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# In Transit: The Well-Being of Migrants from Transition and Post-Transition Countries

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# ABSTRACT

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The extant literature has focused on migration's consequences for the receiving countries. In this paper, we ask a different but important question: how much do migrants gain from moving to another country? Using Gallup World Poll data and a methodology combining statistical matching with difference-in-differences, we assess migration's effects on the well-being of migrants from transition economies. We contribute to the literature by showing that in addition to increasing household income, migration enhances subjective well-being and satisfaction with freedom. The results are robust to sensitivity checks. Understanding the causal effects of migration on perceived and actual well-being is crucial for an informed public policy debate and has direct implications for social cohesion and integration policy.

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## 1. 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] In this study, we address a related but under-studied question: do the migrants gain from moving to another country? About three percent of the world's population lives outside its country of birth and most migrants move from developing to advanced economies, both to maximize their earnings and achieve a better quality of life (Hanson, 2010; Stillman, Gibson, McKenzie, & Rohorua, forthcoming). 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.

We employ an empirical approach combining propensity score matching (PSM) with difference-in-differences (DID) to explore the consequences of migration on movers' incomes, subjective well-being, and freedom satisfaction. We find that migration improves the incomes, life satisfaction, and the satisfaction with freedom of movers from transition economies. Specifically, the average household earnings gain from migration is about 21,000 international dollars (ID), while the average life satisfaction benefit is about 1.0 -1.2 on a scale of 0-10. Migration also positively affects perceptions of freedom, implying that it presents new opportunities and choices for movers from transition economies.

We study migrants from transition and post-transition societies as they are quantitatively

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[1] See De Haas (2010) for a historical perspective of the immigration debate and Grether et al. (2001) for a political economy perspective on immigration. Following the policy discourse, labor economists have investigated immigration's economic and fiscal consequences for the host countries (Blanchflower & Shadforth, 2009; Borjas, 1994, 2001; 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).

the most significant migration source for the European OECD countries (OECD, 2007) and are

key sending countries of high-skilled migrants for advanced economies in general.[2,3] For

example, Poland and Romania were among the top three sources of OECD migrants in 2012

(along with China) (OECD, 2013). The ex-communist countries are also geo-politically

significant as they border the EU, China, Iran, and Turkey. Studying transition economies as a

group is appropriate as many of them have similar economic conditions and face comparable

migration regimes and restrictions.[4] While migrants from transition economies are a rather

homogenous group, we exploit the variation in migrants' experiences in the destination countries to

analyze the well-being consequences of migration.

Studying the well-being consequences of migration is policy-pertinent for several

reasons. From the destination governments' point of view, immigrant quality of life is

instrumentally important for social outcomes such as public health and productivity (De Neve,

Diener, Tay, and Xuereb, 2013). For example, positive affect and happiness have beneficial

impacts on labor market productivity (Oswald, Proto, & Sgroi, 2009), income (De Neve &

Oswald, 2012; Graham, Eggers, & Sukhtankar, 2004), and health (Graham, et al., 2004). Happier

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[2] This paper uses the list of advanced economies from the International Monetary Fund (IMF) Appendix Table B (2014). This comprises the following 30 countries: 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. Gallup does not poll San Marino. While the IMF considers the Czech Republic, Estonia, Latvia, Slovakia, and Slovenia advanced economies, we include them in the source countries list.

[3] Over 10 million migrants from these post-socialist nations (about 14 percent of all migrants) live in the advanced OECD countries (OECD, 2008).

[4] Transition economies share a common socialist past, recently underwent or are still going through transitions to democracy and market economy, are geographically close, and culturally similar. While 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). 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.

immigrants are therefore less likely to be dependent on the host nations' welfare and healthcare systems and may integrate more easily (Ivlevs, 2014). Immigrant life dissatisfaction may, however, be symptomatic of lack of assimilation or social exclusion (Safi, 2010; Sen, 2000). From the sending countries' perspective, emigrant well-being is important not only for issues related to brain drain but also as migrants send remittances and contribute through investments, the spread of ideas, and technology.

This study makes several contributions to the extant literature. First, instead of focusing on a single well-being dimension, it estimates migration's effects on a range of well-being metrics, including income, life satisfaction, and freedom satisfaction. Second, it studies multilateral migration flows. Third, it employs a methodology combining propensity score matching (PSM) with difference-in-differences (DID) to discern, to the extent possible, well-being changes caused by migration. Our results imply that by voting with their feet, migrants from transition economies achieve higher perceived and actual well-being and quality of life.

Though not specific to transition economies, research suggests that migrants positively affect destination countries' fiscal outcomes (OECD, 2013) and natives' subjective well-being (Akay, Constant, & Giulietti, 2014; Betz & Simpson, 2013). In addition, 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. In conjunction with our findings, these results imply that migration from transition economies might present substantial development opportunities for both receiving and sending countries.

## 2. Literature and Theory

### 2.1.Well-being and Migration

We build on the new "science" of well-being measurement 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 the human condition, especially given that objective well-being can coexist with un-happiness and frustration (Stiglitz, Sen, & Fitoussi, 2009).[5] These studies show that the key SWB determinants are consistent across different societies and levels of development (Dolan, Peasgood, & White, 2008; Graham, 2009; Helliwell, Barrington-Leigh, Harris, & Huang, 2010). There is, moreover, a consensus that SWB metrics are valid and reliable, psychometrically sound, and comparable across respondents (Diener, Inglehart, & Tay, 2013; Diener, Suh, Lucas, & Smith, 1999; OECD, 2011).

Second, the income increases due to migration could be as high as 260-270 percent (Clemens, et al., 2008; McKenzie, et al., 2010). Despite this, studies using cross-sectional data show that internal and international migrants experience unhappiness (Bartram, 2011; De Jong, Chamratrithirong, & Tran, 2002; Knight & Gunatilaka, 2010; Safi, 2010; Stillman, et al., forthcoming).[6,7] Specifically, immigrants are unhappier than natives in destination countries, but

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[5] While economists prefer studying revealed choice and income as opposed to self-reported subjective states, Easterlin's seminal study (1974) used self-reported happiness data to examine their relationship with economic growth and income. Building on early 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).

[6] In one exception, Erlinghagen (2012) finds that German movers are happier and more satisfied with their lives than stayers.

[7] Comparing the outcomes of migrants and stayers is misleading, as well-being gains (or losses) may actually reflect unobserved differences in ability, risk tolerance, and motivation (McKenzie, et al., 2010). Obtaining causal estimates is difficult in the absence of experiments and panel data tracing migrants before and after leaving, however. In addition, because SWB studies predominantly use cross-sectional data to compare migrants and natives in destination countries (Baltatescu, 2007; Bartram, 2010; Safi, 2010) or movers and stayers in the sending countries

the result varies by country of origin (Simpson, 2014).[8] Birth country 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, Central and Eastern European (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 outcome. Based on experimental data from an immigration lottery of Tongans leaving for New Zealand, Stillman et al. (forthcoming) find that movers' hedonic well-being declined despite income improvements in income, mental well-being, and income adequacy perceptions. Building on the extant literature, this study assesses migration's effects on three well-being outcomes: household income, subjective well-being (i.e., global life evaluation), and satisfaction with freedom.

### 2.2. Migration Theories

International migration theories generally assume that income maximization motivates the migration decision. For example, *micro-level theories* view moving as the resultant of a cost-benefit calculation by rational actors seeking to maximize the net monetary gain from migration (Massey et al., 1993). An extension of the classic Roy model predicts, for instance, that if

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(Bartram, 2013; Erlinghagen, 2012), they cannot adequately demonstrate migration's causal impacts. For an exception, see Stillman et al. (forthcoming).

[8] For a detailed summary of the literature, see Simpson (2014). First, some migrant groups are happier than others: in Israel, immigrants from Western Europe are happier than those from the former Soviet countries (Amit, 2010; Amit & Litwin, 2010). First generation immigrants are happier than their second-generation counterparts (Safi, 2010; Senik, 2011). Second, migrants are less happy than natives in Europe (Baltatescu, 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, Chamratrithirong, & Tran, 2002) and Finland (Ek, Koiranen, 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 unhappiness, then they experience happiness during the process of migration, but their happiness declines post-migration. Finally, Bartram shows that migrants from Northern (Belgium, Switzerland, France, Germany, Britain, and the Netherlands) to Southern Europe (Spain, Portugal, Greece and Cyprus) are less happy (Bartram, 2014). 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.

earnings in the source and destination countries depend on a single factor which is transferable across borders and there are no migration costs, a worker will move to a destination country which maximizes his or her earnings (Borjas, 2014).[9] In addition, *macro-level models* predict that international migration is due to the wage differentials between countries and that labor markets are the most important drivers of migration (Massey, et al., 1993).

A large empirical literature has examined migration policies and push- and pull- factors determining the global movement of people (de Haas, 2011; Mayda, 2010; Zimmermann, 1996). The drivers of economic migration include absolute and relative poverty (Czaika & de Haas, 2012; Stark & Taylor, 1989), institutions (Bertocchi & Strozzi, 2008), the income gap between origin and destination countries and the destination's immigration laws (Ortega & Peri, 2009), among others. In addition, migrant networks furnish information, help, and ethnic goods to movers (Bauer, Epstein, & Gang, 2000). These results suggest that while important, economic concerns are not the only drivers of the international movement of people. Non-economic factors and quality of life aspirations are also relevant. For instance, Graham and Markowitz (2011) were the first to show that respondents from Latin America with higher than average incomes but lower than average happiness scores are more likely to express emigration intentions.

Specifically for transition economies, Polish movers migrate to improve their household's relative income position in the community (Stark, Micevska, & Mycielski, 2009).[10] The children of former Latvian migrants are more likely to migrate, meanwhile (Ivlevs & King, 2012b). More educated respondents from Kosovo and Albania are also more likely to emigrate (Ivlevs & King, 2012a; Papapanagos & Sanfey, 2001) and so are male Albanians, and free

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[9] The relative skill transferability across borders and country-specific knowledge and experiences are also relevant when selecting a host country (Danzer & Dietz, 2014).

[10] Inequality, population density, and the net interregional migration rate are positively related to Polish emigration; unemployment has a negative association but absolute income and poverty have no influence (Stark et al., 2009).

market supporters (Papapanagos & Sanfey, 2001). Blanchflower and Shadforth (2009) discover that the migration propensity from the ex-communist countries which joined the European Union in 2004 is, unsurprisingly, inversely correlated with GDP per capita in the origin country, as well as with life satisfaction. They also find that migration propensity is positively associated with unemployment rates.

### 2.3. Analytical Model

We posit that the migration decision is motivated by a desire to enhance one's quality of life, defined and measured using a range of perceived and actual well-being indicators. 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 at time $t'$, and $C_i$ be the monetary and psychological costs of migration.[11] In each time period, $U_i$ is a function of income and consumption (I), subjective well-being (H), and freedoms and opportunities (F).

Specifically:

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

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

where $u_1 (.), u_2 (.),$ and $u_3 (.)$ are the respective sub-utility functions for consumption, subjective well-being, 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 $(u_j (.|X_{it}))$ and $(u_j (.|X_{it}))$ 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

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[11] Moving costs include: *direct expenses* such as transportation costs and visa fees; *opportunity costs* of foregone earnings and opportunities at home, and *psychological costs* related to separation from family and friends.

psychological costs $U_{it'} - U_{it} > C_i$. The probability of migration $\Pr(M = 1|X_i) = \Pr(U_{it'} - U_{it} - C_i > 0|X_i)$.

### 3. Estimation Strategy

### 3.1. Empirical Objectives

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 causal impact of migration on well-being (McKenzie, 2012). For example, migrants have higher aspirations (Czaika & Vothknecht, 2014) and may be more risk-loving than non-migrants and risk-aversion may also be correlated with well-being outcomes. Reverse causality is another methodological concern. For instance, while migration may affect happiness, those dissatisfied with their lives are more likely to migrate (Cai, Esipova, Oppenheimer, & Feng, 2014; Chindarkar, 2014; Graham & Markowitz, 2011; Otrachshenko & Popova, 2014).[12] Moreover, if migration is costly, relatively well-off individuals will be more likely to migrate and a cross-sectional comparison would simply pick the effect of pre-migration status on post-moving income.

While studies have dealt with selection and reverse causality in several ways, including assuming selection on observables, using instrumental variables, and matching, only experimental data can establish causality.[13] In the absence of a panel tracing migrants before and after moving, we use available cross-sectional data and statistical matching to create a two-period synthetic panel of observably similar migrants and stayers. We then employ DID to assess the effects of migration on well-being. To our knowledge, this is the first paper employing this methodology in the context of migration.

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[12] In one exception, using instrumental variables, Ivlevs (2014) discovers that potential migrants from transition economies are positively selected on life satisfaction.

[13] Under certain conditions, non-experimental methods such as difference-in-differences (DID) produce results that are reasonably close to experimental findings (McKenzie et al., 2010).

Let $M_{it} \in \{0,1\}$ be an indicator for whether transition country migrant $i$ moved to an advanced country in time period $t$. Let $Y_{it}$ be the well-being outcome before migration and $Y_{it'}$ be the well-being outcome post-migration. The causal effect of migration is:

$$Y_{it'} - Y_{it} \tag{1}$$

Because the counterfactual outcome $Y_{it}$ is unobserved, the estimation focuses on the average treatment effects (ATT) (Caliendo & Kopeinig, 2008):

$$E\{Y_{t'} - Y_t \mid M=1\} = E\{Y_{t'} \mid M=1\} - E\{Y_t \mid M=1\} \tag{2}$$

As they are unobserved, the counterfactual mean outcomes $E\{Y_t \mid M=1\}$ (i.e., the well-being outcome of migrants had they not migrated) must be constructed using statistical methods.[14] In summary, our empirical 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 (i.e., household income, evaluative well-being, and satisfaction with freedom).

### 3.2. Analysis Groups

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

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[14] Using the well-being outcomes of those who did not migrate $E\{Y_t \mid M_{it}=0\}$ as a counterfactual will not deal with selection problems as factors that influence selection into migration likely also affect the well-being outcomes (Caliendo & Kopeinig, 2008).

**Figure 1.** Analysis Groups
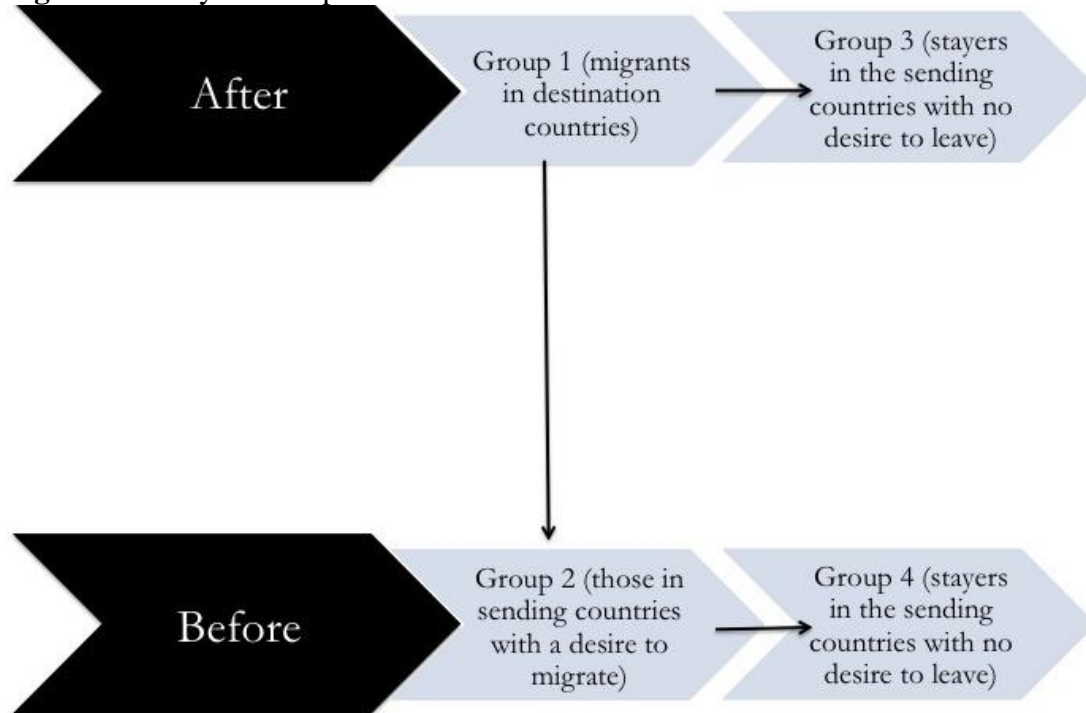


*Source:* Authors.

**Table 1.** Analysis Groups

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

*Source:* Authors.

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

**Group 2**. This group comprises migrants before leaving at time $t$. For each migrant in Group 1, we identify a "migrant before migration" using probability matching combined with exact matching. Specifically, we match migrants in Group 1 with respondents who expressed a desire to move permanently to another country using age, age squared, gender, religion, education, country of origin, and destination country. We use exact matching to ensure that the match is from the same country of origin, will move to the same destination country, is of the same gender and religion, and has the same educational attainment. After matching, we deleted matched pairs if the match's age is greater than the migrant's.

**Group 3**. This group comprises non-migrants observed at time $t'$ identified by matching Group 1 with stayers based on age, age squared, gender, religion, education, and country of origin. We imposed exact matching by country of origin, year of interview, gender, religion, and education.

**Group 4**. This group comprises non-migrants at time t (i.e., before migration) matched with migrants before migration in Group 2 using an identical procedure as the matching of Groups 3 and 1.

### 3.3. Creating Synthetic Cohorts with Matching[15]

Let *X* be a vector of 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, the propensity score, or the conditional probability of migrating, is: $P(X) = Pr(M = 1|X)$.

We explain the matching of migrants and non-migrants as the procedure is analogous for matching potential with actual migrants. We first estimate the propensity scores using a logit model:

$$M_i = \alpha_1 + \beta^M X_i + u_i \tag{3}$$

where $M = 1$ if the individual from a transition economy migrated to an advanced economy and 0 if he or she stayed in the home country. We excluded stayers in the sending countries who were foreign-born and those who wanted or planned to move. Prior to matching, we also excluded respondents with missing observations for any of the covariates or the outcome variables. $X_i$ is a vector of socio-demographic characteristics predicting migration: age, age squared, gender, indicators for religious affiliation, country of origin, indicators for whether the respondent has elementary, secondary, or tertiary education, year of interview, and country of origin. Note that the treatment (i.e., migration) cannot influence the matching variables (Heinrich et al., 2010; Smith & Todd, 2005), which is why the matching covariates exclude marital status and income. While education may not be independent of migration, we included it as it is an important proxy for ability, intelligence, and skills.

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[15] For detailed overviews of the theoretical, practical, and methodological aspects of PSM, see (Blundell & Costa Dias, 2000; Caliendo & Kopeinig, 2008; Dehejia & Wahba, 2002; Rosenbaum & Rubin, 1983; Shadish & Steiner, 2010; Smith & Todd, 2005; Stuart, 2010; Todd, 2006).

After computing the propensity score, we used one-to-one nearest neighbor matching without replacement with a caliper (i.e., maximum allowable distance between the propensity scores) of 0.01.[16] We excluded migrants without a match within the caliper, which increases the confidence that the matching is balanced but reduces the number of observations. Since the goal is to create matches that are as similar as possible, we use exact matching by country of birth, year, gender, religion, and education.

Next, we 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. Migrants and non-migrants have identical values for education, gender, and religion. Finally, we only kept exact matches to create a balanced synthetic panel of migrants and non-migrants before and after migration. Each group includes 122 observations (see tables 2 and 3).

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[16] We used the -psmatch2- module in Stata developed by Leuven and Sianesi (2003).

**Table 2.** Analysis Sample, by Source and Destination Countries

| Birth Country | Freq. | Percent | Residence Country | Freq. | Percent |
|---|---|---|---|---|---|
| Romania | 21 | 17.21 | Greece | 20 | 16.39 |
| Albania | 18 | 14.75 | Germany | 17 | 13.93 |
| Poland | 17 | 13.93 | Italy | 17 | 13.93 |
| Serbia | 12 | 9.84 | Austria | 13 | 10.66 |
| Russia | 10 | 8.20 | Spain | 12 | 9.84 |
| Croatia | 6 | 4.92 | Switzerland | 8 | 6.56 |
| Slovenia | 6 | 4.92 | Ireland | 7 | 5.74 |
| Kosovo | 6 | 4.92 | Sweden | 6 | 4.92 |
| Lithuania | 5 | 4.10 | Australia | 6 | 4.92 |
| Hungary | 3 | 2.46 | France | 3 | 2.46 |
| Georgia | 3 | 2.46 | Finland | 3 | 2.46 |
| Moldova | 3 | 2.46 | Netherlands | 2 | 1.64 |
| Bosnia and Herzegovina | 3 | 2.46 | United States | 1 | 0.82 |
| Bulgaria | 3 | 2.46 | United Kingdom | 1 | 0.82 |
| Macedonia | 3 | 2.46 | Belgium | 1 | 0.82 |
| Ukraine | 1 | 0.82 | Denmark | 1 | 0.82 |
| Estonia | 1 | 0.82 | Canada | 1 | 0.82 |
| Latvia | 1 | 0.82 | New Zealand | 1 | 0.82 |
| | | | Norway | 1 | 0.82 |
| | | | Portugal | 1 | 0.82 |
| **Total** | **122** | **100.00** | **Total** | **122** | **100.00** |

*Source:* Authors' calculations based on the Gallup World Poll, 2008-2013.

**Table 3.** Summary Statistics, Analysis Sample

| Variables | Migrants After Group 1 Mean | Std. Dev. | Migrants Before Group 2 Mean | Std. Dev. | Stayers After Group 4 Mean | Std. Dev. | Stayers Before Group 3 Mean | Std. Dev. |
|---|---|---|---|---|---|---|---|---|
| *Outcome Variables* | | | | | | | | |
| Household Income (in 1,000s ID) | 34.203 | 30.447 | 14.084 | 15.898 | 14.106 | 11.363 | 14.326 | 17.429 |
| HH Income Per HH Member (in 1,000s ID) | 15.816 | 14.494 | 5.334 | 5.249 | 5.935 | 4.899 | 6.150 | 6.502 |
| Best Possible Life (BPL) (0-10) | 6.305 | 2.085 | 5.096 | 2.226 | 5.485 | 1.894 | 5.389 | 2.292 |
| Satisfaction with Freedom | 0.832 | 0.375 | 0.575 | 0.496 | 0.713 | 0.454 | 0.695 | 0.462 |
| *Matching Variables* | | | | | | | | |
| Age | 40.305 | 12.815 | 38.353 | 13.355 | 40.557 | 13.458 | 39.581 | 13.034 |
| Female (1=Yes) | 0.563 | 0.498 | 0.563 | 0.498 | 0.563 | 0.498 | 0.563 | 0.498 |
| Catholic (1=Yes) | 0.359 | 0.481 | 0.359 | 0.481 | 0.359 | 0.481 | 0.359 | 0.481 |
| Protestant (1=Yes) | 0.018 | 0.133 | 0.018 | 0.133 | 0.018 | 0.133 | 0.018 | 0.133 |
| Orthodox (1=Yes) | 0.449 | 0.499 | 0.449 | 0.499 | 0.449 | 0.499 | 0.449 | 0.499 |
| Muslim (1=Yes) | 0.144 | 0.352 | 0.144 | 0.352 | 0.144 | 0.352 | 0.144 | 0.352 |
| Muslim: Sunni (1=Yes) | 0.012 | 0.109 | 0.012 | 0.109 | 0.012 | 0.109 | 0.012 | 0.109 |
| No religion/Agnostic (1=Yes) | 0.018 | 0.133 | 0.018 | 0.133 | 0.018 | 0.133 | 0.018 | 0.133 |
| Elementary Education (1=Yes) | 0.072 | 0.259 | 0.072 | 0.259 | 0.072 | 0.259 | 0.072 | 0.259 |
| Completed Secondary Education (1=Yes) | 0.749 | 0.435 | 0.749 | 0.435 | 0.749 | 0.435 | 0.749 | 0.435 |
| Some College Education/ College Graduate (1=Yes) | 0.180 | 0.385 | 0.180 | 0.385 | 0.180 | 0.385 | 0.180 | 0.385 |

*Source:* Authors' calculations based on the Gallup World Poll, 2008-2013.

*Notes:* The number of observations in each group is 167. All statistics are for 2008-2013 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 1,000s of international dollars (ID), which allows comparisons across countries and time. The variable "Household Income Per Household Member" is constructed by dividing total household income (in 1,000s ID) by the number of household members. "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. "Satisfaction with Freedom" is a binary variable coded as 1 if the respondent is satisfied with his or her freedom to choose in life and as 0 otherwise.

Of course, labeling respondents expressing a desire to move permanently to another country "migrants before migration" requires that they will in fact subsequently move to the destination they indicated. Research suggests that this assumption is plausible as intentions are good predictors of actual migration (Creighton, 2013; van Dalen & Henkens, 2008, 2013). We also offer a robustness check by matching actual migrants with respondents with concrete migration plans.

### 3.4. Parametric Difference-in-Differences Estimator

After creating the synthetic panel, we calculated the parametric difference-in-differences (DID). The parameter of interest is:

$$(Y^M_{t'} - Y^M_t) - (Y^S_{t'} - Y^S_t) \tag{4}$$

where the superscripts $^M$ and $^S$ designate migrants and stayers, respectively. We obtain the DID estimate using the pooled cross-sectional synthetic cohort data from the following regression:

$$Y_{it,t'} = \beta_0 + \beta_1 M_i + \beta_2 T_{t'} + \beta_3 M_i * T_{t'} + X'_{it,t}\pi + \varepsilon_{it,t'} \tag{5}$$

where $M$ is a binary indicator for migrant or stayer, $T$ is an indicator for period before or after migration, and $X$ is a vector of individual characteristics (age, age squared, gender, education, religion, and country of origin).[17] All equations are estimated using OLS with robust standard errors clustered at the country of origin and the Gallup-provided survey weight. OLS is appropriate as the interpretation of the interaction term in non-linear models with a monotonic transformation functions is problematic (Ai & Norton, 2003). In addition, estimating ordinal SWB data using OLS or ordered logits and probits produces similar results (Ferrer-i-Carbonell &

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[17] Note that $\beta_2$ is the difference in outcomes between movers and stayers pre-migration, while $\beta_2 + \beta_3$ is the difference in their outcomes post-migration. The DID (or the causal effect of migration on the outcome) is measured by $\beta_3$.

Frijters, 2004; Frijters & Beatton, 2012).

The DID estimator's main assumption is that changes which occurred for reasons other than migration impacted migrant and non-migrant groups in the same way (Abadie, 2005). One such factor was the global economic crisis and to the 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 un-balanced between the treatment and control groups (Abadie, 2005), which is not the case here. While the pre-treatment characteristics for the mover and stayer groups are observably similar, the effect of the global crisis likely varied across the countries in the analysis sample. We are constrained by data limitations and the DID estimator is the best available alternative.

### 4. Data and Summary Statistics

#### 4.1. Data

The data are from the Gallup World Poll (GWP), which is an annual survey conducted 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 2005-2013 period. GWP is probability-based and nationally representative (of populations aged 15 and over), polling about 1,000 individuals per country and over-sampling some countries such as Russia. While not specifically designed to study migration, GWP's comprehensiveness enables the analysis 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 stayers.[18] The data are collected using telephone or in-person interviews using the same survey

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[18] The data are weighted post-collection to ensure that they are nationally representative. First, the data are weighed using base sampling weights to correct for oversampling and household size. Then, post-stratification weights are

methodology across countries, ensuring comparability across countries and over time. In most transition countries, the interviews are face-to-face and in most advanced countries, the data are collected via landline or cell phone interviews. We emphasize that since Gallup polls different individuals each year, we have pooled cross-sections rather than a panel, which is a limitation that we acknowledge.

### 4.2. Outcome Variables

First, our objective well-being variable is *household income*, which is calculated in international dollars, allowing comparisons across countries and over time. Second, the SWB indicator is 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 (Cantril, 1965). Third, *freedom perceptions* is a binary indicator for whether or not the respondent is satisfied with his or her freedom to choose what to do with his or her life.

### 4.3. Summary Statistics

The analysis sample spans 2008-2013 representing migrants from 21 of the 30 transition economies, including both EU and non-EU members. The top three sending countries are Poland, Romania, and Albania, while less than one percent came from the Czech Republic, Kazakhstan, and Montenegro. The most frequent destinations are Germany, Greece, and Austria (see table 2). Migrants and stayers are on average in their very late 30s or early 40s, about 56 percent are female and about 45 percent are Christian Orthodox (see table 3). Across the board, 75 percent of migrants and stayers have secondary education, while 18 percent are college-educated.

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constructed - population statistics are used to weight the data by gender, age, and in some instances, education and socio-economic status. In the DID estimations, we use the Gallup-provided weight.

Table 3 also demonstrates that migrants earn considerably more than comparable potential migrants (Group 2) and non-migrants (Groups 3 and 4). Specifically, while the unconditional mean incomes are about 34,000 ID after migration, they are only about 14,000 ID for the other groups. Migrants also report higher subjective well-being (BPL) and satisfaction with freedom than any other group. The *potential* migrant group (Group 2) has the lowest BPL score of 5.1 and the lowest percentage of respondents satisfied with freedom (58 percent). We next examine whether these unconditional differences in well-being hold after we implement the DID estimation.

## 5. Main Results

Table 4 shows the DID estimation results. Models (1)-(4) are estimated without additional covariates. The baseline findings are robust to including the individual-level controls and country of origin indicators in (5)-(8). Specifically, migration leads to an unequivocal increase in material well-being: the household income premium (with and without controls for observable characteristics including education) is about 21,000 ID (10,500 ID per household member).

**Table 4.** Main Results

| | Full Sample No Covariates | | | | Full Sample With Covariates | | | |
|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| | | HH Income | | | | HH Income | | |
| | Household | Per HH | | | Household | Per HH | | |
| | Income | Member | BPL | Freedom | Income | Member | BPL | Freedom |
| Migrant (1=Yes) | 0.815 | -0.278 | -0.073 | -0.121* | 0.098 | -0.586* | -0.199 | -0.134** |
| | (0.861) | (0.339) | (0.218) | (0.059) | (0.881) | (0.322) | (0.213) | (0.063) |
| After Migration (1=Yes) | -0.034 | -0.056 | 0.134 | 0.016 | -0.420 | -0.402 | 0.093 | 0.012 |
| | (1.236) | (0.428) | (0.256) | (0.045) | (1.256) | (0.423) | (0.230) | (0.045) |
| **Migrant*After** | **21.226*** | **10.470*** | **1.043*** | **0.261** | **20.900*** | **10.515*** | **1.171*** | **0.276** |
| | **(4.256)** | **(1.908)** | **(0.349)** | **(0.108)** | **(4.459)** | **(2.014)** | **(0.336)** | **(0.115)** |
| | | | | | | | | |
| Birth Country Dummies | No | No | No | No | Yes | Yes | Yes | Yes |
| Individual Controls | No | No | No | No | Yes | Yes | Yes | Yes |
| N | 668 | 668 | 668 | 668 | 668 | 668 | 668 | 668 |
| Adjusted $R^2$ | 0.181 | 0.214 | 0.043 | 0.043 | 0.292 | 0.341 | 0.135 | 0.096 |

*Source:* Authors' calculations based on the Gallup World Poll, 2008-2013.

*Notes:* Difference-in-Differences estimation using robust standard errors, clustered at the country of origin level (in parentheses). Household income is in 1,000s of international dollars (ID), which allows comparisons across countries and time. The variable "Household Income Per Household Member" is constructed by dividing total household income (in 1,000s ID) by the number of household members. "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. "Freedom" is a binary variable coded as 1 if the respondent is satisfied with his or her freedom to choose in life and as 0 otherwise. The individual control variables include: age, age squared, gender, religion dummies, and education.

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

Migrants from transition economies not only earn more but also realize SWB gains. The evaluative well-being (BPL) benefit from migration is between 1.0 and 1.2 on an eleven-point scale (when accounting for individual characteristics and country of birth); as such, this "happiness premium" from migration is substantively significant. In addition to boosting incomes and well-being perceptions, migration affects movers' satisfaction with freedom to choose. Movers are about 26-27 percent more satisfied with their freedom due to migration.

Table 5 shows the main results excluding (only using) the top five sending and destination countries. The top part of Table 5 indicates that when we exclude the most common origin countries (Romania, Albania, Poland, Serbia, and Russia), the household income premium from migration drops slightly to 19,000 ID (9,500 ID per household member), the happiness premium increases to 1.9, and the satisfaction with freedom benefit is comparable to that in the main specification. Similarly, when we exclude the top five destination countries (Greece, Germany, Italy, Spain, Austria), the income premium is about 36,000 ID (16,600 ID per household member), the happiness premium is similar in magnitude to that in the main analysis and significant at the 5 percent level. There is no change in the satisfaction with freedom outcome, however.

When we focus only on the results based on the top five destination countries, the income premium is smaller in magnitude than that in the main results. The happiness increase is slightly larger in magnitude than the results in Table 4 although the change in the perceptions of freedom disappear. When we consider only the top five sending countries, the income premium rises to almost 22,500 ID, although the BPL DID is less than one and there is no longer an increase in satisfaction with freedom. Table 5 indicates that the main results shown in Table 4 are generally

robust and that migration leads to income and  subjective well-being premiums. However, the

effects differ across sending and destination countries and are the largest for migrants moving to

countries other than the top destinations and coming from countries other than Romania,

Albania, Poland, Serbia, and Russia.

**Table 5.** DID Results Excluding Top Sending and Destination Countries

| | Excluding Top 5 Sending Countries | | | | Only Top 5 Sending Countries | | | |
|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| | Household Income | HH Income Per HH Member | BPL | Freedom | Household Income | HH Income Per HH Member | BPL | Freedom |
| Migrant (1=Yes) | 2.257 | -0.032 | -0.448* | -0.100 | -1.576*** | -1.110** | -0.035 | -0.168 |
| | (1.876) | (0.622) | (0.230) | (0.075) | (0.331) | (0.329) | (0.311) | (0.092) |
| After Migration (1=Yes) | 1.341 | 0.210 | 0.156 | 0.085 | -2.019 | -0.936 | 0.002 | -0.025 |
| | (1.269) | (0.742) | (0.456) | (0.064) | (1.980) | (0.563) | (0.282) | (0.065) |
| **Migrant*After** | **19.203*** | **9.517*** | **1.895*** | **0.261** | **22.449** | **11.321** | **0.668** | **0.277** |
| | **(4.481)** | **(2.194)** | **(0.590)** | **(0.090)** | **(7.088)** | **(3.129)** | **(0.267)** | **(0.182)** |
| Birth Country Dummies | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Individual Controls | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| N | 260 | 260 | 260 | 260 | 416 | 416 | 416 | 416 |
| Adjusted $R^2$ | 0.404 | 0.420 | 0.297 | 0.193 | 0.246 | 0.311 | 0.067 | 0.063 |
| | Excluding Top 5 Destination Countries | | | | Only Top 5 Destination Countries | | | |
| | (9) | (10) | (11) | (12) | (13) | (14) | (15) | (16) |
| | Household Income | HH Income Per HH Member | BPL | Freedom | Household Income | HH Income Per HH Member | BPL | Freedom |
| Migrant (1=Yes) | 2.961 | 0.297 | 0.227 | -0.225* | -1.107 | -0.898* | -0.367* | -0.098 |
| | (2.556) | (0.558) | (0.457) | (0.107) | (1.448) | (0.445) | (0.190) | (0.083) |
| After Migration (1=Yes) | 2.763 | 0.107 | 0.366 | -0.005 | -1.268 | -0.472 | 0.009 | 0.025 |
| | (2.136) | (0.679) | (0.529) | (0.128) | (1.592) | (0.570) | (0.338) | (0.055) |
| **Migrant*After** | **27.295*** | **15.158*** | **1.009** | **0.466*** | **16.454*** | **7.899*** | **1.179*** | **0.182** |
| | **(8.130)** | **(2.888)** | **(0.648)** | **(0.122)** | **(4.220)** | **(1.937)** | **(0.370)** | **(0.137)** |
| Birth Country Dummies | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Individual Controls | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| N | 216 | 216 | 216 | 216 | 460 | 460 | 460 | 460 |
| Adjusted $R^2$ | 0.395 | 0.425 | 0.103 | 0.112 | 0.247 | 0.312 | 0.126 | 0.115 |

*Source:* Authors' calculations based on the Gallup World Poll, 2008-2013.

*Notes:* Difference-in-Differences estimation using robust standard errors, clustered at the country of origin level (in parentheses). Household income is in 1,000s of international dollars (ID), which allows comparisons across countries and time. The variable "Household Income Per Household Member" is constructed by dividing total household income (in 1,000s ID) by the number of household members. "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. "Freedom" is a binary variable coded as 1 if the respondent is satisfied with his or her freedom to choose in life and as 0 otherwise. The individual control variables include: age, age squared, gender, religion dummies, and education. See Table 2 for the top sending and destination countries.

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

### 6. Robustness Checks

#### 6.1. Matching with Respondents with Emigration Plans

As a robustness check, we matched migrants in Group 1 with respondents in the source countries with concrete migration plans (as opposed to those expressing willingness to leave in the main analysis sample). We employed the same matching covariates and procedures. Gallup started asking the question about migration plans in 2010, which limits the number of observations.[19] Therefore, we used a less strict caliper of 0.5 to ensure about 50 observations per group. The sample includes 53 observations per group (212 observations total). Eighteen transition countries are represented, compared with 21 in the main analysis. The top sending countries are Romania, Poland, Bulgaria and Croatia, and the most common host countries are Italy, Germany, and Austria (see table A.1).

Table A.2 demonstrates that the matching produced observably similar migrant and stayer groups. In the "post" period, migrants and non-migrants are on average 42-43 years old, while their counterparts pre-migration are in their early thirties. A little under a third of respondents in all groups are college-educated (compared with 18 percent in the main analysis sample). Across the board, about two thirds are female, about a third is Catholic, and 47 percent are Christian Orthodox. Immigrants (Group 1) have the highest household income, SWB score, and are more satisfied with their freedom than any other group. Note, however, that the BPL score of those planning to migrate (Group 2) is very similar to that of immigrants, suggesting that those with concrete emigration plans may receive a life satisfaction boost due to having made the emigration decision.

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[19] Between 2010-2013, about 19 percent of citizens from transition countries expressed a desire to emigrate, only 1.39 percent made emigration plans for the next year, and 0.69 percent prepared for this move.

Table 6 shows the DID results for the robustness check, with Models (1)-(4) presenting the findings without country of birth and individual controls, and Models (5)-(8) adding these covariates. Despite the small sample size, the results are generally robust and similar across the two sets of models. We focus on the results including the full set of controls. First, the income premium from migration is larger than that in the main model and is 26,600 ID (note that the income premium per household member is similar to that in the main specification). There is also a "freedom premium" from migration, which is similar in magnitude to that in the main analysis sample. Specifically, migrants are about 26 percent more satisfied with their freedom to choose in life due to migration. Unsurprisingly, the BPL DID is not statistically significant. The summary statistics showed that while migrants' evaluative well-being is slightly higher, it is not statistically different from that of the other groups. These results indicate that migration has a positive causal influence on income and perceptions with freedom, although the evaluative well-being gain is statistically insignificant, likely due to the small sample size or the possibility that those with concrete emigration plans have received a life satisfaction boost from making the decision. Experimental findings show that expectations affect hedonic happiness even before the outcomes are revealed and that the expectations related to making decisions affect happiness (Rutledge, et al., 2014).

**Table 6.** Analysis Sample, Matching with Those Planning to Move, DID Results

| | Full Sample No Covariates | | | | Full Sample With Covariates | | | |
|---|---|---|---|---|---|---|---|---|
| | (1) | (2) HH Income Per HH | (3) | (4) | (5) | (6) HH Income Per HH | (7) | (8) |
| | Household Income | Member | BPL | Freedom | Household Income | Member | BPL | Freedom |
| Migrant (1=Yes) | 1.129 | 0.854 | 0.466 | -0.238** | -0.166 | 0.784 | 0.303 | -0.234** |
| | (2.752) | (0.846) | (0.328) | (0.099) | (3.658) | (1.095) | (0.349) | (0.107) |
| After Migration (1=Yes) | -1.069 | 0.201 | 0.177 | -0.143* | 2.542 | 1.476 | 0.284 | -0.155* |
| | (1.442) | (0.627) | (0.375) | (0.073) | (2.247) | (0.854) | (0.385) | (0.082) |
| **Migrant*After** | **28.531***** | **10.830***** | **-0.139** | **0.288**** | **26.595***** | **10.063***** | **0.069** | **0.261**** |
| | **(7.943)** | **(2.695)** | **(0.573)** | **(0.116)** | **(8.736)** | **(2.843)** | **(0.632)** | **(0.113)** |
| | | | | | | | | |
| Birth Country Dummies | No | No | No | No | Yes | Yes | Yes | Yes |
| Individual Controls | No | No | No | No | Yes | Yes | Yes | Yes |
| N | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 |
| Adjusted R$^2$ | 0.203 | 0.238 | -0.004 | 0.020 | 0.294 | 0.353 | 0.037 | 0.090 |

*Source:* Authors' calculations based on the Gallup World Poll, 2009-2013.

*Notes:* Difference-in-Differences estimation using robust standard errors, clustered at the country of origin level (in parentheses). Household income is in 1,000s of international dollars (ID), which allows comparisons across countries and time. The variable "Household Income Per Household Member" is constructed by dividing total household income (in 1,000s ID) by the number of household members. "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. "Freedom" is a binary variable coded as 1 if the respondent is satisfied with his or her freedom to choose in life and as 0 otherwise. The individual control variables include: age, age squared, gender, religion dummies, and education.

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

### 6.2. EU-10 Migrants

Of particular interest to national governments and EU policymakers alike is how migrants from the recent EU enlargements fare in the destination countries. To examine this question, we focus on EU-10 immigrants in the advanced EU countries.[20] Tables A.3-A.4 show the summary statistics for this sample. Only Slovakia is not represented among the EU-10 migrants and the top origin countries are Poland, Romania, and Lithuania, and the top destinations are Germany, Spain, and Ireland. Migrants appear to have higher incomes, SWB, and perceptions of freedom in the destination countries (see table A.4).

Table 7 shows the results from this alternative specification. The main results and conclusions still hold, albeit with some nuances. First, while the household earnings premium is still sizeable and statistically significant, it is smaller in magnitude.[21] This is unsurprising as EU-10 migrants are leaving countries that are wealthier, on average, than the non-EU transition countries. The SWB benefit from migration is still sizeable – 1.3 on average compared with 1.2 in the main results. There are also sizeable gains in satisfaction with freedom, which are larger than those in the main analysis sample. When Bulgaria and Romania – the poorest and unhappiest EU members – are excluded from the source countries, the household income premium rises to 21,000 ID (12,700 ID per household member), the evaluative well-being gain is 1.8, and satisfaction with freedom increases by 44 percent on average.[22]

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[20] See footnote 4 for the list of transition countries that are EU members. Croatia is excluded from the sending countries as it only joined the EU in 2013. The advanced EU countries include the EU-15 and Malta and Cyprus.
[21] The earnings premium per household member of 9,100 ID is similar to that in the main sample (10,500 ID).
[22] Results available upon request.

**Table 7.** EU Sample, DID Results

| | Full Sample No Covariates | | | | Full Sample With Covariates | | | |
|---|---|---|---|---|---|---|---|---|
| | (1) | (2) HH Income | (3) | (4) | (5) | (6) HH Income | (7) | (8) |
| | Household Income | Per HH Member | BPL | Freedom | Household Income | Per HH Member | BPL | Freedom |
| Migrant (1=Yes) | 1.775 | 0.133 | -0.675** | -0.124* | 1.092 | -0.256 | -0.687* | -0.135* |
| | (2.164) | (0.686) | (0.245) | (0.065) | (2.340) | (0.750) | (0.309) | (0.064) |
| After Migration (1=Yes) | 1.508 | 0.146 | -0.085 | -0.035 | 1.144 | -0.255 | 0.076 | -0.020 |
| | (1.945) | (0.880) | (0.250) | (0.067) | (2.660) | (1.076) | (0.308) | (0.076) |
| **Migrant*After** | **15.475**** | **9.172*****| **1.432*****| **0.377*****| **14.866**** | **9.093**** | **1.325*****| **0.354***** |
| | **(5.217)** | **(2.667)** | **(0.328)** | **(0.085)** | **(5.383)** | **(2.751)** | **(0.384)** | **(0.081)** |
| Birth Country Dummies | No | No | No | No | Yes | Yes | Yes | Yes |
| Individual Controls | No | No | No | No | Yes | Yes | Yes | Yes |
| N | 316 | 316 | 316 | 316 | 316 | 316 | 316 | 316 |
| Adjusted $R^2$ | 0.132 | 0.189 | 0.037 | 0.064 | 0.276 | 0.326 | 0.096 | 0.110 |

*Source:* Authors' calculations based on the Gallup World Poll, 2008-2013.

*Notes:* Difference-in-Differences estimation using robust standard errors, clustered at the country of origin level (in parentheses). Household income is in 1,000s of international dollars (ID), which allows comparisons across countries and time. The variable "Household Income Per Household Member" is constructed by dividing total household income (in 1,000s ID) by the number of household members. "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. "Freedom" is a binary variable coded as 1 if the respondent is satisfied with his or her freedom to choose in life and as 0 otherwise. The individual control variables include: age, age squared, gender, religion dummies, and education.

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

### 6.3. Return Migration

Return migration poses a validity threat as it is possible that because of the economic crisis or some other circumstances, those with the lowest SWB, satisfaction with freedom, and/or the least skilled immigrants returned back to their home countries.[23] Return migration may also be undertaken to correct errors in the initial migration decision or because the migrant has acquired human capital valued at home (Borjas, 2014). While not causal, research finds that Romanian returnees are unhappier than stayers (Bartram, 2012).

While GWP does not explicitly inquire about return migration, two questions could be used to shed some light: (i) whether respondents have lived in a foreign country for more than six months (asked in 2009-2012 in all transition economies except Mongolia) and (ii) whether the respondent went abroad in the past five years to make money (asked in 2007 in several transition economies). We do not have information on the country of residence prior to return, duration of stay, or reason for return. However, a follow-up question specifically asks respondents whether their social status increased, fell, or did not change as a result of going abroad to make money in the past five years. Of the 624 respondents who gave valid answers to this question, social status fell for about a third (34 percent) and did not change for about 43 percent.

To examine whether return migration biases our results, we matched returnees in transition economies (the treatment group) with immigrants from transition countries still living in the advanced countries (the controls). We used PSM and the following matching covariates: age, age squared, religion, education, country of birth, and year. We forced exact matching by

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[23] There have been no large outflows of migrants due to the economic crisis as 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).

country of birth and year. When "Went Abroad to Make Money" is the treatment variable, religion and year are excluded from the matching covariates due to missing observations and the fact that the data are for 2007 only, respectively.[24]

We used nearest neighbor matching without replacement with two calipers – 0.01 and 0.001 (see table 8), which provides results that generally satisfy the balancing property (tables A.5-A.7). The results suggest that return migration is associated with lower incomes and SWB (BPL) regardless of the matching procedure and the treatment variable used. Taken at face value, the results in Table 8 imply that the household income penalty due to return migration is between 14,500 and 18,700 ID, depending on the model, while BPL declines are between 0.7 and 1.7. The results regarding satisfaction with freedom are not robust, however.

These results should be treated with caution as we do not know whether the lower earnings and SWB are because of return migration or because of selection issues. In this instance, total bias reduction is impossible as we cannot include a large number of covariates (due the restriction that the treatment cannot influence the matching variables). Thus, while return migration may be a validity threat, it is unlikely that it is driving all the results in this paper.

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[24] While 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 Roma from France (Papademetriou, Sumption, Terrazas, Loyal, & Ferrero-Turrión, 2010). There is little information on the demographic profile of those who left, however.

**Table 8.** Return Migration and Well-being, Average Treatment Effect using Propensity Score Matching

**Treatment: Lived Abroad for More than 6 Months; Nearest Neighbor Matching without replacement, caliper=0.01**

| Outcome | N Treatment | N Control | Average Outcome Treatment | Average Outcome Control | ATT | S.E. | t-stat |
|---|---|---|---|---|---|---|---|
| Household Income | 252 | 1,245 | 13.639 | 29.479 | -15.840 | 1.869 | -8.480 |
| Best Possible Life (BPL) | 252 | 1,245 | 5.480 | 6.155 | -0.675 | 0.195 | -3.470 |
| Satisfied with Freedom in Life | 252 | 1,245 | 0.655 | 0.821 | -0.167 | 0.039 | -4.330 |

**Treatment: Lived Abroad for More than 6 Months; Nearest Neighbor Matching without replacement, caliper=0.0001**

| Outcome | N Treatment | N Control | Average Outcome Treatment | Average Outcome Control | ATT | S.E. | t-stat |
|---|---|---|---|---|---|---|---|
| Household Income | 76 | 1,245 | 12.710 | 27.175 | -14.465 | 3.630 | -3.980 |
| Best Possible Life (BPL) | 76 | 1,245 | 5.145 | 6.395 | -1.250 | 0.350 | -3.570 |
| Satisfied with Freedom in Life | 76 | 1,245 | 0.645 | 0.776 | -0.132 | 0.073 | -1.800 |

**Treatment: Went Abroad to Make Money; Nearest Neighbor Matching without replacement, caliper=0.01**

| Outcome | N Treatment | N Control | Average Outcome Treatment | Average Outcome Control | ATT | S.E. | t-stat |
|---|---|---|---|---|---|---|---|
| Household Income | 42 | 700 | 10.042 | 28.732 | -18.690 | 2.967 | -6.300 |
| Best Possible Life (BPL) | 42 | 700 | 5.405 | 7.143 | -1.738 | 0.422 | -4.110 |
| Satisfied with Freedom in Life | 42 | 700 | 0.595 | 0.762 | -0.167 | 0.101 | -1.640 |

*Source:* Authors' calculations based on the Gallup World Poll.

*Notes:* ATT=Average Treatment Effect. The data are for 2008-2012 when the treatment is whether the respondent lived abroad fro more than 6 months, and for 2007 when the treatment is whether the respondent went abroad in the past 5 years to make money. 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 from transition economies in advanced countries. The matching variables include: age, age squared, religion, education, country of birth, and year. We force exact matching by country of birth and year (year is excluded when the treatment is "Went Abroad to Make Money"). When "Went Abroad to Make Money" is the treatment variable, religion and year are excluded from the matching covariates. Household income is in 1,000s of international dollars (ID), which allows comparisons across countries and time. 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. "Freedom" is a binary variable coded as 1 if the respondent is satisfied with his or her freedom to choose in life and as 0 otherwise. Balancing tests available in Tables A.5-A.7.

### 7. Channels

This paper's empirical strategy explicitly allows us to explore the well-being consequences of migration but not the pathways leading to them. Theoretically, several mechanisms could be enhancing the well-being of migrants from transition economies. As the channels affecting income are straightforward, we focus on the SWB and freedom dimensions.

First, migration could enhance SWB through the positive income gains. For example, Olgiati, Calvo, and Berkman (2013) show that income is associated with higher global life evaluation and life satisfaction among immigrants in 16 advanced countries. Moreover, income and SWB are positively correlated in transition economies (Easterlin, 2009). In addition, CEE migrants move to the EU-15 for employment (Kahanec, 2013). Therefore, they likely migrate because of better employment and income opportunities and freedoms, which may also enhance their SWB. The consistently positive effect on the satisfaction with freedom outcome in this paper highlights this channel.

Second, while the majority of the studies find a negative association between happiness and migration, the results depend on country of origin (Simpson, 2014). Research using GWP data shows that North-to-North migrants experience gains in various perceived well-being dimensions, unlike migrants moving from other contexts (Esipova et al., 2013). The countries from which the migrants in this paper moved are relatively advanced and culturally similar to the destination countries, which likely facilitates their assimilation and adaptation.

Third, there are several mechanisms that could also decrease migrant SWB. Psychological distress from separation from one's family and friends (i.e., loss of social capital), culture shock, loss of cultural identity, changing reference norms, and rising expectations likely

lower the perceived well-being of migrants. While these same issues are also likely to affect

migrants from transition economies to the EU, they face far fewer barriers to returning to their

home countries to visit than, for example, South-to-North migrants. Finally, 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 socializing,

leading to isolation (Ribar, 2013). Despite these opposite effects of migration on SWB, it seems

that the positive channels dominate in this analysis sample.

## 8. Limitations

We acknowledge several limitations. First, despite the use of matching and DID, our

results could suffer from selection bias. While movers and stayers are similar based on

observable characteristics, a non-experimental technique cannot fully address selection bias from

unobservables. Although we match on education, which is a proxy for ability, unobservable

factors such as motivation and skills likely positively bias our results. While we cannot provide a

precise estimate of the size of this bias, one study's findings imply that the migration gains we

find are likely overstated by at least about 20 percent (McKenzie et al., 2010).[25]

Second, while our empirical strategy explicitly addresses selection, it does not deal with

endogeneity. Since we only have cross-sectional data, we cannot establish whether the positive

well-being effects are because of migration or because respondents with greater a priori well-

being are more likely to migrate. The research shows, however, that lower levels of life

satisfaction are correlated with the migration decision for migrants from transition economies

(Otrachshenko & Popova, 2014) and Latin America (Graham and Markowitz, 2011). The SWB

gains from migration, therefore, are unlikely to be due to the positive SWB selection of migrants.

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[25] Moreover, the empirical strategy is based on assumptions, some of which are untestable.

Third, since GWP is not specifically designed to study migrants, it has several limitations. GWP does not distinguish between voluntary and involuntary migrants, lacks information on year of arrival in the destination country and detailed information on return migration, which is problematic. Due to the limited number of observations, we do not distinguish between migrants who arrived in the host country in the past five years or later. Since the majority of immigrants are established, they could have simply adapted to living in the destinations. Fourth, caution is necessary when extrapolating these results to other countries and contexts. The well-being effects of migration likely differ depending on the migrant cohort studied, the destination countries, and the well-being metrics employed.

## 9. Policy Implications and Conclusion

This study asked whether migration improves the well-being of immigrants from transition economies who moved to advanced economies. Using cross-sectional data from the Gallup World Poll (GWP) and a methodology combining statistical matching with difference-in-differences, we show that migration enhances well-being. The mean household earnings premium is about 21,000 ID and the average life satisfaction benefit is about 1.0 -1.2 on a scale of 0-10. Movers from the EU-10 to the rest of the EU realize even larger SWB gains of up to 1.4 (1.8 when we exclude Bulgarians and Romanians). Moreover, migration increases freedom satisfaction by about 26-28 percent on average. The results are generally robust to several robustness checks.

The "happiness and migration" literature suggests that increases in income post-migration may be accompanied by declining happiness because of adaptation and rising aspirations. While migrants' (absolute) incomes increase, so do their expectations as they compare themselves to high-earning natives in the host countries. We find, however, that migrants from transition

countries are in fact happier after they go abroad. This suggests that even if their reference norms and aspirations change, movers' objective and subjective quality of life improves post-migration. The relevance of these results for immigrants from other world regions is an empirical question for future research.

Although migration may have positive well-being effects while also allowing movers to escape the opportunity constraints at home, it is not a comprehensive development strategy. 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). And while it may enhance individual well-being and autonomy, as we find, it may have negative consequences for the happiness of family members left behind (Borraz, Pozo, & Rossi, 2010; Jones, 2014). Future research is needed to understand if migration can enhance individual well-being without negative effects on the "common good" in the sending countries.

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**Appendix**

**Table A.1.** Analysis Sample, Matching with Those Planning to Move, Source and Destination Countries

| Birth Country | Freq. | Percent | Residence Country | Freq. | Percent |
|---|---|---|---|---|---|
| Romania | 13 | 24.530 | Italy | 10 | 18.870 |
| Poland | 8 | 15.090 | Germany | 9 | 16.980 |
| Bulgaria | 4 | 7.550 | Austria | 7 | 13.210 |
| Croatia | 4 | 7.550 | Spain | 5 | 9.430 |
| Estonia | 3 | 5.660 | Greece | 5 | 9.430 |
| Lithuania | 3 | 5.660 | Finland | 3 | 5.660 |
| Kosovo | 3 | 5.660 | France | 2 | 3.770 |
| Czech Republic | 2 | 3.770 | Sweden | 2 | 3.770 |
| Russia | 2 | 3.770 | Australia | 2 | 3.770 |
| Albania | 2 | 3.770 | Ireland | 2 | 3.770 |
| Serbia | 2 | 3.770 | Switzerland | 2 | 3.770 |
| Hungary | 1 | 1.890 | Netherlands | 1 | 1.890 |
| Georgia | 1 | 1.890 | Denmark | 1 | 1.890 |
| Moldova | 1 | 1.890 | Canada | 1 | 1.890 |
| Bosnia and Herzegovina | 1 | 1.890 | New Zealand | 1 | 1.890 |
| Macedonia | 1 | 1.890 | | | |
| Slovakia | 1 | 1.890 | | | |
| Slovenia | 1 | 1.890 | | | |
| **Total** | **53** | **100.000** | **Total** | **53** | **100.000** |

*Source:* Authors' calculations based on the Gallup World Poll, 2009-2013.

**Table A.2.** Summary Statistics, Analysis Sample, Matching with Those Planning to Move

| Variables | Migrants After Group 1 | | Migrants Before Group 2 | | Stayers After Group 4 | | Stayers Before Group 3 | |
|---|---|---|---|---|---|---|---|---|
| | **Mean** | **Std. Dev.** | **Mean** | **Std. Dev.** | **Mean** | **Std. Dev.** | **Mean** | **Std. Dev.** |
| *Outcome Variables* | | | | | | | | |
| Household Income (in 1,000s ID) | 39.358 | 32.295 | 15.950 | 25.566 | 14.704 | 10.607 | 14.094 | 12.181 |
| HH Income Per HH Member (in 1,000s ID) | 18.052 | 14.136 | 7.499 | 8.436 | 6.769 | 6.122 | 5.762 | 4.421 |
| Best Possible Life (BPL) (0-10) | 6.245 | 1.890 | 5.981 | 2.414 | 5.830 | 2.164 | 5.755 | 2.139 |
| Satisfaction with Freedom | 0.717 | 0.455 | 0.585 | 0.497 | 0.660 | 0.478 | 0.755 | 0.434 |
| *Matching Variables* | | | | | | | | |
| Age | 42.943 | 13.226 | 32.547 | 10.451 | 42.170 | 13.978 | 34.585 | 9.029 |
| Female (1=Yes) | 0.660 | 0.478 | 0.660 | 0.478 | 0.660 | 0.478 | 0.660 | 0.478 |
| Catholic (1=Yes) | 0.340 | 0.478 | 0.340 | 0.478 | 0.340 | 0.478 | 0.340 | 0.478 |
| Protestant (1=Yes) | 0.075 | 0.267 | 0.075 | 0.267 | 0.075 | 0.267 | 0.075 | 0.267 |
| Orthodox (1=Yes) | 0.472 | 0.504 | 0.472 | 0.504 | 0.472 | 0.504 | 0.472 | 0.504 |
| Muslim (1=Yes) | 0.075 | 0.267 | 0.075 | 0.267 | 0.075 | 0.267 | 0.075 | 0.267 |
| No religion/Agnostic (1=Yes) | 0.038 | 0.192 | 0.038 | 0.192 | 0.038 | 0.192 | 0.038 | 0.192 |
| Elementary Education (1=Yes) | 0.038 | 0.192 | 0.038 | 0.192 | 0.038 | 0.192 | 0.038 | 0.192 |
| Completed Secondary Education (1=Yes) | 0.660 | 0.478 | 0.660 | 0.478 | 0.660 | 0.478 | 0.660 | 0.478 |
| Some College Education/ College Graduate (1=Yes) | 0.302 | 0.463 | 0.302 | 0.463 | 0.302 | 0.463 | 0.302 | 0.463 |

*Source:* Authors' calculations based on the Gallup World Poll, 2009-2013.

*Notes:* The number of observations in each group is 53. All statistics are for 2009-2013 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 1,000s of international dollars (ID), which allows comparisons across countries and time. The variable "Household Income Per Household Member" is constructed by dividing total household income (in 1,000s ID) by the number of household members. "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. "Freedom" is a binary variable coded as 1 if the respondent is satisfied with his or her freedom to choose in life and as 0 otherwise.

**Table A.3.** EU Sample Analysis Sample, Source and Destination Countries

| Birth Country | Freq. | Percent | Residence Country | Freq. | Percent |
|---|---|---|---|---|---|
| Poland | 26 | 32.910 | Germany | 21 | 26.580 |
| Romania | 25 | 31.650 | Spain | 15 | 18.990 |
| Lithuania | 9 | 11.390 | Ireland | 12 | 15.190 |
| Hungary | 6 | 7.590 | Italy | 10 | 12.660 |
| Slovenia | 6 | 7.590 | Austria | 10 | 12.660 |
| Bulgaria | 4 | 5.060 | Greece | 3 | 3.800 |
| Czech | 1 | 1.270 | France | 2 | 2.530 |
| Estonia | 1 | 1.270 | Sweden | 2 | 2.530 |
| Latvia | 1 | 1.270 | Denmark | 2 | 2.530 |
| | | | Belgium | 1 | 1.270 |
| | | | Finland | 1 | 1.270 |
| **Total** | **79** | **100.000** | **Total** | **79** | **100.000** |

*Source:* Authors' calculations based on the Gallup World Poll, 2009-2013.

**Table A.4.** Summary Statistics, Analysis Sample, Matching with Those Planning to Move

| Variables | Migrants After Group 1 | | Migrants Before Group 2 | | Stayers After Group 4 | | Stayers Before Group 3 | |
|---|---|---|---|---|---|---|---|---|
| | Mean | Std. Dev. | Mean | Std. Dev. | Mean | Std. Dev. | Mean | Std. Dev. |
| *Outcome Variables* | | | | | | | | |
| Household Income (in 1,000s ID) | 31.337 | 26.658 | 14.578 | 16.114 | 14.573 | 9.625 | 15.706 | 18.609 |
| HH Income Per HH Member (in 1,000s ID) | 16.139 | 15.574 | 5.902 | 5.995 | 6.250 | 3.820 | 7.319 | 7.090 |
| Best Possible Life (BPL) (0-10) | 6.405 | 1.971 | 4.848 | 2.248 | 5.557 | 2.459 | 5.797 | 2.127 |
| Satisfaction with Freedom | 0.886 | 0.320 | 0.595 | 0.494 | 0.671 | 0.473 | 0.658 | 0.477 |
| *Matching Variables* | | | | | | | | |
| Age | 41.937 | 12.504 | 40.139 | 13.068 | 43.241 | 11.340 | 40.848 | 12.356 |
| Female (1=Yes) | 0.557 | 0.500 | 0.557 | 0.500 | 0.557 | 0.500 | 0.557 | 0.500 |
| Catholic (1=Yes) | 0.582 | 0.496 | 0.582 | 0.496 | 0.582 | 0.496 | 0.582 | 0.496 |
| Protestant  (1=Yes) | 0.025 | 0.158 | 0.025 | 0.158 | 0.025 | 0.158 | 0.025 | 0.158 |
| Orthodox  (1=Yes) | 0.354 | 0.481 | 0.354 | 0.481 | 0.354 | 0.481 | 0.354 | 0.481 |
| No religion/Agnostic  (1=Yes) | 0.038 | 0.192 | 0.038 | 0.192 | 0.038 | 0.192 | 0.038 | 0.192 |
| Elementary Education (1=Yes) | 0.089 | 0.286 | 0.089 | 0.286 | 0.089 | 0.286 | 0.089 | 0.286 |
| Completed Secondary Education (1=Yes) | 0.747 | 0.438 | 0.747 | 0.438 | 0.747 | 0.438 | 0.747 | 0.438 |
| Some College Education/ College Graduate (1=Yes) | 0.165 | 0.373 | 0.165 | 0.373 | 0.165 | 0.373 | 0.165 | 0.373 |

*Source:* Authors' calculations based on the Gallup World Poll, 2009-2013.

*Notes:* The number of observations in each group is 53. All statistics are for 2009-2013 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 1,000s of international dollars (ID), which allows comparisons across countries and time. The variable "Household Income Per Household Member" is constructed by dividing total household income (in 1,000s ID) by the number of household members. "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. "Freedom" is a binary variable coded as 1 if the respondent is satisfied with his or her freedom to choose in life and as 0 otherwise.

**Table A.5.** Balancing Tests, Return Migration Matching, Nearest Neighbor Matching Without Replacement, Caliper=0.01

| Variable | Mean | | % Bias | t-stat | p-value |
|---|---|---|---|---|---|
| | Treated | Control | | | |
| Age | 43.083 | 43.325 | -1.400 | -0.170 | 0.869 |
| Age Squared | 2150.000 | 2119.900 | 1.800 | 0.210 | 0.832 |
| Female | 0.683 | 0.635 | 9.700 | 1.130 | 0.260 |
| Elementary Education | 0.075 | 0.083 | -2.800 | -0.330 | 0.742 |
| Completed Secondary Education | 0.575 | 0.579 | -0.800 | -0.090 | 0.928 |
| Some College Education/College Graduate | 0.349 | 0.337 | 2.600 | 0.280 | 0.779 |
| Poland | 0.048 | 0.048 | 0.000 | 0.000 | 1.000 |
| Hungary | 0.012 | 0.012 | 0.000 | 0.000 | 1.000 |
| Czech Republic | 0.028 | 0.028 | 0.000 | 0.000 | 1.000 |
| Romania | 0.052 | 0.052 | 0.000 | 0.000 | 1.000 |
| Belarus | 0.008 | 0.008 | 0.000 | 0.000 | 1.000 |
| Georgia | 0.067 | 0.067 | 0.000 | 0.000 | 1.000 |
| Kazakhstan | 0.040 | 0.040 | 0.000 | 0.000 | 1.000 |
| Kyrgyzstan | 0.008 | 0.008 | 0.000 | 0.000 | 1.000 |
| Moldova | 0.063 | 0.063 | 0.000 | 0.000 | 1.000 |
| Russia | 0.282 | 0.282 | 0.000 | 0.000 | 1.000 |
| Ukraine | 0.063 | 0.063 | 0.000 | 0.000 | 1.000 |
| Albania | 0.111 | 0.111 | 0.000 | 0.000 | 1.000 |
| Armenia | 0.028 | 0.028 | 0.000 | 0.000 | 1.000 |
| Bosnia and Herzegovina | 0.028 | 0.028 | 0.000 | 0.000 | 1.000 |
| Bulgaria | 0.044 | 0.044 | 0.000 | 0.000 | 1.000 |
| Croatia | 0.012 | 0.012 | 0.000 | 0.000 | 1.000 |
| Estonia | 0.024 | 0.024 | 0.000 | 0.000 | 1.000 |
| Latvia | 0.012 | 0.012 | 0.000 | 0.000 | 1.000 |
| Lithuania | 0.016 | 0.016 | 0.000 | 0.000 | 1.000 |
| Macedonia | 0.016 | 0.016 | 0.000 | 0.000 | 1.000 |
| Serbia | 0.020 | 0.020 | 0.000 | 0.000 | 1.000 |
| Slovakia | 0.008 | 0.008 | 0.000 | 0.000 | 1.000 |
| Slovenia | 0.004 | 0.004 | 0.000 | 0.000 | 1.000 |
| Uzbekistan | 0.008 | 0.008 | 0.000 | 0.000 | 1.000 |
| Catholic | 0.190 | 0.187 | 1.100 | 0.110 | 0.910 |
| Protestant | 0.135 | 0.083 | 17.200 | 1.860 | 0.063 |
| Christianity: Orthodox | 0.393 | 0.488 | -20.600 | -2.160 | 0.031 |
| Islam/Muslim | 0.111 | 0.095 | 4.600 | 0.580 | 0.559 |
| Judaism | 0.008 | 0.008 | 0.000 | 0.000 | 1.000 |
| No Religion/Agnostic | 0.147 | 0.111 | 14.400 | 1.200 | 0.232 |
| Christian | 0.016 | 0.028 | -6.900 | -0.910 | 0.361 |
| Year 2009 | 0.111 | 0.111 | 0.000 | 0.000 | 1.000 |
| Year 2010 | 0.143 | 0.143 | 0.000 | 0.000 | 1.000 |
| Year 2011 | 0.587 | 0.587 | 0.000 | 0.000 | 1.000 |
| Year 2012 | 0.159 | 0.159 | 0.000 | 0.000 | 1.000 |
| **Mean Bias** | **Before** | **21.488** | | | |
| | **After** | **1.680** | | | |

**Table A.6.** Balancing Tests, Return Migration Matching, Nearest Neighbor Matching Without Replacement, Caliper=0.0001

| Variable | Mean | | % Bias | t-stat | p-value |
| --- | --- | --- | --- | --- | --- |
| | **Treated** | **Control** | | | |
| Age | 40.711 | 40.474 | 1.400 | 0.100 | 0.921 |
| Age Squared | 1884.000 | 1842.600 | 2.500 | 0.180 | 0.854 |
| Female | 0.711 | 0.684 | 5.300 | 0.350 | 0.726 |
| Elementary Education | 0.053 | 0.053 | 0.000 | 0.000 | 1.000 |
| Completed Secondary Education | 0.632 | 0.632 | 0.000 | 0.000 | 1.000 |
| Some College Education/College Graduate | 0.316 | 0.316 | 0.000 | 0.000 | 1.000 |
| Poland | 0.053 | 0.053 | 0.000 | 0.000 | 1.000 |
| Romania | 0.026 | 0.026 | 0.000 | 0.000 | 1.000 |
| Georgia | 0.132 | 0.132 | 0.000 | 0.000 | 1.000 |
| Kazakhstan | 0.013 | 0.013 | 0.000 | 0.000 | 1.000 |
| Kyrgyzstan | 0.013 | 0.013 | 0.000 | 0.000 | 1.000 |
| Moldova | 0.066 | 0.066 | 0.000 | 0.000 | 1.000 |
| Russia | 0.368 | 0.368 | 0.000 | 0.000 | 1.000 |
| Ukraine | 0.053 | 0.053 | 0.000 | 0.000 | 1.000 |
| Albania | 0.039 | 0.039 | 0.000 | 0.000 | 1.000 |
| Armenia | 0.079 | 0.079 | 0.000 | 0.000 | 1.000 |
| Bosnia | 0.039 | 0.039 | 0.000 | 0.000 | 1.000 |
| Bulgaria | 0.013 | 0.013 | 0.000 | 0.000 | 1.000 |
| Estonia | 0.026 | 0.026 | 0.000 | 0.000 | 1.000 |
| Latvia | 0.039 | 0.039 | 0.000 | 0.000 | 1.000 |
| Lithuania | 0.026 | 0.026 | 0.000 | 0.000 | 1.000 |
| Slovenia | 0.013 | 0.013 | 0.000 | 0.000 | 1.000 |
| Religion: Other | 0.013 | 0.000 | 29.500 | 1.000 | 0.319 |
| Catholic | 0.105 | 0.118 | -3.800 | -0.260 | 0.799 |
| Protestant | 0.079 | 0.079 | 0.000 | 0.000 | 1.000 |
| Christianity: Orthodox | 0.579 | 0.658 | -17.100 | -1.000 | 0.320 |
| Islam/Muslim | 0.079 | 0.079 | 0.000 | 0.000 | 1.000 |
| Buddhism | 0.013 | 0.000 | 52.500 | 1.000 | 0.319 |
| Judaism | 0.013 | 0.013 | 0.000 | 0.000 | 1.000 |
| No Religion/Agnostic | 0.066 | 0.039 | 10.600 | 0.720 | 0.471 |
| Christian | 0.053 | 0.013 | 22.900 | 1.360 | 0.175 |
| Year 2009 | 0.066 | 0.066 | 0.000 | 0.000 | 1.000 |
| Year 2010 | 0.158 | 0.158 | 0.000 | 0.000 | 1.000 |
| Year 2011 | 0.618 | 0.618 | 0.000 | 0.000 | 1.000 |
| Year 2012 | 0.158 | 0.158 | 0.000 | 0.000 | 1.000 |
| **Mean Bias** | **Before** | **21.488** | | | |
| | **After** | **3.721** | | | |

**Table A.7.** Balancing Tests, Return Migration Matching, Nearest Neighbor Matching Without Replacement, Caliper=0.01

| Variable | Mean | | % Bias | t-stat | p-value |
| --- | --- | --- | --- | --- | --- |
| | Treated | Control | | | |
| Age | 38.310 | 38.238 | 0.500 | 0.030 | 0.979 |
| Age Squared | 1629.100 | 1600.500 | 2.100 | 0.130 | 0.899 |
| Female | 0.405 | 0.429 | -5.000 | -0.220 | 0.827 |
| Elementary Education | 0.000 | 0.024 | -15.700 | -1.000 | 0.320 |
| Completed Secondary Education | 0.738 | 0.810 | -15.300 | -0.780 | 0.440 |
| Some College Education/College Graduate | 0.262 | 0.167 | 20.700 | 1.060 | 0.293 |
| Georgia | 0.286 | 0.286 | 0.000 | 0.000 | 1.000 |
| Kyrgyzstan | 0.095 | 0.095 | 0.000 | 0.000 | 1.000 |
| Russia | 0.286 | 0.286 | 0.000 | 0.000 | 1.000 |
| Ukraine | 0.214 | 0.214 | 0.000 | 0.000 | 1.000 |
| Armenia | 0.048 | 0.048 | 0.000 | 0.000 | 1.000 |
| Azerbaijan | 0.071 | 0.071 | 0.000 | 0.000 | 1.000 |
| **Mean Bias** | **Before** | **46.597** | | | |
| | **After** | **3.488** | | | |