Yuguslavia, until the early 1990s when the first democratic elections were held. On May 19, 1991, more than 93% of the people voted for independence from Yugoslavia in a referendum. The 1990s and 200s were marked by an economic, political, and social transition that was similar to the transition in both Bulgaria and Romania. 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 counterfactual country. Meanwhile, Bulgaria and Romania signed their accession treaties on April 25, 2005. Figure 1 demonstrates that Bulgaria and Romania have lower life satisfaction levels than Croatia. All three countries experienced similar life satisfactions trends prior to 2007, with slight increase in SWB between the first and third quarter of 2006, and then relatively stable trend until 2007.

4. Data

Individual-level data were collected from the Eurobarometer (EB), which, to our knowledge, is the only publicly available dataset allowing the reliable comparison of subjective well-being before and after the 2007 enlargement.[6] We use data on life satisfaction, which is a reflective assessment of one's own life and complements objective well-being indicators by providing an overall assessment of individual preferences 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 (Diener, Inglehart, & Tay, 2012; Diener, Suh, Lucas, & Smith, 1999; Helliwell, Barrington-Leigh, Harris, & Huang, 2010; Krueger & Schkade, 2008). Scholars have used the life satisfaction approach to study the well-being effects of various macroeconomic policies

[6] The Gallup World Poll, an annual survey conducted by the Gallup Organization in about 160 countries worldwide, which is not publicly available, could be used in the case of Romania.

and phenomena including inflation and unemployment (DiTella, MacCulloch, & Oswald, 2001), the welfare effects of EU integration (Wunder, Schwarze, Krug, & Herzog, 2008), and the impact of the recent financial crisis (Graham, Chattopadhyay, & Picon, 2010), among others.

Starting with Eurobarometer (EB) 62, conducted in October-November, 2004, the Eastern European Countries including Bulgaria, Romania, and Croatia are polled as part of the Standard Eurobarometer. The dataset has consistent information about gender, age, years of education, employment status, household size, marital status, and household location. There are, however, no consistent income or expenditure variables. The EB life satisfaction question asks respondents how satisfied they are on the whole with their life on a scale from 1 "not at all satisfied" to 4 "very satisfied" with no "neutral" category.

Table 1 collapses the data into two periods: before and after 2007. Life satisfaction in Bulgaria rose by 0.127 points post-accession (on a scale from 1 to 4) and 0.092 points in Romania, while it remained virtually unchanged in Croatia (a change of 0.007). The change in life satisfaction in Bulgaria and Romania is statistically significant while the change in Croatia is not statistically significant. 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. In this context, the change in life satisfaction in Bulgaria, for example, accounts for about 13% of the happiness gap between Bulgaria and the EU-15. The rest of Table 1 summarizes the main socio-demographic variables included in the regressions.

5. Empirical Findings

In this we report our empirical findings by grouping them into five separate sub-sections. First, we report coefficient estimates from our baseline model (1) in section 3. Then, we examine possible anticipation and adaptation effects using model (2) in section 3. Next, we explore how the results differ by gender, age, employment status, and education. We conclude with several robustness tests.

5.1 Main Results

Table 2 reports our baseline regressions, which are estimated using OLS with robust standard errors. The outcome variable in all models is life satisfaction. The treatment

countries are Bulgaria and Romania (EU-2) and the control country is Croatia. The treatment variable (EU-2x2007Q2) is the interaction term of the EU-2 variable (i.e., a dummy for either Bulgaria or Romania) with a dummy for the post-accession period (2007Q2 and after). We estimated three different models for each country—Bulgaria (left panel) and Romania (right panel). Model (1) and (4) present our most basic specification that does not include any controls. Model (2) and (5) add individual-level controls including age, age squared, gender, an indicator for whether the respondent is married or in a civil partnership, a married and gender interaction, employment status, household size and its square, whether there are any children in the household, an indicator for a large or small town, and age-education categories. Finally, model (3) and (6) include a wealth index, which we compute by adding the total number of household durables such as cars, TVs, computers, and others durables.

In all models, the EU dummy is negative and statistically significant indicating that Bulgaria and Romania have lower baseline life satisfaction than Croatia. In particular, even after controlling for individual characteristics in model (2), life satisfaction in Bulgaria was 0.746 points lower compared to Croatia. The coefficient estimate of interest is that of the interaction term, which captures the SWB effect of joining the EU. Models (1)-(3) suggest that joining the EU was associated with increase in life satisfaction in Bulgaria in the range of .076 (model 3) to .120 (model 1). To put this in perspective, the increase in life satisfaction in Bulgaria as a result of joining the EU was close to 13% of the life satisfaction gap with the rest of the EU-15 countries (in 2013). Although positive, the coefficients of the treatment variable in models (5)-(6) were statistically insignificant once we control for individual characteristics suggesting that there was no statistically significant change in life satisfaction in Romania.

5.2 Anticipation and Adaptation Effects

The models in Table 3 delve deeper into the temporal effects of joining the EU on life satisfaction in Romania and Bulgaria. Here, the coefficient estimates of interest are the *year*EU status* interactions (2005Q4 is the base period.) These interactions describe the change in relative life satisfaction in Bulgaria and Romania, with 2006 as the pre-treatment and 2007-2008 as the post-treatment period. The pre-2007 interactions capture anticipation effects related to joining the EU, which in theory should be zero since we expect increase in

life satisfaction only after the accession. The post-2008 interactions account for adaptation effects and allow us to examine the process of integration in greater detail.

As in Table 2, the EU-2 indicator shows that life satisfaction in both Romania and Bulgaria was 0.473 and 0.785 points lower than that in Croatia, respectively. The results imply limited anticipation effects in 2006 for both countries. Only in Bulgaria, we find a positive and statistically significant change in life satisfaction in the last quarter of 2006, just prior to accession. More importantly, joining the EU had no immediate well-being effects on life satisfaction in the first three quarters of 2007 for both countries. Positive and statistically significant effect from joining the EU in Bulgaria was observed starting with the fourth quarter of 2007 and thereafter. If causal, our estimates suggest that life satisfaction increased between 0.197 to 0.245 in the last quarter of 2007 (close to 25% of the life satisfaction gap between the EU-15 countries and Bulgaria). In Romania, there was an increase in happiness in the first two quarters of 2008, but the effect disappears afterwards. One possible interpretation of these results has to do with the lukewarm welcome of both countries to the EU. Even though Bulgaria and Romania became EU members in 2007, they were frequently scolded for not making progress on reducing corruption and organized crime. It is thus likely that building a EU identity was a gradual process and that it took a while for both countries to learn "the rules of the game" and to take advantage of their their EU membership.

5.3 Results by Sub-Groups

The EU benefits and costs are unlikely to be equally distributed among different social groups. The literature suggests that the elderly, the less educated, and women were among the losers of transition (Easterlin 2009). How these groups experienced transition likely also affected their perceptions of EU membership and life satisfaction (Tucker et al 2002). Tables 4-6 examine the SWB effects of joining the EU by age group, employment status, and education, respectively. In a working version of this paper, we find that there were no gender differences in either Bulgaria or Romania (results are available upon request). Although Easterlin (2009) suggests that women may have been the losers of transition, our results are in line with the Life in Transition Survey II, which finds no significant differences between men and women in transitional economies in terms of life satisfaction, job satisfaction, and how they have done relative to others (EBRD 2010).

In Table 4 we examine the SWB effect of joining the EU by age group. Overall, our

results indicate that younger people benefited more from the transition than older people, but only in the case of Bulgaria. The ATE, although positive, is statistically insignificant for all age groups in Romania. Specifically, if causal, our results imply that life satisfaction for Bulgarians under 35 years of age increased by 0.152 points and 0.122 points for those between the ages of 36-60, with no significant effect for people above the age of 60. These results are not surprising since many of the benefits of joining the EU such as opportunities to travel, work, and study abroad increased the choice set primarily of the younger.

Table 5 summarizes the results by employment status. The results in this table are also consistent with previous findings in the literature suggesting that the winners of EU integration were largely those who were employed and not retired. Panel B, for example, suggests that even in Romania people who were employed experienced SWB gains relative to their unemployed counterparts. The unemployed in both Bulgaria and Romania, and in other transition countries, likely experienced constraints related to international migration because their skills acquired during communism were less marketable in the modernized EU countries (Stark, Micevska, & Mycielski, 2009).

Finally, in Table 6 we explore the results according to the age at which the respondents stopped their full-time education. Even the most educated groups in Bulgaria and Romania have a much lower baseline happiness compared to their counterparts in Croatia. Our results indicate that only respondents with 16-19 years of education (high school and college) experienced positive SWB gains in both countries while the estimated coefficients for the least and most educated groups in both countries are statistically insignificant.

5.4 Trust in the EU

So far, our results suggest that joining the EU increased life satisfaction in Bulgaria while the outcomes for Romania, although positive in most regressions, are not robust. There are many possible reasons for these results as we discuss in section 2 of this paper. In order to aggregate the variety of unobserved experiences that may have led to different perception of the integration process in Bulgaria and Romania, and as a robustness test, we examine how people's trust in the EU changed after the accession in 2007. Table 7 summarizes our findings, which replicate our baseline models from Table 2, only using trust in the EU as a dependent variable. The results suggest that while trust in the EU increased post-accesssion

in Bulgaria, it remained virtually unchanged in Romania. This could be one possible reason why life satisfaction increased in Bulgaria, but remained flat in Romania, especially given the large literature that links the generalized level of trust to SWB (e.g., see Kroll, 2008).

5.5 Robustness Checks

We provide two types of robustness checks: (1) placebo tests and (2) using wild bootstrap standard errors clustered at the country level. First, we replicate our main results using two alternative fake entry dates to the EU, namely, the last quarter of 2005 and the first quarter of 2009. The results are summarized in Table 8. In all models, we find no significant effects for Bulgaria when we use a fake treatment year. In the case of Romania, we find some negative effects when we use 2005 as fake treatment year, but these effects disappear in our most complete model. This suggests that our results are robust to using a fake treatment year: only in 2007, the true year of accession, we see positive SWB change.

Second, we replicate our results using wild bootstrapped standard errors, which are also clustered at the country level. The results (Table 9) are consistent with our main findings in Table 2. Furthermore, even the effects for Romania are now positive and statistically significant. It is important to note, however, that since we have only two countries and hence clusters, these results should be taken with caution since clustering with a small number of clusters is known to lead to bias in the estimated coefficients (Moulton, 1990). Generally, our robustness tests are consistent with our main findings from model 2.

6. Conclusion

This study examines the effect of joining the EU on life satisfaction in the context of the latest enlargement of the EU, i.e., the accession of Bulgaria and Romania in 2007. Using difference-in-differences and data from the Eurobarometer, the paper's key finding is that EU accession increased life satisfaction in Bulgaria, but not in Romania. One possible explanation for this finding is that trust in the EU increased in Bulgaria after the accession, but remained unchanged in Romania. We further find that those who benefited the most from EU integration were the young, employed and educated while we discovered no gender differences.

From a policy perspective, these results are relevant to the countries in the Western Balkans which prepare to become EU members in the next wave of EU enlargement. Like

Bulgaria and Romania, these candidate countries are less advanced and less prepared for membership than the countries that joined the EU during the 2004 enlargement. As the EU's poorest and unhappiest members, Bulgaria and Romania also 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 also associated with life satisfaction gains, at least in the case of Bulgaria.

There are, however, important questions that remain to be answered. First, EU integration is a gradual process that involves multiple domains of social, economic and political life. In this paper, we suggest several different channels— (1) modernization, (2) economic development, (3) perceptions of life control, and (4) social identity—through which EU integration may have affected how individuals perceive the quality of their life. While the advantage of SWB metrics is that they allow us to aggregate a great number of experiences that are unobserved to the researcher in a single outcome variable, it is important to understand how EU integration affected SWB through each one of these channels.

Furthermore, while the DID results can in theory be interpreted as causal, readers should use caution. The DID strategy relies on the use of counterfactual countries—i.e., countries that are similar to Bulgaria and Romania, except that they did not become members in 2007. While Croatia, the counterfactual country in this study, has a similar economic, political, and social history as both Bulgaria and Romania, the country also had its unique historical developments. Croatia have also been on the path of European accession, eventually joining the union in 2013. Since the DID strategy in this study is non-experimental and cannot completely remove all sources of bias, the results should be viewed as suggestive and not as causal.

7. References

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8. Appendix

Figure 1: Life Satisfaction Trends in Bulgaria, Romania, and Croatia, 2006-2009

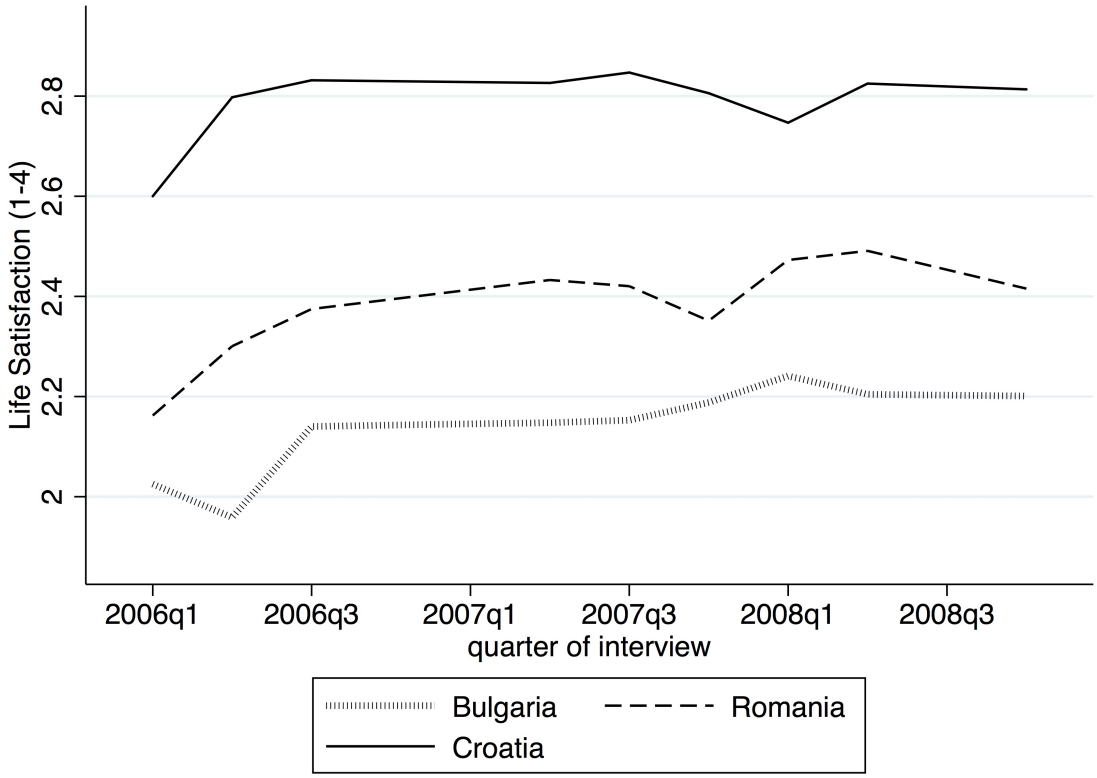

Table 1: Life Satisfaction and Socio-Demographic Variables, Summary Statistics, 2006-2008

	Bulgaria Before			**Romania Before**			**Croatia Before**		
	Obs.	*Mean*	*Std. Dev.*	*Obs.*	*Mean*	*Std. Dev.*	*Obs.*	*Mean*	*Std. Dev.*
Life Satisfaction (1-4)	1,954	2.059	0.789	1,903	2.337	0.775	1,926	2.810	0.801
Age	1,954	46.961	17.691	1,903	45.468	17.457	1,926	45.070	18.348
Male (1=Yes)	1,954	0.467	0.499	1,903	0.482	0.500	1,926	0.433	0.496
Married or in Civil Partnership (1=Yes)	1,954	0.701	0.458	1,903	0.641	0.480	1,926	0.599	0.490
Employed (1=Yes)	1,954	0.459	0.498	1,903	0.480	0.500	1,926	0.422	0.494
Household Size	1,954	3.061	1.571	1,903	2.632	1.369	1,926	3.153	1.618
Age at Which Stopped Education									
No Education	1,954	0.015	0.123	1,903	0.000	0.000	1,926	0.031	0.174
15 Years or Younger	1,954	0.197	0.397	1,903	0.214	0.410	1,926	0.173	0.378
16-19 Years	1,954	0.494	0.500	1,903	0.455	0.498	1,926	0.471	0.499
20 Years or Older	1,954	0.237	0.425	1,903	0.239	0.427	1,926	0.205	0.403
Still Studying	1,954	0.057	0.232	1,903	0.092	0.290	1,926	0.120	0.326
Large Town (1=Yes)	1,954	0.450	0.498	1,903	0.276	0.447	1,926	0.216	0.412
Child in Household (1=Yes)	1,954	0.276	0.447	1,903	0.261	0.439	1,926	0.307	0.461
Wealth Index (Min=0, Max=9)	1,954	4.020	1.891	1,903	3.874	2.079	1,926	6.061	2.289
Trust in the EU (1=Yes)	1,555	0.712	0.453	1,654	0.771	0.420	1,683	0.407	0.491
	Bulgaria After			**Romania After**			**Croatia After**		
	Obs.	*Mean*	*Std. Dev.*	*Obs.*	*Mean*	*Std. Dev.*	*Obs.*	*Mean*	*Std. Dev.*
Life Satisfaction (1-4)	3,783	2.186	0.802	3,957	2.429	0.763	3,670	2.817	0.782
Age	3,783	48.317	17.771	3,957	45.379	17.411	3,670	46.719	18.005
Male (1=Yes)	3,783	0.451	0.498	3,957	0.481	0.500	3,670	0.416	0.493
Married or in Civil Partnership (1=Yes)	3,783	0.680	0.466	3,957	0.676	0.468	3,670	0.618	0.486
Employed (1=Yes)	3,783	0.477	0.500	3,957	0.514	0.500	3,670	0.428	0.495
Household Size	3,783	3.022	1.580	3,957	2.776	1.406	3,670	3.088	1.571
Age at Which Stopped Education									
No Education	3,783	0.004	0.065	3,957	0.002	0.048	3,670	0.000	0.000
15 Years or Younger	3,783	0.173	0.378	3,957	0.182	0.386	3,670	0.205	0.404
16-19 Years	3,783	0.479	0.500	3,957	0.463	0.499	3,670	0.494	0.500
20 Years or Older	3,783	0.273	0.446	3,957	0.258	0.437	3,670	0.207	0.405
Still Studying	3,783	0.071	0.256	3,957	0.094	0.292	3,670	0.093	0.291
Large Town (1=Yes)	3,783	0.446	0.497	3,957	0.332	0.471	3,670	0.230	0.421
Child in Household (1=Yes)	3,783	0.265	0.441	3,957	0.266	0.442	3,670	0.316	0.465
Wealth Index (Min=0, Max=9)	3,783	4.546	2.058	3,957	4.363	2.171	3,670	6.381	2.241
Trust in the EU (1=Yes)	3,003	0.742	0.438	3,462	0.751	0.432	3,289	0.380	0.485

Source: Eurobarometer, 2006-2008

Notes: The table shows the number of observations, means, and standard deviations for each variable and for each country. The means of the binary variables show the proportion of non-missing responses. The wealth index variable sums the total number of household durables (such as a car, a TV, a computer, and others).

Table 2: Joining the EU and Life Satisfaction, Baseline Results, Eurobarometer 2006-2008

	(1)	(2)	(3)	(4)	(5)	(6)
	Treatment: *Bulgaria*			Treatment: *Romania*		
EU-2 Country (1=Yes)	-0.752***	-0.746***	-0.581***	-0.473***	-0.469***	-0.318***
	(0.026)	(0.025)	(0.026)	(0.025)	(0.024)	(0.025)
2007Q2 and After (1=Yes)	0.007	0.079	0.047	0.007	0.249***	0.214***
	(0.022)	(0.056)	(0.055)	(0.022)	(0.080)	(0.078)
EU-2×2007Q2	0.120***	0.086***	0.076**	0.085***	0.044	0.045
	(0.031)	(0.030)	(0.029)	(0.031)	(0.029)	(0.029)
Individual Controls	N	Y	Y	N	Y	Y
Individual Controls + Wealth Index	N	N	Y	N	N	Y
Quarter Dummies	N	Y	Y	N	Y	Y
Observations	11,333	11,333	11,333	11,456	11,456	11,456
Adj. R^2	0.154	0.259	0.283	0.068	0.164	0.187

Sources: Eurobarometer, 2006-2008

Notes: The dependent variable in all models is life satisfaction (on a scale of 1-4). Robust standard errors in parentheses. The treatment variable is the interaction (EU*after 2007, quarter 2). The control country in all regressions is Croatia. The EU-2 Country dummy variable takes the value of 1 for Bulgaria in Columns (1)-(3) and takes the value of 1 for Romania in Models (4)-(6). 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 status 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. Models (3) and (6) include an additional wealth index control, which sums the total number of household durables (such as a car, a TV, a computer, and others). All regressions include quarter of interview dummies.

*** p<0.01, ** p<0.05, * p<0.1

Table 3: Yearly Interactions

	(1)	(2)	(3)	(4)
	Bulgaria		Romania	
EU-2 Country (1=Yes)	-0.751***	-0.785***	-0.473***	-0.490***
	(0.036)	(0.034)	(0.036)	(0.035)
Before				
EU-2×2006Q1	0.176	0.163	0.036	-0.087
	(0.122)	(0.117)	(0.166)	(0.155)
EU-2×2006Q2	-0.088*	-0.038	-0.024	0.002
	(0.053)	(0.049)	(0.051)	(0.048)
EU-2×2006Q3	0.059	0.091*	0.017	0.028
	(0.051)	(0.048)	(0.051)	(0.048)
After				
EU-2×2007Q2	0.072	0.091*	0.080	0.080*
	(0.050)	(0.047)	(0.050)	(0.047)
EU-2×2007Q3	0.056	0.093	0.047	0.051
	(0.063)	(0.060)	(0.064)	(0.061)
EU-2×2007Q4	0.133**	0.161***	0.019	0.040
	(0.063)	(0.060)	(0.062)	(0.059)
EU-2×2008Q1	0.245***	0.197***	0.199***	0.145**
	(0.072)	(0.070)	(0.072)	(0.071)
EU-2×2008Q2	0.130**	0.142**	0.139**	0.110**
	(0.062)	(0.058)	(0.056)	(0.053)
EU-2×2008Q4	0.138***	0.122**	0.076	0.012
	(0.051)	(0.048)	(0.051)	(0.048)
Individual Controls	N	Y	N	Y
Individual Controls + Wealth Index	N	N	N	N
Quarter Dummies	Y	Y	Y	Y
Observations	13,286	13,286	13,365	13,365
Adj. R-squared	0.160	0.264	0.071	0.169

Sources: Joining the EU and Life Satisfaction, Eurobarometer, 2005Q4-2008

Notes: The dependent variable in all models is life satisfaction (on a scale of 1-4). Robust standard errors in parentheses. The omitted category for the interactions is EU-2×2005Q4.The control country in all regressions is Croatia. The EU-2 Country dummy variable takes the value of 1 for Bulgaria in Columns (1)-(3) and takes the value of 1 for Romania in Models (4)-(6). 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 status 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.
*** p<0.01, ** p<0.05, * p<0.1

Table 4: Joining the EU and Life Satisfaction, Heterogeneous Treatment Effects, By Age Groups, Eurobarometer 2006-2008

Panel A: By Age Groups						
	(1)	(2)	(3)	(4)	(5)	(6)
	Treatment: Bulgaria			Treatment: Romania		
	Under 35	Ages 36-60	Over 60	Under 35	Ages 36-60	Over 60
EU-2 Country (1=Yes)	-0.716***	-0.773***	-0.718***	-0.506***	-0.403***	-0.546***
	(0.043)	(0.039)	(0.053)	(0.039)	(0.038)	(0.056)
2007Q2 and After (1=Yes)	0.029	0.087	0.115	0.391***	0.202*	0.001
	(0.095)	(0.076)	(0.099)	(0.143)	(0.115)	(0.148)
EU-2×2007Q2	0.152***	0.122***	-0.066	0.036	0.017	0.091
	(0.051)	(0.046)	(0.064)	(0.048)	(0.045)	(0.067)
Individual Controls	Y	Y	Y	Y	Y	Y
Individual Controls + Wealth Index	N	N	N	N	N	N
Quarter Dummies	Y	Y	Y	Y	Y	Y
Observations	3,481	4,889	2,963	3,812	4,984	2,660
Adj. R^2	0.247	0.212	0.211	0.143	0.120	0.134

Sources: Eurobarometer, 2006-2008

Notes: The dependent variable in all models is life satisfaction (on a scale of 1-4). Robust standard errors in parentheses. The treatment variable is the interaction (EU*after 2007, quarter 2). The control country in all regressions is Croatia. The EU-2 Country dummy variable takes the value of 1 for Bulgaria in Columns (1)-(3) and takes the value of 1 for Romania in Models (4)-(6). 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 status 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. All regressions include quarter of interview dummies.

*** p<0.01, ** p<0.05, * p<0.1

Table 5: Joining the EU and Life Satisfaction, Heterogeneous Treatment Effects, By Employment Status, Eurobarometer 2006-2008

Panel B: By Employment Status				
	(1)	(2)	(3)	(4)
	Treatment: Bulgaria		Treatment: Romania	
	Employed	Not Employed	Employed	Not Employed
EU-2 Country (1=Yes)	-0.754***	-0.735***	-0.461***	-0.481***
	(0.036)	(0.035)	(0.034)	(0.034)
2007Q2 and After (1=Yes)	0.050	0.087	0.055	0.335***
	(0.072)	(0.070)	(0.091)	(0.117)
EU-2×2007Q2	0.192***	-0.003	0.082**	0.016
	(0.043)	(0.042)	(0.041)	(0.041)
Individual Controls	Y	Y	Y	Y
Individual Controls + Wealth Index	N	N	N	N
Quarter Dummies	Y	Y	Y	Y
Observations	5,084	6,249	5,331	6,125
Adj. R^2	0.198	0.287	0.114	0.187
Panel C: By Unemployment Status				
	(5)	(6)	(7)	(8)
	Treatment: Bulgaria		Treatment: Romania	
	Unemployed	Not Unemployed	Unemployed	Not Unemployed
EU-2 Country (1=Yes)	-0.857***	-0.721***	-0.404***	-0.479***
	(0.077)	(0.026)	(0.092)	(0.025)
2007Q2 and After (1=Yes)	0.019	0.084	0.798**	0.181**
	(0.146)	(0.054)	(0.347)	(0.079)
EU-2×2007Q2	0.111	0.084***	0.063	0.045
	(0.092)	(0.032)	(0.112)	(0.031)
Individual Controls	Y	Y	Y	Y
Individual Controls + Wealth Index	N	N	N	N
Quarter Dummies	Y	Y	Y	Y
Observations	1,365	9,968	1,013	10,443
Adj. R^2	0.274	0.251	0.140	0.166
Panel D: By Retirement Status				
	(9)	(10)	(11)	(12)
	Treatment: Bulgaria		Treatment: Romania	
	Retired	Not Retired	Retired	Not Retired
EU-2 Country (1=Yes)	-0.747***	-0.746***	-0.530***	-0.440***
	(0.047)	(0.030)	(0.049)	(0.028)
2007Q2 and After (1=Yes)	0.073	0.095	0.361**	0.169*
	(0.090)	(0.063)	(0.155)	(0.092)
EU-2×2007Q2	-0.075	0.158***	0.047	0.044
	(0.057)	(0.035)	(0.059)	(0.034)
Individual Controls	Y	Y	Y	Y
Individual Controls + Wealth Index	N	N	N	N
Quarter Dummies	Y	Y	Y	Y
Observations	3,456	7,877	3,240	8,216
Adj. R^2	0.229	0.238	0.143	0.140

Sources: Eurobarometer, 2006-2008

Notes: The dependent variable in all models is life satisfaction (on a scale of 1-4). Robust standard errors in parentheses. The treatment variable is the interaction (EU*after 2007, quarter 2). The control country in all regressions is Croatia. The EU-2 Country dummy variable takes the value of 1 for Bulgaria in Columns (1)-(3) and takes the value of 1 for Romania in Models (4)-(6). The individual controls are age, age squared, gender, an indicator for whether the respondent is married or in a civil partnership, married×gender interaction, 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.Note that the regressions exclude employment status indicators. All regressions include quarter of interview dummies.

*** p<0.01, ** p<0.05, * p<0.1

Table 6: Joining the EU and Life Satisfaction, Heterogeneous Treatment Effects, By Education, Eurobarometer 2006-2008

Panel D: By Age At Which Stopped Full Time Education								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Treatment: Bulgaria				Treatment: Romania			
	15 Years or Younger	16-19 Years	20+ Years	Still Studying	15 Years or Younger	16-19 Years	20+ Years	Still Studying
EU-2 Country (1=Yes)	-0.717***	-0.789***	-0.747***	-0.461***	-0.407***	-0.519***	-0.434***	-0.419***
	(0.060)	(0.036)	(0.051)	(0.089)	(0.059)	(0.035)	(0.050)	(0.069)
2007Q2 and After (1=Yes)	0.207*	0.054	0.060	0.185	0.403**	0.176*	0.226	0.379
	(0.124)	(0.070)	(0.102)	(0.236)	(0.196)	(0.102)	(0.148)	(0.241)
EU-2×2007Q2	-0.046	0.154***	0.079	-0.003	-0.015	0.126***	-0.027	-0.119
	(0.073)	(0.043)	(0.061)	(0.101)	(0.071)	(0.043)	(0.059)	(0.086)
Individual Controls	Y	Y	Y	Y	Y	Y	Y	Y
Individual Controls + Wealth Index	N	N	N	N	N	N	N	N
Quarter Dummies	Y	Y	Y	Y	Y	Y	Y	Y
Observations	2,124	5,499	2,651	953	2,214	5,420	2,629	1,124
Adj. R^2	0.197	0.211	0.213	0.102	0.088	0.112	0.120	0.131

Sources: Eurobarometer, 2006-2008

Notes: The dependent variable in all models is life satisfaction (on a scale of 1-4). Robust standard errors in parentheses. The treatment variable is the interaction (EU*after 2007, quarter 2). The control country in all regressions is Croatia. The EU-2 Country dummy variable takes the value of 1 for Bulgaria in Columns (1)-(3) and takes the value of 1 for Romania in Models (4)-(6). 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 status indicator, household size, household size squared, whether there are any children in the household, an indicator for a large or small town. The regressions exclude indicators for the age at which the respondent stopped full time education. All regressions include quarter of interview dummies.

*** p<0.01, ** p<0.05, * p<0.1

Table 7: Joining the EU and EU Trust, Baseline Results, Eurobarometer 2006-2008

	(1)	(2)	(3)	(4)	(5)	(6)
		Treatment: Bulgaria			Treatment: Romania	
EU-2 Country (1=Yes)	0.305***	0.292***	0.322***	0.364***	0.362***	0.390***
	(0.017)	(0.017)	(0.018)	(0.016)	(0.016)	(0.017)
2007Q2 and After (1=Yes)	-0.027*	-0.069*	-0.074**	-0.027*	0.065	0.058
	(0.015)	(0.038)	(0.037)	(0.015)	(0.059)	(0.059)
EU-2×2007Q2	0.057***	0.046**	0.044**	0.007	-0.000	-0.000
	(0.020)	(0.021)	(0.021)	(0.019)	(0.019)	(0.019)
Individual Controls	N	Y	Y	N	Y	Y
Individual Controls + Wealth Index	N	N	Y	N	N	Y
Quarter Dummies	N	Y	Y	N	Y	Y
Observations	9,530	9,530	9,530	10,088	10,088	10,088
Adj. R^2	0.119	0.138	0.140	0.139	0.151	0.152

Sources: Eurobarometer, 2006-2008

Notes: The dependent variable in all models is EU trust (1=Yes). Robust standard errors in parentheses. The treatment variable is the interaction (EU*after 2007, quarter 2). The control country in all regressions is Croatia. The EU-2 Country dummy variable takes the value of 1 for Bulgaria in Columns (1)-(3) and takes the value of 1 for Romania in Models (4)-(6). 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 status 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. Models (3) and (6) include an additional wealth index control, which sums the total number of household durables (such as a car, a TV, a computer, and others). All regressions include quarter of interview dummies. All regressions are estimated using linear probability models.

*** p<0.01, ** p<0.05, * p<0.1

Table 8: Joining the EU and Life Satisfaction, Placebo Tests

Panel A: 2005Q1 - 2008Q4, Fake Treatment: 2005Q4 and after						
	(1)	(2)	(3)	(4)	(5)	(6)
	Treatment: Bulgaria			Treatment: Romania		
EU-2 Country (1=Yes)	-0.696***	-0.713***	-0.512***	-0.314***	-0.314***	-0.228***
	(0.026)	(0.024)	(0.036)	(0.026)	(0.024)	(0.036)
2005Q4 and After (1=Yes)	-0.046**	-0.284***	0.106***	-0.046**	-0.461***	0.082**
	(0.021)	(0.048)	(0.032)	(0.021)	(0.079)	(0.032)
EU-2×2005Q4	0.012	0.004	-0.018	-0.109***	-0.136***	-0.061
	(0.029)	(0.027)	(0.038)	(0.029)	(0.028)	(0.038)
Individual Controls	N	Y	Y	N	Y	Y
Individual Controls + Wealth Index	N	N	Y	N	N	Y
Quarter Dummies	N	Y	Y	N	Y	Y
Observations	17,057	17,057	13,209	17,124	17,124	13,278
Adj. R^2	0.157	0.268	0.284	0.064	0.174	0.188
Panel A: 2008Q1 - 2009Q2, Fake Treatment: 2009Q1 and after						
	(1)	(2)	(3)	(4)	(5)	(6)
	Treatment: Bulgaria			Treatment: Romania		
EU-2 Country (1=Yes)	-0.596***	-0.631***	-0.504***	-0.360***	-0.414***	-0.271***
	(0.026)	(0.026)	(0.027)	(0.025)	(0.024)	(0.026)
2005Q4 and After (1=Yes)	0.022	0.012	-0.007	0.022	-0.018	-0.037
	(0.024)	(0.037)	(0.037)	(0.024)	(0.037)	(0.037)
EU-2×2005Q4	-0.020	-0.026	-0.015	-0.049	-0.024	-0.028
	(0.034)	(0.033)	(0.032)	(0.033)	(0.032)	(0.031)
Individual Controls	N	Y	Y	N	Y	Y
Individual Controls + Wealth Index	N	N	Y	N	N	Y
Quarter Dummies	N	Y	Y	N	Y	Y
Observations	9,173	9,173	9,173	9,476	9,476	9,476
Adj. R^2	0.125	0.220	0.239	0.057	0.139	0.162

Sources: Eurobarometer, 2006-2008

Notes: The dependent variable in all models is life satisfaction (on a scale of 1-4). Robust standard errors in parentheses. The placebo treatment variable is .the last quarter of 2005 in Panel A; and the first quarter of 2009 in Panel B. The control country in all regressions is Croatia. The EU-2 Country dummy variable takes the value of 1 for Bulgaria in Columns (1)-(3) and takes the value of 1 for Romania in Models (4)-(6). 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 status 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. Models (3) and (6) include an additional wealth index control, which sums the total number of household durables (such as a car, a TV, a computer, and others). All regressions include quarter of interview dummies.

*** p<0.01, ** p<0.05, * p<0.1

Table 9: Joining the EU and Life Satisfaction, Wild Bootstrapped Standard Errors, Eurobarometer 2006-2008

	(1)	(2)	(3)	(4)	(5)	(6)
	Treatment: Bulgaria			Treatment: Romania		
EU-2 Country (1=Yes)	-0.752***	-0.746***	-0.581***	-0.473***	-0.469***	-0.318***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
2007Q2 and After (1=Yes)	0.007***	0.079***	0.047	0.007***	0.249	0.214***
	(0.000)	(0.000)	(0.484)	(0.000)	(0.500)	(0.000)
EU-2×2007Q2	0.120***	0.086***	0.076***	0.085***	0.044***	0.045***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Individual Controls	N	Y	Y	N	Y	Y
Individual Controls + Wealth Index	N	N	Y	N	N	Y
Quarter Dummies	N	Y	Y	N	Y	Y
Observations	11,333	11,333	11,333	11,456	11,456	11,456
Adj. R^2	0.154	0.259	0.283	0.068	0.164	0.187

Sources: Eurobarometer, 2006-2008

Notes: The dependent variable in all models is life satisfaction (on a scale of 1-4). P-values in parentheses. The treatment variable is the interaction (EU*after 2007, quarter 2). The control country in all regressions is Croatia. The EU-2 Country dummy variable takes the value of 1 for Bulgaria in Columns (1)-(3) and takes the value of 1 for Romania in Models (4)-(6). 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 status 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. Models (3) and (6) include an additional wealth index control, which sums the total number of household durables (such as a car, a TV, a computer, and others). All regressions include quarter of interview dummies.

*** p<0.01, ** p<0.05, * p<0.1