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Potential migration and subjective well-being in Europe

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Abstract

By examining the preferences over migration destinations of those revealing a desire to permanently leave their country, this paper provides new evidence on the relevance of subjective measures for cross country comparisons. While hard statistics such as GDP per capita and unemployment rates are commonly used to measure a country's success, this analysis reveals that people's preferences over alternative migration destinations are better explained by average levels of life satisfaction in the destination country. Aggregated measures of subjective well-being are, therefore, useful for international comparisons as they better reflect what makes some countries more attractive than others.

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Keywords: Subjective well-being; Intention to migrate; Migration destinations; Europe

1 Introduction

Income per capita is commonly used to measure a country's level of well-being, and it has often been considered the best approximation of quality of life across countries. More recently the consensus over the use of GDP per capita as a measure of a country level of success has started to fade (Stiglitz et al. 2010). New ways of measuring well-being have emerged that tend to combine multiple objective statistics (for example, the well-known Human Development Index (UNDP 2011)) and, less frequently, also subjective measures that capture people's perceptions and expectations (Cummins 2012).

The growing research on subjective well-being has promoted the use of people's evaluations of their own life as indicators of the quality of life in a country (Layard 2005). However, there are some concerns about the suitability of these measures for international comparisons. Issues related to adaptation and changes in aspirations pose some challenges to the use of subjective data for measuring well-being (Dolan and White 2007). Moreover, cultural differences and translation problems raise additional concerns about the validity of cross-country comparisons (Stevenson and Wolfers 2008).

This paper provides new evidence on the relevance of subjective measures for international comparisons by investigating the determinants of destination choices of potential migrants, i.e., those people revealing a desire to permanently leave their country. While hard statistics such as GDP per capita and unemployment rates are commonly used by governments to measure a country's progress, people may use alternative criteria

to assess a country's level of success. The analysis of migration decisions of potential migrants, i.e., those people willing to leave their country, can help identify measures that best capture what makes some countries more attractive and, in those terms, more successful.

Research on lifestyle migration, defined as the relocation of people within the developed world searching for a better way of life, shows that migrants explain their specific choice of destination considering factors such as the relative cost of living, pace of life, health benefits and feeling of community (Benson and O'Reilly 2009). Information on potential migrants' choices offers the opportunity to test which metrics best capture these various aspects of quality of life from the perspectives of those people that show an explicit interest in improving their own life experience.

People form their opinions on the level of well-being and opportunities in other countries through various sources of information, contacts or personal traveling. The analysis conducted in this paper focuses on respondents in European countries since the flow of information in these countries is likely to be more homogeneous and comprehensive than in developing countries. In particular, the analysis uses individual-level data from the Gallup World Poll on about 11,000 individuals, obtained from comparable surveys in 25 European countries. Individuals are asked to express their desire to move permanently to another country and to state in which country they would like to move. This paper is the first to combine individual-level potential migration choices with subjective wellbeing measures in the destination countries. This study differs from those pertaining to the migration literature mainly because the preferences over destinations are not influenced by external commitments (for example job or family) and do not necessarily imply that the migration plan is feasible. The trade-offs in using potential migration versus actual migration data are more extensively explored in the next sections.

The analysis of the socio-demographic characteristics of potential migrants show that they tend to be younger, more educated and richer than other respondents. They also evaluate their own life less positively and are more likely to perceive that the businesses and the government in their home country are corrupt. The analysis of migration destinations is conducted using a conditional logit model that relates people's choices to the characteristics of the most selected destinations. Beyond national-level measures commonly used in migration studies, such as income and unemployment, the analysis includes other measures of quality of life such as the average life satisfaction and perception of corruption. The inclusion of these variables provides new insights into which measures, beyond standard objective statistics, better proxy what makes a country appealing and, therefore, successful in the view of the people.

The results show that potential migrants are attracted by countries where the average life satisfaction is higher and the average perception of corruption is lower, although this latter effect is less robust. On the other hand, GDP per capita is negatively associated with the probability of choosing a particular destination, and unemployment levels have a negative but small influence on a country's attractiveness. The results suggest that average life satisfaction measures and, to a lesser extent, people's perceptions over corruption better reflect the level of success of a country than standard macroeconomic statistics.

The paper is structured as follows. Section 2 provides a brief review of the literature on subjective well-being and migration. Section 3 describes the empirical strategy adopted to analyze the characteristics of the potential migrants and the determinants of preferred migration destinations. Section 4 presents the data and the descriptive statistics. Section 5 discusses the empirical results, and Section 6 concludes.

2 Migration and subjective well-being

This paper adopts the framework used by several studies in the migration literature. The migration literature is vast, and many studies analyze the preferences of “actual” migrants over alternative destination choices. The majority of the papers analyze migration flows across countries and combine these data with country-level information on both the home and host countries (Mayda 2010 and De Giorgi and Pellizzari 2009). Most papers find that human capital and its transferability are the main explanatory factors for the choice of a particular destination location.

Fewer studies have been conducted to understand the links between subjective well-being and migration. Simpson (2013) provides a comprehensive survey of this literature. Blanchflower and Shadforth (2009), for example, find that the propensity to migrate of temporary migrants in the UK is more highly correlated with life satisfaction than it is with GDP per capita in the country of origin. At the micro-level, existing studies mainly focus on the level of life satisfaction of actual migrants before and/or after migration. For instance, Fuchs-Schündeln and Schündeln (2009) find that life satisfaction of permanent migrants from Eastern to Western Germany during the period 1991 to 2006 increases significantly after a move, while that of temporary migrants remains unchanged. Safi (2010) looks at differences in life satisfaction between the first and second-generation migrants in 13 European countries and finds that they have a lower level of satisfaction than natives. Finally, Graham and Markowitz (2011) analyze the characteristics of potential migrants in 18 Latin American countries and find that they tend to report low satisfaction levels despite satisfactory objective outcomes.

A study by Pacheco et al. (2013) links quality of life measures with the choice of the migration destination. The authors use objective indicators, such as immunization rates and population density, to measure non-economic wellbeing in the destination country. In addition, the paper uses a subjective measure of quality of life provided by the World Database of Happiness Index (Veenhoven 2012) that resembles the measure of subjective well-being used in this analysis. The authors analyze international migration flows using a gravity model and find, contrary to this study, that non-economic measures of quality of life, including the happiness index, do not explain the variation in migration flows toward 16 OECD countries. While their analysis shares the underlying framework of this study by relating migration flows to quality of life measures, it differs in various aspects. First, the analysis conducted here uses individual-level data rather than data on a national level. Second, it considers only potential migrants residing in European countries. As discussed in the next sections, migrants from developed countries are likely to have different preferences than those from developing countries. Moreover, potential migrants in developed countries are more likely to have access to a more homogenous and comprehensive set of information about the quality of life in the potential destinations, through the media and other sources of information, with consequential effects on their migration choices. Third, the analysis presented here does not focus on actual migrants but on

“potential migrants,” which are those people expressing a desire to move permanently out of their country if the opportunity arises. This is also an important difference to most of the migration literature.

Although data on potential migrants are sometimes used in the migration literature, they usually refer to people that express an intention to leave the country (rather than a desire). The use of such data is justified by empirical evidence that suggests a strong link between hypothetical and actual migration decisions. Gordon and Molho (1997), for example, find that a large proportion of people who express an intention to migrate from the UK actually move within five years. The definition of potential migrants used in this study, however, differs from that considered in Gordon and Molho (1997) because of the lack of an explicit intention to migrate by the respondents. Therefore, the analysis reported below is not intended to understand the determinants of current or future migration flows but investigates the determinants of people’s preferences over “ideal” destination locations. Nevertheless, there are many similarities with the migration literature. For example, potential migrants are expected, as actual migrants, to prefer a location where their expected objective and subjective returns to migration would be higher. Therefore, the theoretical and empirical framework used in this paper is derived from that used in the migration literature.

3 Empirical strategy

This section presents the empirical specifications adopted to analyze the characteristics of potential migrants and what influences their choices over alternative migration destinations.

3.1 A model to analyze the characteristics of potential migrants

The analysis of the characteristics of the potential migrants considers an individual’s i desire to permanently leave the home country j as a binary dependent variable d_{ij} . The model can be written as follows:

$$d_{ij} = \alpha + \mathbf{X}_{ij}\boldsymbol{\beta} + \epsilon_{ij}, \quad (1)$$

where \mathbf{X}_{ij} is a matrix of individual characteristics including age, gender, income, education, employment, marital status, satisfaction with life and perception of corruption. Given the binary nature of the dependent variable, equation 1 is estimated by employing a logit regression model, i.e., the error term ϵ_{ij} is assumed to follow a logistic distribution.

The major challenge faced in this analysis is the identification of the effect of people’s perceptions, for example, life satisfaction, on the willingness to migrate since both variables are subjective answers based on a person’s evaluation of current conditions and future prospects. The desire to migrate and life satisfaction, for example, can be both influenced by unobserved personality traits, such as an innate optimism, or incidental factors such as the weather or particular memories. It is not possible to completely address this problem, but in order to minimize the positive response bias, the empirical specification includes variables that partially capture the positive attitude of the respondent. These variables incorporate questions about people’s expectations regarding the future of the national economy and of the city’s economy. Moreover, a variable is included that explicitly asks the person whether she/he agrees with the following statement: “*Even when things go wrong, you feel very optimistic*”.

3.2 A model to analyze the determinants of migration destinations

The second part of the analysis investigates the factors that affect the likelihood of selecting one of the possible potential migration destinations. The conceptual framework follows the migration literature (De Giorgi and Pellizzari 2009), where an individual i is expected to prefer to migrate to destination d if the derived utility $U(\mathbf{x}_{id})$ is higher than in any alternative destination k among D possible alternatives:

$$U(\mathbf{x}_{id}) > U(\mathbf{x}_{ik}) \quad \text{for all } k \neq d, \quad (2)$$

where x_{id} are the characteristics of the destination country that can potentially vary across individuals. The utility has a deterministic, $V(\mathbf{x}_{id})$, and a random component, ε_{id} :

$$U(\mathbf{x}_{id}) > V(\mathbf{x}_{ik}) + \varepsilon_{id}. \quad (3)$$

For simplicity, the deterministic component is assumed linear ($V(\mathbf{x}_{id}) = \mathbf{x}_{id}\gamma$). Under the assumption that the random components are independently and identically distributed according to a type I extreme-value distribution, the probability of choosing destination d over the others is the following:

$$\Pr[\mathbf{x}_{id}\beta + \varepsilon_{id} \geq \mathbf{x}_{ik}\beta + \varepsilon_{ik} \text{ for all } k \neq d] = \frac{e^{\mathbf{x}_{id}\beta}}{\sum_{k=1}^D e^{\mathbf{x}_{ik}\beta}} = P_{id}(\mathbf{x}|\beta). \quad (4)$$

Finally the log-likelihood function for a sample of N potential migrants can be written as follows:

$$L(\beta) = \sum_{i=1}^N \sum_{d=1}^D f_{id} \log P_{id}(\mathbf{x}|\beta), \quad (5)$$

where f_{id} takes a value of one if the individual chooses destination d and zero otherwise.

This model is applied to the sample by generating D observations (one for each potential destination) for each potential migrant i . The dependent dummy variable indicates the chosen destination and each observation is associated with a set of destination characteristics. The model includes individual fixed effects (conditional logit model) and, in practice, compares alternative destinations for a given individual. Consequently, it does not allow for individual-specific characteristics. The explanatory variables considered in the analysis include variables that are common to the migration literature, such as average income (GDP per capita), unemployment rate, tax and benefit rates and share of same-origin migrants. In addition, this paper considers subjective variables such as the average level of life satisfaction and the perception of corruption and freedom in the destination countries. All regressions control for a set of destination dummies, distance, common language, warmer climate, and the share of same-nationality migrants as a fraction of total migrants in the destination country.

For some countries, the set of potential destinations include also the home country. Because the analysis focuses only on potential migrants, choosing the home country is not a feasible option and would imply a decision not to migrate. To avoid this problem, all combinations that imply that an individual is unwilling to migrate are dropped. Because each individual can only choose one of the available options, the error terms relative to an individual are correlated and require clustering at the individual level. This should also take account of possible correlations in the choices of destinations between individuals belonging to the same country of origin (Fafchamps and Shilpi 2013).

4 Data

The empirical analysis uses a repeated cross-sectional sample from the Gallup World Poll for 25 European countries for the period 2008-2011. The survey interviews about a thousand individuals annually in each country and year, with only a few exceptions. Table 1 reports the distribution of observations by country and year. In total, about 80,000 individuals were interviewed, including about 11,400 potential migrants.

The analysis considers only respondents in European countries since they are more likely to have access to a more homogeneous and developed information system and to modern communication technologies that allow them to gather relatively accurate information on other countries' economic and non-economic conditions and, therefore, to have a better informed opinion on the quality of life in other countries. Moreover, given the free movement of people granted among countries in the European Union and the relatively ease of traveling in terms of visa requirements, many respondents are likely to have personally visited at least some European or non-European countries¹.

Potential migrants are defined using the following questions from the Gallup World Poll Survey:

“Ideally, if you had the opportunity, would you like to move permanently to another country, or would you prefer to continue living in this country? (Question A1) To which country would you like to move? (Question A2)”

Table 1 Number of individuals interviewed by country and year

	Year			
	2008	2009	2010	2011
Austria	980		1,949	989
Belgium	970		953	967
Bulgaria			1,841	969
Czech Republic			1,943	922
Denmark	992	978	989	982
Estonia	561	560		983
Finland	996		994	986
France	985	976	987	980
Germany	989	1,968	995	1,149
Greece		986	990	988
Hungary		975	967	1,005
Ireland	979	472	953	955
Italy	970	957	959	902
Latvia	478	481		977
Lithuania	421	441	916	914
Malta		488	992	988
Netherlands	983		986	956
Poland		921	1,863	975
Portugal	972		1,929	969
Romania		967	933	968
Slovakia			968	973
Slovenia		498	982	978
Spain	993	995	981	985
Sweden	986	970	981	974
United Kingdom	978	973	965	1,198

To those respondents that are willing to leave their country the survey subsequently asks the following questions:

“Are you planning to move permanently to another country in the next 12 months?
 (Question B1) To which country are you planning to move? (Question B2)”

As mentioned above, potential migration does not necessarily reflect an actual commitment to migrate. In the sample, only 8% of the respondents showing a desire to migrate (Question A1) are planning to migrate within one year (Questions B1).

Table 2 reports the percentages of respondents in each country who reveal a desire to move permanently to another country if the opportunity arises. The highest percentage is observed in the United Kingdom, followed by Latvia. The percentage of potential migrants in the United Kingdom is homogenously high across survey years and reaches a peak of 30% in 2008. The country shows above-average percentages of potential migrants across all age groups and education levels. Nevertheless, the fraction of respondents that are actually planning to move within the next 12 months is lower than the sample average. The highest percentage of respondents that are planning to move is recorded in Lithuania, followed by Estonia. On the other hand, the lowest percentage of potential and planning migrants is recorded in Austria.

Table 3 provides information on the average characteristics of potential migrants and other respondents. Life satisfaction is provided by the following question as an ordered response from 0 to 10:

“Please imagine a ladder with steps numbered from zero, at the bottom, to ten at the top. Suppose we say that the top of the ladder represents the best possible life for you, and the bottom of the ladder represents the worst possible life for you. On which step of the ladder would you say you personally feel you stand at this time, assuming that the higher the step the better you feel about your life, and the lower the step the worse you feel about it? Which step comes closest to the way you feel?” (Question C)

Table 2 Percentage of respondents that would like to permanently move to another country

Country	Obs	Would like to move	Plan to move	Country	Obs	Would like to move	Plan to move
Austria	3,892	7.91	5.59	Latvia	1,930	25.13	12.82
Belgium	2,796	22.32	4.66	Lithuania	2,689	23.21	20.31
Bulgaria	2,776	19.45	14.85	Malta	2,447	21.45	6.42
Czech Republic	2,841	9.93	4.62	Netherlands	2,901	17.51	3.66
Denmark	3,925	13.61	3.37	Poland	3,697	14.61	5.88
Estonia	2,104	22.67	14.09	Portugal	3,789	18.40	9.64
Finland	2,964	10.83	10.50	Romania	2,841	23.97	10.73
France	3,895	17.05	8.00	Slovakia	1,934	13.91	10.08
Germany	5,075	19.29	4.57	Slovenia	2,453	14.72	3.06
Greece	2,941	20.13	12.53	Spain	3,929	9.72	16.74
Hungary	2,941	16.46	12.00	Sweden	3,886	14.95	4.09
Ireland	3,319	17.57	12.43	UK	2,869	27.74	2.33
Italy	3,707	21.66	6.19				

Source: Author’s calculation from the Gallup World Poll. Statistics on respondents that are planning to move refer only to 2010 and 2011.

Table 3 Characteristics of potential migrants

Would you like to move?	No	Yes		No	Yes
Age 15-25			Age 45-55		
Income	30.06	26.22	Income	36.00	35.03
Employed (%)	40	38	Employed (%)	72	69
Male (%)	48	47	Male (%)	39	46
Married (%)	6	5	Married (%)	67	59
Life satisfaction	7.04	6.53	Life satisfaction	6.41	5.77
Age 25-35			Age > 55		
Income	33.52	29.92	Income	24.18	28.69
Employed (%)	73	69	Employed (%)	21	33
Male (%)	41	48	Male (%)	38	46
Married (%)	50	40	Married (%)	56	55
Life satisfaction	6.66	6.02	Life satisfaction	6.13	5.74
Age 35-45					
Income	38.51	35.52			
Employed (%)	77	74			
Male (%)	39	47			
Married (%)	67	60			
Life satisfaction	6.68	5.97			

Source: Author's calculation from the Gallup World Poll. Income is reported in thousands of international dollars.

Other variables considered in the empirical analysis include two binary variables indicating whether an individual responded positively to questions about the future conditions of the economy of their country and city (defined as “Economy gets better” and “City gets better”)².

In the Gallup World Poll, respondents are asked to select which country they would like to move to, where only their first choice is recorded. A total of 152 destinations have been chosen by respondents in the 25 European countries. However, 34 and 21 destinations are chosen by only 1 and 2 respondents respectively. Considering all 152 destinations in the analysis would make the estimations computationally complex, therefore, a cut-off threshold selects only the most popular destinations: the analysis considers only 24 destinations that have been selected by at least 70 respondents. In order to test the sensitivity of the results to the number of destination choices available, the empirical model is also estimated on a sample that considers only the 15 destinations that have been selected by at least 300 potential migrants.

There is a potential trade-off between using data on actual versus potential migration. The use of data on actual migration (i.e., information on migrants who have already migrated) may not allow the researcher to correctly analyze the preferences over alternative migration destinations since actual migrants might not have migrated to their most desired location. Some migrants, in fact, may have been relocated as part of their job commitments or to follow relatives and friends. Moreover, actual migrants exclude those that could not migrate because of various constraints, such as lack of financial resources. In this sample, about 14% of those planning to move reveal divergent destination choices between the country where they would like to move (Question A2) and where they are planning to move (Question B2). Although the reasons behind these differences cannot be tested, it is reasonable to expect that the responses of potential migrants are more likely to reveal real preferences since they are not conditioned on the feasibility of the

relocation plan and are not driven by external factors such as job or family commitments. On the other hand, because potential migration does not necessarily translate into actual migration, the revealed preferences of a potential migrant may not necessary be the result of a pondered choice but could sometimes reflect a superficial evaluation of few potential alternatives. Although the sample offers information on those planning to move, which could be used to test the differences with potential migrants, the resulting sample size is too small to allow any inference.

Table 4 reports the most popular migration destinations. The United Kingdom and the United States top the list. Six out of the 15 most chosen destinations are English-speaking countries. All chosen countries except of Brazil, Russia and Thailand are developed countries belonging to the Organisation for Economic Cooperation and Development (OECD).

The quality of life in the ideal destination countries is measured by using standard objective variables, such as GDP per capita and the unemployment rate, and subjective measures, such as life satisfaction and corruption perception (Table 5). The average life satisfaction in the destination country is obtained by averaging the responses to question C above. The average response in each country ranges between 4.7 in Hungary to 7.8 in Denmark. The average perception of corruption is obtained as the percentage of respondents answering positively to the following Gallup question:

“Is corruption widespread within businesses located in (country), or not?” (Question D)

Other country-level variables used in the analysis include GDP per capita at purchasing power parity, obtained from the International Monetary Fund, the unemployment rate, provided by the OECD, and by specific national offices of statistics. The analysis also considers data on income tax rates and unemployment benefits also provided by the OECD and supplemented by information from individual country offices. The income tax data correspond to the “all-in” average personal income tax rates at the average wage computed as the average rate across family types³. The benefits include only the unemployment benefits as a share of the average gross income. Finally, bilateral migration flows were obtained from Ratha and Shaw (2007) and used to compute the share of same-origin migrants in the destination country.

5 Results

This section discusses the results obtained by estimating the models presented above.

Table 4 Most popular ideal migration destinations

Destination	%	Country	%
United Kingdom	10.76	Switzerland	3.62
United States	10.44	Sweden	3.13
Spain	8.91	Norway	2.25
Germany	8.25	Austria	2.17
Australia	7.00	New Zealand	2.14
France	6.82	Netherlands	1.62
Canada	6.64	Ireland	1.54
Italy	4.48		

Source: Author’s calculation from the Gallup World Poll. The other nine destinations are: Greece, Finland, Denmark, Russia, Belgium, Thailand, Portugal, Brazil and Luxembourg.

Table 5 Characteristics of ideal migration destinations (average 2008-2011)

Country	GDP pc ^d (PPP)	Unemp. rate (%)	Tax rate (%)	Benefits (%)	Life satisfaction	Corruption (%)
Australia	39.40	5.03	20.88	24.47	7.37	34.30
Austria	40.01	4.28	32.23	39.03	7.32	51.43
Belgium	36.39	7.60	36.10	35.99	7.03	50.70
Brazil	11.03	6.35	29.00	10.00	6.84	62.51
Canada	39.17	7.45	18.38	53.53	7.51	35.48
Denmark	36.78	6.08	37.51	51.21	7.80	21.05
Finland	35.34	7.68	29.72	47.50	7.47	27.62
France	34.04	9.00	23.83	57.40	6.76	50.88 1
Germany	36.03	7.05	31.05	39.96	6.63	68.58
Greece	28.90	12.00	19.73	33.12	5.75	85.65
Ireland	40.12	11.43	14.74	39.07	7.22	47.63 3
Italy	29.74	7.95	25.88	46.71	6.38	82.63
Luxembourg	82.12	4.90	20.55	81.67	7.05	36.98
Netherlands	41.17	3.78	27.46	75.00	7.57	36.70
New Zealand	27.25	5.85	19.02	36.66	7.27	25.65
Norway	52.51	3.15	27.26	61.24	7.63	50.76
Portugal	23.07	10.48	18.67	65.00	5.34	88.60
Russia	15.79	7.03	13.00	10.00	5.39	76.96
Spain	30.24	17.75	15.83	59.29	6.55	71.92
Sweden	38.11	7.58	26.15	50.06	7.42	26.65
Switzerland	41.89	3.75	12.72	73.33	7.52	31.22
Thailand	9.01	0.95	27.50	20.00	6.00	82.74
United Kingdom	35.38	7.30	25.06	13.24	6.96	40.75
United States	46.81	8.43	16.08	45.95	7.18	59.81
Average	35.43	7.20	23.68	44.56	6.87	53.03

^dIn thousands international dollars.

5.1 Characteristics of the potential migrants

Table 6 reports the results of estimating equation 1, where the desire to migrate is related to individual-level characteristics. The coefficients reported in the table reflect marginal effects calculated at the mean of all explanatory variables. All regressions include country and year fixed effects and report standard errors clustered at country level.

Respondents with lower levels of subjective well-being are more likely to reveal a desire to move out of the country. The effect persists also when additional controls for potential optimism bias (columns 3, 4 and 5) or the presence of family members abroad (column 6) are included. The sample size for the latter is reduced since this variable is available only for the last two waves, 2010 and 2011. Having family members abroad has a positive impact on the willingness to move while most of the other effects described above remain stable.

The results also show that older respondents are less willing to move, while men and single respondents are more likely to desire to leave their country. Migrants that perceive widespread corruption in businesses and in government are 8 percentage points more likely to express a desire to permanently leave their country. Following the literature (Burda et al. 1998), I test for non-linearities in the income effect and include a quadratic term in income. The results confirm the non-linear relationship between income and the desire to migrate. In particular, the results show a U-shaped relation between household income and the desire to migrate, as found in Burda et al. (1998).

Table 6 Characteristics of potential migrants

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8) ^a
Age	0.115** (0.046)	0.080 (0.055)	-0.107** (0.055)	-0.218*** (0.068)	-0.119** (0.059)	-0.066 (0.112)	-0.252*** (0.087)	-0.948*** (0.089)
Age squared	-0.652*** (0.051)	-0.623*** (0.060)	-0.443*** (0.059)	-0.327*** (0.073)	-0.446*** (0.064)	-0.548*** (0.120)	-0.257*** (0.094)	0.416*** (0.083)
Employed (d)	-0.012*** (0.003)	-0.012*** (0.003)	-0.007** (0.003)	-0.008** (0.004)	-0.005 (0.004)	-0.011* (0.006)	-0.003 (0.006)	-0.003 (0.006)
Male (d)	0.030*** (0.003)	0.028*** (0.003)	0.025*** (0.003)	0.026*** (0.004)	0.026*** (0.003)	0.030*** (0.006)	0.021*** (0.005)	0.025*** (0.005)
Corruption	0.076*** (0.003)	0.077*** (0.004)	0.071*** (0.004)	0.072*** (0.005)	0.074*** (0.004)	0.057*** (0.008)	0.066*** (0.006)	0.071*** (0.006)
Married (d)	-0.031*** (0.003)	-0.025*** (0.003)	-0.021*** (0.003)	-0.021*** (0.004)	-0.020*** (0.003)	-0.026*** (0.006)	-0.021*** (0.005)	-0.023*** (0.005)
Children	-0.005*** (0.001)	-0.005*** (0.002)	-0.006*** (0.002)	-0.005*** (0.002)	-0.006*** (0.002)	-0.003 (0.003)	-0.003 (0.003)	-0.004 (0.003)
Secondary educ (d)	0.018*** (0.004)	0.026*** (0.005)	0.033*** (0.005)	0.032*** (0.006)	0.030*** (0.005)	0.035*** (0.009)	0.035*** (0.007)	0.029*** (0.007)
Beyond secondary (d)	0.031*** (0.005)	0.037*** (0.006)	0.052*** (0.007)	0.052*** (0.008)	0.049*** (0.007)	0.050*** (0.013)	0.046*** (0.011)	0.038*** (0.009)
Log of income		-0.051** (0.021)	-0.048** (0.022)	-0.077*** (0.026)	-0.055** (0.023)	0.014 (0.043)	-0.063* (0.033)	-0.071* (0.043)
Log of income squared		0.002** (0.001)	0.003** (0.001)	0.004*** (0.001)	0.003** (0.001)	-0.000 (0.002)	0.003* (0.002)	0.004 (0.002)
Life satisfaction			-0.018*** (0.001)	-0.016*** (0.001)	-0.019*** (0.001)	-0.020*** (0.002)	-0.015*** (0.001)	-0.017*** (0.001)
Economy gets better (d)				-0.018*** (0.005)			-0.016*** (0.006)	-0.018*** (0.006)
City gets better (d)				-0.023*** (0.004)			-0.022*** (0.005)	-0.024*** (0.006)
Life in 5 year					-0.001 (0.001)			
Optimistic (d)						-0.018*** (0.006)		
Family abroad (d)							0.096*** (0.008)	0.105*** (0.008)
Country	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	78541	57532	57214	37094	52181	16007	21614	21614

Logit results.

Marginal effects; Standard errors in parentheses. (d) indicates discrete change of dummy variable from 0 to 1 ^aOLS results.

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

Finally, column 7 estimates a linear probability model. Including fixed effects in a discrete choice model might generate an incidental parameter problem, which, however, does not occur when using a linear probability model. The results are mostly in line with previous findings, with the only exception being the employment status variable, which

now shows a negative effect, indicating that unemployed people are more likely to desire to leave their country.

To further address the problem of a potential optimism bias, the above analysis has been applied to a pseudo-panel based on five age groups (cohorts). For each year, averages across age groups and gender were calculated and used in a regression that controls for cohort-country fixed effects. One advantage of using group averages is that it is less likely that individual-level personality differences influence both average life satisfaction and the willingness to move, and it also helps to eliminate other additional sources of unobserved heterogeneity. This estimator shows desirable properties, i.e., the cohort effect can be considered fixed over time if the analysis is based on a large number of individual observations per cohort (Verbeek 2008). To avoid having insufficient observations per cohort, only five age groups are initially considered, and as a second robustness check, the groups are also separated by gender. The first option produces 400 group-based observations across four years, where each group contains more than 70 individual observations. The results are reported in Table 7. The effects of life satisfaction and perceived corruption remain significant. Most of the coefficients reflect previous findings, with the exception of the gender variable that now shows an opposite effect. Nevertheless, when excluding the youngest and the oldest age-groups (column 2), the coefficient of the gender variable becomes smaller and insignificant, suggesting that these two particular age groups had a strong influence on the result.

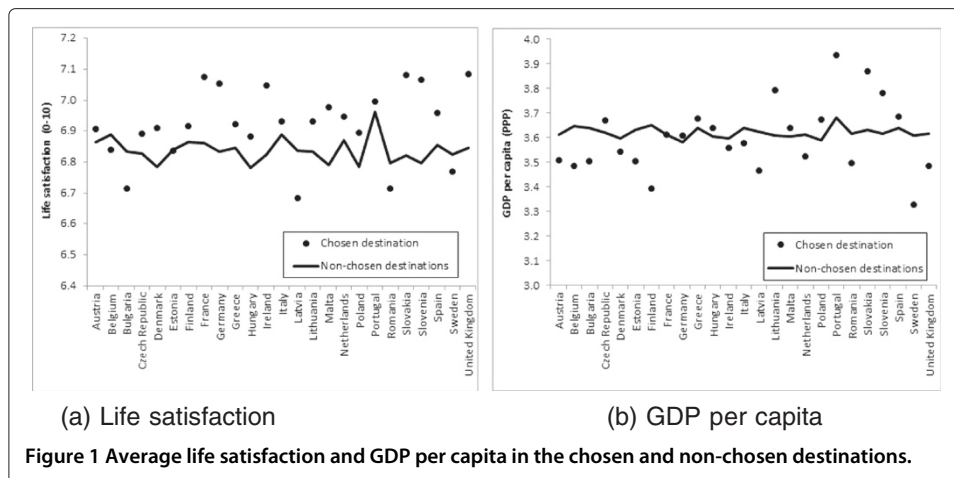
5.2 Determinants of migration destinations

This section analyzes the factors influencing the choice over alternative migration destinations of potential migrants. Figure 1 highlights the differences in terms of average life

Table 7 Pseudo panel results

	(1)	(2) ^a	(3) ^b
Log of Income	-0.707* (0.395)	-0.414 (0.633)	-0.286 (0.268)
Log of Income squared	0.034 (0.021)	0.016 (0.032)	0.013 (0.014)
Employed	0.007 (0.026)	0.008 (0.029)	0.000 (0.022)
Male	-0.175** (0.082)	-0.069 (0.086)	
Secondary education	0.141 (0.097)	0.315* (0.174)	0.124 (0.079)
Beyond secondary	0.174* (0.102)	0.315* (0.180)	0.149* (0.088)
Life satisfaction	-0.056*** (0.015)	-0.043** (0.017)	-0.050*** (0.011)
Married	0.032 (0.083)	0.054 (0.110)	0.024 (0.060)
Children	-0.014 (0.039)	-0.041 (0.048)	-0.032 (0.027)
Year	Yes	Yes	Yes
Groups	400	240	800
R-squared	0.226	0.221	0.146

Standard errors in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$ ^aexcludes the first and last age-groups (15-25 and above 55). ^bGender- and age- based groups.



satisfaction and GDP per capita in the chosen and in the alternative destinations⁴. The average life satisfaction (left panel) is usually higher in the chosen destination than in the alternatives. Exceptions are found in Belgium, Sweden, Bulgaria, Latvia, and Romania. The latter three countries are also among those showing the lowest domestic average level of life satisfaction. The right panel replicates the graph using data on GDP per capita. The evidence is mixed. While in some countries potential migrants tend to prefer richer countries, in others we can observe an opposite tendency. In common with previous results, respondents in the three Eastern European countries Bulgaria, Latvia and Romania chose, on average, destination countries with relatively lower GDP per capita. Respondents in these countries tend, on average, to select destinations where the unemployment rate is lower.

The results obtained by estimating the model in equation 5 are reported in Table 8. In line with the migration literature, potential migrants are attracted by countries where the unemployment rate is relatively lower, although the effect of this variable becomes statistically insignificant with the inclusion of additional explanatory variables. Potential migrants tend to choose countries that share a similar language and have a higher share of migrants from their home country. Distance, instead, is not significant and mainly reflects the fact that most destinations are in Europe.

Potential migrants do not prefer countries with higher GDP per capita; on the contrary, the effect is actually negative and significant. On the other hand, the positive effect of average life satisfaction indicates that respondents tend to select destinations where the average subjective well-being of the population is higher. Columns 3 and 4 include a measure of perceived corruption and personal freedom in the destination locations. Potential migrants exhibit a preference for countries with lower perceived corruption, while perceived freedom has no significant effect on the choice of the destination (column 5).

Location preferences are likely to be influenced by the comparison between the destination characteristics and the characteristics of the home country and might, therefore, differ according to the income and the quality of life in the country of residence (Davies et al. 2001). Respondents in richer countries, for example, might value economic and non-economic conditions differently than people in poorer countries. Because the estimations control for individual fixed effects and, by definition, home country characteristics do not

Table 8 The choice of the ideal migration destination - conditional logit estimates - 24 possible destinations

	(1)	(2)	(3)	(4)	(5)	(6) ^a
GDP per capita	-0.090*** (0.030)	-0.092** (0.039)	-0.129*** (0.041)	-0.109** (0.045)	-0.109** (0.045)	-0.004 (0.049)
Unemployment rate	-0.073*** (0.017)	-0.064*** (0.019)	-0.032 (0.025)	-0.015 (0.030)	-0.015 (0.030)	0.022 (0.028)
Distance	-0.057 (0.081)	-0.058 (0.082)	-0.063 (0.083)	-0.062 (0.083)	-0.062 (0.083)	-0.224*** (0.078)
Common language	0.869*** (0.168)	0.867*** (0.168)	0.956*** (0.139)	0.955*** (0.139)	0.955*** (0.139)	1.039*** (0.131)
Share of migrants	0.058*** (0.012)	0.059*** (0.012)	0.056*** (0.010)	0.056*** (0.010)	0.056*** (0.010)	0.062*** (0.011)
Warmer country	0.106 (0.194)	0.106 (0.194)	0.122 (0.209)	0.121 (0.209)	0.121 (0.209)	
Income tax		-2.881 (2.766)	-6.869** (3.075)	-6.024** (3.015)	-6.032* (3.100)	-1.811 (3.119)
Unemployment benefit		0.024 (0.024)	0.036 (0.029)	0.039 (0.029)	0.039 (0.029)	0.020 (0.028)
Life satisfaction			0.275** (0.125)	0.279** (0.128)	0.278** (0.129)	0.192* (0.100)
Corruption				-0.793* (0.478)	-0.789* (0.474)	-0.936** (0.441)
Freedom of choice					0.011 (0.371)	
Destination fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	265,927	265,927	203,877	203,877	203,877	203,877
Individuals	11,370	11,370	10,255	10,255	10,255	10,255

Standard errors are clustered at country level * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. ^acontrols for domestic GDP per capita and average life satisfaction interacted with destination dummies.

vary across individuals, it is not possible to include them directly in the model. To address this problem, destination dummies are interacted with country-level characteristics. The results are reported in column 6 of Table 8 and include controls for domestic GDP per capita and average life satisfaction. The negative effect of GDP per capita becomes insignificant, while life satisfaction and corruption preserve their effect.

In order to test the sensitivity of the model to the number of available destinations, the above analysis is repeated while reducing the number of potential destinations to 15 by selecting only those destinations that had been chosen by at least 300 respondents⁵. The results are reported in Table 9 and partially confirm previous findings (column 1). When controlling for domestic levels of GDP per capita and average life satisfaction (column 2 and 4), most coefficients lose magnitude and significance. However, when excluding respondents in Eastern European countries from the sample (column 3 and 4), the results pertaining to GDP per capita and life satisfaction are in line with previous findings. On the other hand, the coefficient of the corruption variable remains much smaller and statistically insignificant. This indicates that the larger coefficient obtained in Table 8 could have been influenced by the presence of destinations such as Russia, Thailand and Portugal that have higher levels of perceived corruption and a relatively low probability of being chosen. Similarly, the coefficient of the income tax rate variable drops significantly,

Table 9 Results obtained using only 15 possible destinations

	(1)	(2) ^a	(3) ^b	(4) ^{a,b}
GDP per capita	-0.144*** (0.055)	-0.024 (0.051)	-0.155*** (0.059)	-0.111* (0.058)
Unemployment rate	-0.024 (0.035)	0.018 (0.031)	0.005 (0.042)	0.027 (0.037)
Income tax	-0.062** (0.028)	-0.017 (0.031)	-0.042 (0.031)	-0.034 (0.037)
Unemployment benefit	0.020 (0.036)	0.021 (0.035)	-0.019 (0.034)	-0.031 (0.031)
Life satisfaction	0.299** (0.145)	0.161 (0.111)	0.405*** (0.122)	0.361*** (0.107)
Corruption	-0.008 (0.006)	-0.010* (0.005)	-0.009 (0.006)	-0.011 (0.007)
Distance	-0.002 (0.062)	-0.184*** (0.064)	-0.023 (0.063)	-0.178** (0.075)
Common language	1.042*** (0.124)	1.104*** (0.112)	1.110*** (0.106)	1.104*** (0.100)
Share of migrants	0.045*** (0.010)	0.048*** (0.009)	0.054*** (0.015)	0.062*** (0.012)
Warmer country	0.220 (0.224)	0.202 (0.159)	0.337 (0.227)	0.259 (0.222)
Home country characteristics	No	Yes	No	Yes
Observations	112298	112298	75719	75719
Number of cases	9290	9290	6350	6350

Standard errors are clustered at country level * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. ^acontrols for domestic GDP per capita and average life satisfaction ^bEastern European countries are excluded.

reflecting the higher tax rates in some of the excluded destinations, such as Denmark and Belgium, which also have relatively low probabilities of being chosen.

The above results show that when Eastern European countries are excluded from the sample, the coefficient of the life satisfaction variable increases significantly (Table 9, columns 3 and 4). This applies also when considering all possible 24 destinations (not reported). This confirms that respondents in some of these countries, in particular Bulgaria, Latvia and Romania, have different preferences over migration destinations than those in the remaining European countries.

To understand the magnitude of the effects identified above, Table 10 reports the regression coefficients multiplied by the standard deviation of the corresponding variable. This produces rough standardized coefficients that allow comparisons across variables.

Table 10 Relative effects

Variable	All countries		Excluding Eastern Europe	
	Standard deviation	Relative coefficient	Standard deviation	Relative coefficient
GDP per capita	14.32	-2.06	6.80	-1.05
Unemployment rate	3.91	-0.09	4.16	0.02
Income tax	6.87	-0.43	5.61	-0.24
Life satisfaction	0.21	0.20	0.55	0.22
Corruption	21.51	-0.17	19.98	-0.18

The relative coefficients refer to the results reported in columns 1 and 3 of Table 9. Considering all countries in the sample, a one standard deviation increase in average life satisfaction in the destination country has an effect that is half that of a one standard deviation decrease in the income tax rate. It is worth noting that a one standard deviation change in the income tax rate is a large change (almost 7 percentage points). When excluding Eastern European countries, the coefficient of the income tax variable drops significantly and the relative coefficients become very similar in magnitude.

A study by Pacheco et al. (2013) links migration patterns to subjective well-being indicators of quality of life and reaches opposite findings to those reported in this study. Besides the fact that Pacheco et al. (2013) focuses on actual rather than potential migrants, and it considers migrants from both developed and developing countries, this paper focuses only on European countries. Figure 2 plots the residual life satisfaction in the chosen destination, obtained by estimating the residuals from a regression of average life satisfaction on GDP per capita, for all countries surveyed by Gallup and their domestic GDP per capita. The plot shows a clear pattern indicating that respondents in richer countries tend to prefer destinations with higher levels of non-economic well-being than those in developing countries. This suggests that the structure of preferences may vary with the context in which potential migrants reside, as shown also by previous findings about the differences between Eastern and Western Europe. The results obtained in this paper, therefore, might not be generalized to developing countries or other countries excluded from the analysis.

Figure 2 also reveals a set of interesting outliers that includes some Middle Eastern and Central Asian countries. Despite their relative high income per capita, potential migrants in the UAE, Qatar, Saudi Arabia, Kuwait and Bahrain tend to prefer other Arab countries where the average life satisfaction is relatively low. Seven out of the first 10 most selected destinations are Arab countries, the other three choices are the United States, the United Kingdom and Canada. Regarding the central Asian countries, the low average level of

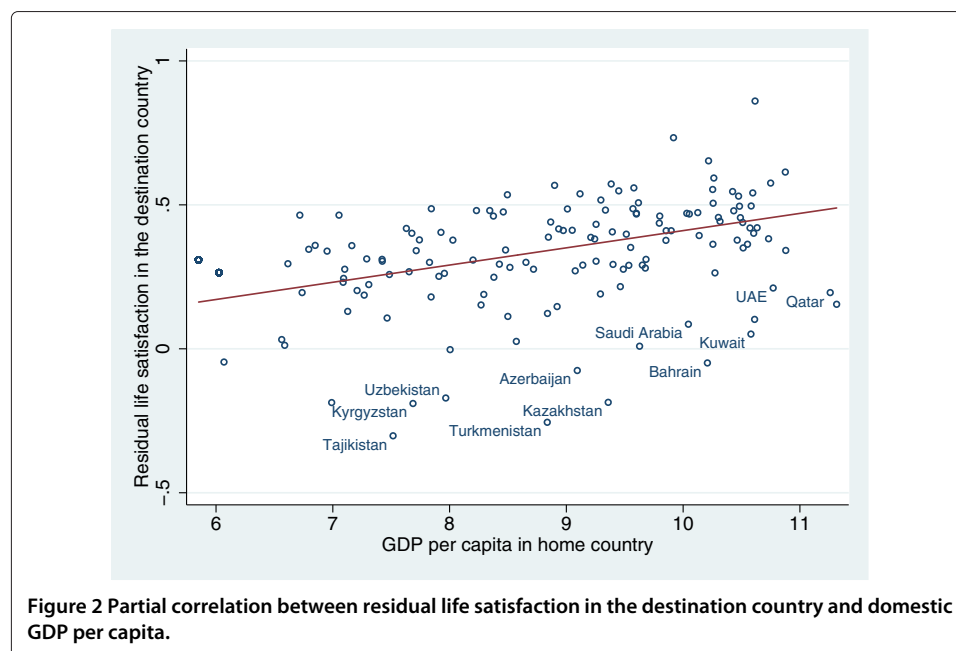


Figure 2 Partial correlation between residual life satisfaction in the destination country and domestic GDP per capita.

life satisfaction in the destination countries is mainly influenced by the fact that 48% of potential migrants in these countries would like to move to Russia, where average life satisfaction is well below the global average.

6 Conclusions

This paper investigates the factors that influence the preferences over migration destinations of potential migrants in 25 European countries. The results provide new evidence on the relevance of subjective well-being measures for international comparisons. Based on individual level data, the empirical analysis shows that standard measures of well-being such as GDP per capita and the employment conditions have a small or even negative effect (in the case of GDP per capita) on the choice of the location destination. On the other hand, potential migrants, who tend to be younger, more educated, richer and less satisfied with life than other respondents, prefer locations where the average life satisfaction is relatively higher. Although these results might not be generalized to individuals in developing countries, they suggest that average levels of life satisfaction are useful measures of a country's success as they reflect what makes country attractive to potential migrants from European countries.

Endnotes

¹Note that 17 out of the 24 European ideal destinations considered in this study are European countries.

²The questions are: "Do you think that the economic conditions in this country (city), as a whole, are getting better or getting worse?"

³Family types include single and one-earner married couple with no child or two children.

⁴These graphs are obtained by omitting the United States and Brazil from the list of potential destinations.

⁵The reduced set of available destinations exclude Belgium, Brazil, Denmark, Finland, Ireland, Luxembourg, Portugal, Russia and Thailand.

Competing interests

The *IZA Journal of Migration* is committed to the IZA Guiding Principles of Research Integrity. The author declares that she has observed these principles.

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References

- Benson M, O'Reilly K (2009) Migration and the search for a better way of life: a critical exploration of lifestyle migration. *Sociol Rev* 57(4):608–625
- Blanchflower DG, Shadforth C (2009) Fear, unemployment and migration. *Econ J* 119(535):136–182
- Burda MC, Hardle W, Muller M, Werwatz A (1998) Semiparametric analysis of German East-West migration intentions: facts and theory. *J Appl Econometrics* 13(5):525–541
- Cummins RA (2012) Australian unity wellbeing index survey 27.0, Report 27, Australian Centre on Quality of Life, Deakin University, Geelong, Australia
- Davies PS, Greenwood MJ, Li H (2001) A conditional logit approach to U.S. state-to-state migration. *J Reg Sci* 41(2):337–360
- De Giorgi G, Pellizzari M (2009) Welfare migration in Europe. *Labour Econ* 16(4):353–363
- Dolan P, White MP (2007) How can measures of subjective well-being be used to inform public policy? *Perspect Psychol Sci* 2(2):71–85
- Fafchamps M, Shilpi F (2013) Determinants of the Choice of Migration Destination. *Oxford Bulletin of Economics and Statistics* 75(3):388–409, 06.
- Fuchs-Schündeln N, Schündeln M (2009) Who stays, who goes, who returns? *Econ Transit* 17(4):703–738

- Gordon I, Molho I (1997) Duration dependence in migration behavior: Cumulative inertia versus stochastic change. *Environ Plan* 27:1961–1975
- Graham C, Markowitz J (2011) Aspirations and happiness of potential migrants in Latin America. *J Soc Res Policy* 2(2):9–25
- Layard R (2005) *Happiness: lessons from a new science*. Penguin Press, New York
- Mayda AM (2010) International migration: a panel data analysis of the determinants of bilateral flows. *J Popul Econ* 23(4):1249–1274
- Pacheco G, Rossouw S, Lewer J (2013) Do Non-Economic Quality of Life Factors Drive Immigration? *Social Indicators Research* 110(1):1–15
- Ratha D, Shaw W (2007) South-south migration and remittances. World Bank Working Paper 102. World Bank, Washington D.C, United States
- Safi M (2010) Immigrants' life satisfaction in europe: Between assimilation and discrimination. *Eur Sociol Rev* 26(2):159–176
- Simpson NB (2013) Happiness and migration. In: Zimmermann KF, Constant AF (eds). *International Handbook on the Economics of Migration*. Edward Elgar Publishing Limited, Cheltenham, UK, pp 393–405
- Stevenson B, Wolfers J (2008) Economic growth and subjective well-being: Reassessing the easterlin paradox. *Brookings Papers Econ Activ* 39(1):1–102
- Stiglitz JE, Sen A, Fitoussi J-P (2010) *Mismearing Our Lives: Why GDP Doesn't Add Up*. The New Press, New York
- UNDP (2011) *Human development report 2011. Sustainability and equity: A better future for all*. United Nations Development Program, New York, United States
- Veenhoven R (2012) *Happiness in nations*. The Netherlands, World Database of Happiness, Erasmus University Rotterdam
- Verbeek M (2008) Pseudo panels and repeated cross-sections. In: *The Econometrics of Panel Data: Fundamentals and Recent Developments in Theory and Practice*. Matyas L, Sevestre P (eds.) Springer-Verlag, Berlin

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