Inverting the logic of economic migration:

Happiness among migrants moving from wealthier to poorer countries in Europe

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Abstract:

Migration from a poorer country to a wealthier one often results in a lower relative economic status for the migrant (even when it increases their incomes in an "absolute" sense) – and thus perhaps results also in a decrease in his/her happiness. By the same logic, migration from a wealthy country to a poorer one might bring a higher status position for the migrant and so might raise his/her happiness. This paper investigates happiness among migrants who move from northern European countries to Spain, Portugal, Greece and Cyprus, comparing them to stayers in the origin countries (Belgium, Switzerland, France, Germany, Britain, and the Netherlands). The analysis shows that migrants are less happy than stayers, in a bivariate comparison and a conventional regression model. A consideration of results from "treatment models" and matching analyses suggests that the difference represents a decrease in happiness for the migrants (and not a difference in happiness prior to migration), contrary to an expectation rooted in an anticipated increase in economic status. Migrants have lower relative incomes than stayers; when relative income is controlled, the happiness disadvantage of migrants is smaller. Controlling additionally for absolute income does not lead to further change in that difference.

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Keywords: international migration; happiness; subjective well-being; Europe; matching methods; treatment models

Migration to another country is an action typically invested with a great deal of hope. Few decisions can be more consequential for the direction one's life will take; in those terms migration is arguably on par with getting married (or divorced), choosing a university (or choosing not to go), embarking on a new career, or deciding whether to have children. Extensive research on happiness suggests that actions in that list can have a significant effect on one's level of happiness. The impact of migration, however, has begun to receive sustained attention only recently (e.g. Safi 2010, Melzer 2011, Olgiati et al. 2013).

Analysis of the relationship between migration and happiness often focuses on the consequence of moving to a wealthier country. That focus is sensible insofar as one imagines that many migrants are motivated by the prospect of increasing their income via finding a job in a wealthier country (or of joining a family member who has already done so). In those terms, migration might appear misguided: research on happiness suggests (via the "Easterlin paradox") that gaining more money in an "absolute" sense will do little to increase one's happiness. If money matters mainly in a "relative" sense (e.g. Ball and Chernova 2008), migration to a wealthier country could prove detrimental for one's happiness – particularly for migrants who held an average status position in the origin society prior to migration but then end up in a lower position in the destination society. People who follow that downward trajectory could find that they experience a decrease in happiness (despite an increase in their absolute income), particularly if they come to compare themselves to others in the destination society.

A significant proportion of migration flows, however, follow a different path. Migration often takes place between countries at roughly the same level of economic development, with many migrants moving from one middle-income country to another, or even one poor country to another (Ratha and Shaw 2007). Migrants also sometimes move to countries where income levels are lower than in their country of origin ("north" to "south"). These flows do not conform to the worries of people who live in wealthier countries (who sometimes seem to imagine that everyone wants to move "here"), but they are by no means uncommon. Considered in the frame of the Easterlin paradox, migration from wealthier countries to poorer countries raises an intriguing possibility: one might end up earning a lower "absolute" income than prior to migration – but one's

position in the socio-economic status hierarchy of the destination country might end up higher than it was in the origin country. If so, perhaps increased happiness will follow.

This paper considers that latter possibility by investigating happiness among people who have migrated from wealthier countries in northern Europe to common destinations in southern Europe. These migration flows have reached sizeable dimensions: significant numbers of Britons and others moved to Spain and Portugal beginning in the 1980s (e.g. King et al. 2000), and Greece and Cyprus as well have become popular destinations for people from wealthy northern European countries (on Greece see Cangiano and Strozza 2008). Many migrants to these destinations engage in "lifestyle migration" (cf. Benson and O'Reilly 2009), hoping to find a simpler life or even better weather; it is not obvious that they are generally motivated by the prospect of a higher status position. Even so, migrants in this mode might well encounter happiness consequences via the economic aspects of their destination-country experiences.

Ideally, one would use longitudinal analysis of panel data to assess the effect of migration on migrants' happiness, comparing their happiness before migration to their happiness afterwards (with relevant statistical controls). Data of that sort do not exist, however, and so it is necessary to resort to cross-sectional methods. The paper thus uses data from the European Social Survey to compare northern-origin migrants resident in Greece, Portugal, Cyprus and Spain to people who remain in the northern countries ("stayers"). Comparisons of that sort can be vulnerable to faulty inference: if one finds a difference – say, migrants are happier than stayers – one then needs to know whether that difference represents an increase for migrants or a greater tendency towards migration among happier people. But the comparison can also be explored via techniques that go beyond basic regression models: the analysis below includes use of a two-stage ("Heckman-style") model that tests for endogeneity as well as "matching" analyses that offer a more persuasive perspective on what variables should be controlled when trying to gauge the happiness consequences of migration.

Migration in the Happiness Literature

Research in happiness studies often defines happiness via the term "subjective well-being". Happiness is then identified as the "affective" dimension of subjective well-being (in contrast to a cognitive dimension, i.e., life satisfaction). Among a wide variety of more specific definitions, that of Haybron (2008) is compelling: happiness is a "positive emotional state" – a definition that conveys something more durable than simply "feeling good" (Layard 2005), extending to a propensity to have positive feelings and moods. In this frame, to say that one is happy is to express a general "psychic affirmation" of one's life.

A central issue for research on the happiness consequences of migration is the effect of changes in one's income. Many migration decisions are rooted in desire for a higher income. That statement is by no means universally true: people choose to migrate for a wide range of reasons, including desire to join a family member who migrated earlier, or to seek adventure and excitement. Even when motivated by non-economic goals, however, migrants likely experience consequences from moving to a country at a different level of socio-economic development. They will generally also share key elements of migrants' economic experiences more generally – for example, if their education qualifications are not recognized, or they cannot speak the local language well – such that it is more difficult to get the kind of job they want.

The association between income and happiness, then, is likely to be highly relevant to their experiences after migration. Again, that connection is commonly considered under the heading of the Easterlin paradox: people who earn more are generally happier than those who earn less, but above a certain threshold an *increase* in income generally does not lead to greater happiness (Easterlin 1973, 2001). The resolution of the paradox comes in the notion that income affects happiness mainly via the way it embodies and signals status: if one earns more than others in a particular reference group, that comparison contributes to a favorable subjective experience. But an increase in income does not always result in a more favorable subjective experience: one might alter one's reference group instead, now comparing to people who earn even more. Aspirations for further increases in income might follow, such that they cannot

be satisfied via the sort of income increases most people can accomplish. Research by Ball and Chernova (2008) indicates that the "relative" aspect of income strongly dominates its "absolute" aspect (while the association with absolute income is small particularly in comparison to the strength of association between happiness and other elements of people's lives, e.g. relationships and employment). These findings help explain why many countries have experienced "flat" happiness trends despite long-term economic growth.

These ideas are currently very much in play, as a number of researchers have recently produced analyses appearing to show that the core of Easterlin's argument is not supported. Stevenson and Wolfers (2008) assert that the Japanese data used by Easterlin to underpin his original findings about Japan were faulty (see also Sacks et al. 2012). Fischer (2008) offers a different way of reading data on the US experience in recent decades: while happiness trends have been flat despite long-term economic growth, most of the gains of growth have gone to wealthier people, and the stagnation of happiness levels is broadly consistent with the stagnation of most people's incomes. In addition, there are calls to consider the connection between happiness and economic aspects of people's lives in ways that go beyond income; at a minimum, one would want to consider also their wealth (Christoph 2010). Dunn et al. (2011) suggest that the relationship between happiness and money is weak because people "aren't spending it right". Veenhoven (2008) argues directly that happiness researchers have placed too much emphasis on "comparison theory"; he finds that absolute income matters, in the sense that with higher incomes people are better able to meet their needs.

These contrasting views underline different expectations about the impact of migration to a country at a higher level of income. Research by Stark and Taylor (1989) establishes that migration decisions are often motivated by concerns about relative income[1]; the question here is whether migration is an effective means of addressing those concerns when migrants remain in the destination country. Again, in most

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[1] Stark and Taylor drew on a well-established sociological concept of relative deprivation (Merton 1968; Runciman 1966) – an idea that resonates strongly with the emphasis of happiness studies on relative income.

instances data limitations impair the most effective form of analysis for this question, and most researchers studying international migration have resorted to cross-sectional analysis. One common approach compares migrants' happiness to that of natives in the destination country, finding that migrants are generally less happy than natives (Safi 2010, Bartram 2011, Baltatescu 2007). That comparison, however, has limitations as a foundation for drawing inferences about changes in migrants' happiness. If migrants move to a country where average happiness is higher than that of their own origin country, they could experience an increase in happiness that still leaves them below the average of the destination country. Seeking a better way to determine how migrants' happiness might have changed, Bartram (2013) instead compares migrants to stayers in the countries the migrants left. In analysis of migrants from eastern Europe to western Europe, it appeared that migrants in general did not experience increased happiness after migration (in models correcting for the possibility of endogeneity). For migrants originating in Poland, there was evidence that migration had led to a decrease in happiness; for migrants from countries where average happiness is very low (Russia, Turkey and Romania), on the other hand, migrants do appear to have gained happiness after migration. Again, however, on average happiness did not change with migration. By contrast, Erlinghagen (2011) finds via a similar approach to comparison that emigrants from Germany are happier than people who remain in Germany.

The main instance of longitudinal analysis of panel data comes in a study on migration from eastern to western Germany (Melzer 2011). The premise of this research is that migration flows of that sort are akin to international migration, insofar as East Germany was a separate country from 1949 to 1990 and significant differences (including economic disparities) have persisted in the post-reunification period. Melzer finds that east-to-west migrants (particularly the men) gained happiness with migration, in large part because of the better employment opportunities in the west. That finding is important for the high quality of the data and of the analysis conducted on it. One might wonder about the extent to which it can be extended to cover international migration in general: migration flows across national borders are typically quite different from the German instance. Even so, Melzer's research clearly indicates that migration to a wealthier area can have positive happiness consequences.

Most research on this question has used quantitative analysis of survey data. A set of studies employing qualitative methods indicates some broadly pessimistic findings. Wright (2010, 2011) conducted interviews with Peruvian immigrants in Madrid and London and heard numerous informants speak of social isolation and loneliness. These aspects of their experiences seemed to overwhelm the material gains they had achieved, so that they felt poorer in a broader sense. A feeling of exclusion from the native society was significant in this respect, as was the sense of lower trust and greater competition among the immigrants themselves. Some of the women Wright interviewed in London said they had achieved a greater sense of autonomy – but in general her findings were summarized by a rueful title: "It's a limited form of happiness".

Again, research on the connection between migration and happiness to date has focused on the movement of people from poorer to wealthier countries (or, in the case of Melzer, poorer to wealthier regions; cf. Knight and Gunatilaka 2010). To the extent that migration is motivated by the aspiration for higher incomes available in a wealthier country, migrants themselves might fail to recognize that the happiness consequences of income changes derive more from income's relative aspect than from its absolute aspect. Migration itself can be disruptive to other dimensions of people's lives (social ties, sense of belonging, etc.), possibly with consequences for their happiness. If the economic benefits of migration compensated for losses experienced in these other areas, the balance might well be positive – but the Easterlin argument implies that the income benefits themselves are often misjudged. That scenario might also describe the experiences of those migrants who were not motivated by economic aspiration (e.g. "family migrants"), given that the economic processes themselves have to do with the transition to a different context (not just with the factors motivating the migration decision).

If, however, migrants follow a different economic trajectory – moving from a wealthier country to a poorer one – then the transition to a different context might work more in their favor. Migrants in this mode can end up poorer in an absolute sense – a lower level of income, adjusted for currency conversion and purchasing power – but nonetheless enjoy a relative position higher in the destination country than it was in the origin country. The migration process itself is likely to be disruptive to other elements

of their lives, but at least in this scenario there is some prospect of an economic benefit conducive to happiness. The core argument mounted by Easterlin is that economic growth cannot raise a country's *average* happiness – but perhaps moving to a poorer country would bring such an increase in an individual's relative position that it produces a happiness benefit, perhaps even one outweighing any negative consequences arising from other more disruptive aspects of the migration experience.

The outcomes for migrants in this mode likely depend significantly on which reference groups become salient for comparison of socio-economic status (cf. Piore 1979). The scenario described immediately above derives from the possibility that migrants who move to a poorer country and achieve a relatively high socio-economic position (by virtue of wielding financial resources/capital, including highly valued educational credentials) will tend to adopt a reference group comprising the destination country population. Other modes of comparison are possible as well, however. Migrants might emphasize comparisons with other migrants, engaging in a more fine-grained (and possibly dynamic/evolving) construction of local reference groups. Or, they might continue to think in terms of how they compare to people who remain in the origin country, perhaps feeling some anxiety about their relative decline in comparison to a stable reference group. Firebaugh and Schroeder (2009) find that for many people comparisons and reference groups are quite "local" – but that conclusion does not obviously extend to situations where individuals themselves have moved to a different country. Gelatt (2013) concludes that migrants generally compare themselves to people in the destination as well as those in the origin.

In a more conventional economic perspective, one might be tempted to conclude that the migration choice itself constitutes sufficient evidence that those who choose it thereby gain happiness (otherwise, so the thinking goes, why would they choose it?). Happiness studies, by contrast, explicitly rejects the "revealed preferences" axiom underpinning that sort of assumption, opting instead to treat the question as an empirical one. A key theme then becomes the possibility that people sometimes make choices that do not lead to greater happiness: we find it difficult to predict outcomes accurately, in part because of insufficient information and because we fail to anticipate how our preferences will evolve (Gilbert 2006; Haybron 2008).

But the fact that some choices result in unintended outcomes does not mean that *all* choices result in unintended outcomes. With migration to a poorer country there is at least a basis for optimism, given that "relative income" is an important determinant of happiness. In contrast to migrants who have gone to wealthier countries, migrants moving to a poorer country are more likely to increase their relative economic position; if they then engage mainly in status comparisons to natives in the destination, their happiness might increase. The main hypothesis here, then, is that migrants to poorer countries will be happier than those who remain in the wealthier origin countries, controlling for other factors (though initially excluding income). The analysis will then gauge the extent to which inclusion of income affects the happiness difference between migrants and stayers. When income is conceived and evaluated in a "relative" sense, the expectation is that including income will reduce any happiness advantage of migrants over stayers: that advantage might derive from migrants having achieved a higher relative position, and if that position is held constant then migrants' advantage should diminish.

When income is considered in an "absolute" sense, on the other hand, the effect of including it in the analysis ought to be the reverse. Income for migrants living in poorer countries is likely to be lower in an absolute sense, even if their relative position is higher. Controlling for absolute income, then, is likely to inflate the gap between migrants and stayers: absolute income is positively correlated with happiness, migrants are assumed to earn lower absolute incomes than stayers – and yet the analysis proceeds (with absolute income included as a control) "as if" migrants' and stayers' absolute incomes were the same. The impact of absolute income can be considered in its own right and also as a control variable for gauging the impact of relative income; for that latter analysis, the impact of relative income is likely to dominate that of absolute income (Ball and Chernova 2008).

Data and methods

These ideas are investigated here via analysis of migration from wealthy northern European countries to southern Europe. Data are drawn from Rounds 1 through 5 of

the European Social Survey (ESS; see Jowell 2007). The origin countries are Belgium, Switzerland, Germany, France, Britain and the Netherlands; the destination countries are Spain, Portugal, Cyprus and Greece. These selections were made on the basis of considering data from a wider range of countries and determining which ones contained sufficient representation of migrants in the destination country samples. The origin countries are all very wealthy, with per-capita GDP adjusted for purchasing-power parity ranging from $36,104 (France) to $53,367 (Switzerland). The destination countries in southern Europe, while still quite wealthy in a global context, have lower average incomes, ranging from $25,411 (Portugal) to $32,682 (Spain).[2]

The crux of the analysis is a comparison between migrants from the selected northern countries who moved to the specified destinations, on the one hand, and people remaining in the northern countries ("stayers"), on the other.[3] The migrants were identified via questions (posed to the ESS samples drawn in the southern countries) asking whether respondents were born in the country in which they currently live and (for those answering no) their country of birth. The sample analyzed here totals 54,469 respondents, of which 313 are migrants; of these, 101 are in Spain, 105 are in Greece, 41 are in Cyprus and 66 are in Portugal.

The dependent variable for analysis here is happiness. Research on happiness commonly uses answers to a single question, as on the ESS: "Taking all things together, how happy would you say you are?", with answers ranging from 0 to 10 ("extremely unhappy" to "extremely happy", with the intervening numbers unlabelled). The question does not offer respondents a definition of happiness; that practice seems particularly advisable when considering happiness in different countries (one would not want to impose a "universal" definition that would inevitably resonate with some people more than with others). Some researchers argue for a more elaborate approach to measurement (e.g. Diener et al.'s multi-item "satisfaction with life scale", 1985), but it

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[2] The economic differences between the various European origin and destination countries are small compared to the larger international differences apparent at a global level. It is possible that the change in relative status for intra-European migrants is not sufficiently large to lead to a gain in happiness.

[3] Immigrants in the northern countries were removed from the dataset.

is not clear in general that a more elaborate approach results in a notably different summary measure of happiness.

After comparing the happiness of migrants to that of stayers in bivariate fashion, the analysis turns to regression models in which a number of control variables are employed. These variables are selected on the basis of reviews of happiness research establishing the factors that usually show significant association with happiness (e.g. Dolan et al. 2008; Diener et al. 2009). Among the most important are health, relationship status, and employment status. Respondents evaluate their health by selecting from five options: very good, good, fair, bad, very bad. Relationship status is treated here as a binary variable via a post-coded question indicating whether the respondent is living with a spouse or partner. Employment status is given by a question asking about "main activity", with options including employed, unemployed (separated into actively looking for a job or not), self-employed, retired, student, "homemaker", and other. The analysis below compares those who are retired and those who are unemployed (whether looking for a job or not) to all those in the other categories (the main differences between migrants and stayers in this sample are in regard to retired and unemployed).

Other control variables include religiosity, via a question asking how religious one is, with eleven options for response (0 for not at all religious, 10 for very religious), similarly to the happiness question. Since social relationships apart from marriage/spouse/partner can be important, the analysis also includes a question asking whether respondents have someone with whom they can discuss intimate and personal matters (yes/no), labelled in tables below as "friends". A categorical variable for education indicates whether respondents have only a primary education (or less) as against attainment at lower secondary, upper secondary, vocational, or tertiary levels. There are also variables for gender and age; the square of age (divided by 100) is added to capture its typically U-shaped association with happiness.

Income is also included as an independent variable – potentially an important one here, given the significant association it generally shows with happiness in cross-sectional analyses. In Rounds 4 and 5, the ESS income question asks respondents to select from

deciles derived from income distributions in the country of residence. For an analysis that considers individuals living in different countries, that approach to measuring income corresponds well to the notion that income affects happiness mainly as a matter of comparing one's status to that of others. In the present context, what is being controlled in effect is individuals' position in the national income distribution, rather than their purchasing ability per se. With income distributions typically skewed by high levels of income inequality, the use of deciles also meshes well with the well-known finding that a logarithmic function fits best when income is given in "absolute" amounts.

Significantly, however, the income question in Rounds 1 through 3 was different (and clearly inferior): it offered respondents in all countries twelve identical ranges (in euros for Eurozone countries, and in local currency equivalents for the others).[4] The use of identical ranges for different countries is not a major problem here: for stayers, the national economies of the six countries in question are similar enough that the equivalence implied in the measure is plausible, and for migrants the data give an indication of where they fall in the income distribution of the countries in which they live – an observation that again highlights the affinity between the data and the notion that income in its "positional" sense is what matters for happiness.

Slightly more problematic is how to merge the twelve ranges of the measure from Rounds 1 to 3 (hinctnt) with the ten ranges of the revised measure in Rounds 4 and 5 (hinctnta). An inspection of the distribution of hinctnt shows that even in the (poorer) destination countries very small proportions of respondents select from the lowest three ranges. It is then a straightforward transformation to combine these ranges and then merge the resulting ten "old" values with the ten "new" values (i.e., of the revised measure). Undoubtedly, this combination involves some real imprecision in the measurement of income (for one thing, the distribution of hinctnt is small in the tails, even after combining the lowest three ranges, in comparison to the more even distribution of a measure rooted in deciles derived for the different countries). If the main question at issue here were the relationship between income and happiness, the

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[4] In effect, then, the survey design implied that earning €300 a month in Romania was equivalent to earning €300 a month in France.

measurement error that results from combining the old and new data would likely be a genuine obstacle in the search for robust findings. For use as a variable in models comparing the happiness of migrants and stayers, however, this approach is reasonable even if flawed; it is a necessary compromise insofar as the data from Rounds 4 and 5 on their own contain only 108 migrants as defined here.

The variable combining information from hinctnt and hinctnta, then, is given in models below as "relative income".[5] A variable denoted as "absolute income" is derived from those data using the showcards for each country, following a procedure presented by Ball and Chernova (2008): the midpoint was identified for each range (using 120% of the bottom of the highest "range", for which no maximum was given); where necessary the amounts were converted to euros; and the resulting figures were converted to 2010 euros using deflators from the World Bank's *World Development Indicators*. The corresponding amounts were then assigned to respondents as per their selection of the range on the showcard.

Table 1 gives "descriptive" data on the variables in question, separately for migrants and stayers and for the sample as a whole. Notable differences include: migrants are healthier than stayers (no doubt in large part for being significantly younger); migrants have higher rates of completing higher education; and migrants are much less likely to be retired, instead engaging in paid work at a higher rate (though also experiencing a higher rate of unemployment).

(Table 1 here)

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[5] As with most survey data, non-response rates for the income question are decidedly non-trivial, with roughly twenty per cent declining to answer in the sample considered here. The structure of non-response was explored using techniques of multiple imputation (Rubin 1987; Royston 2004). The data created via imputation provided no basis for believing that non-response was selective according to income level; for migrants there was no difference whatsoever in the mean, and for stayers the difference was trivial. The analysis below, then, reports results from the original data, without imputation (thus proceeding via listwise deletion).

The analysis proceeds in the first instance via ordinary least-squares (OLS) regression. Strictly speaking, one might insist on use of ordinal logistic regression models, given that the dependent variable is ordinal, not continuous. For the OLS results reported below, however, the conclusions drawn from ordered logit results are identical to those in the OLS analysis (cf. Ferrer-i-Carbonell and Frijters 2004); OLS is therefore adopted for greater ease of interpretation. The analysis then explores the question of direction of causation via a two-stage "treatment effects" model that considers whether a correction for endogeneity is necessary, via inclusion of a first stage equivalent to a probit regression of the migration decision (with reference to respondent's age, gender and education together with mother's and father's education, as reported by the respondent).[6] Finally, a "matching" analysis is employed to consider comparison of migrants to stayers from a different angle, using a "counterfactuals" perspective (Morgan and Winship 2007). Sampling weights are used in all analyses except as noted.

Analysis and results

Considering the sample as a whole, in a bivariate comparison of migrants and stayers the migrants are two-tenths of a point less happy than the stayers, with migrants reporting an average happiness of 7.3 on the 11-point scale and stayers averaging 7.5 (Table 1). Given that migrants and stayers are quite different with regard to certain characteristics that typically matter for people's happiness, the question then becomes whether that bivariate difference persists when other factors are held constant. That question is addressed here in the first instance via OLS regression.

In a regression model controlling for a range of other variables but initially omitting income (Table 2, Model A), the gap between migrants and stayers is larger (–0.32), and we can be reasonably confident that this sample result is not too distant from what would likely be found in the population as well (with a 95 per cent confidence interval of –0.565 to –0.084). This result is directly contrary to the main hypothesis indicated above: migrants are *less* happy than stayers, not more, controlling for a range of other

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[6] See Cong and Drucker (2001) for details of Stata's 'treatreg' routine and Maddala (1983) for the underlying model.

variables. The output for the control variables is very much in line with analyses produced by other researchers.

(Table 2 here)

In a model including relative income (Model B), the gap between migrants and stayers is substantially smaller at –0.20 (with a 95 per cent confidence interval that includes zero) —a reduction "explained" in part by the fact that relative income for migrants is lower than for stayers (in combination with the more general proposition that lower relative income is associated with lower happiness). This result is sensible on its own terms, even if both elements of it (the lower happiness and the lower relative incomes for migrants) are contrary to the hypotheses articulated above. Whether this is an explanation in anything more than a mathematical sense is a topic explored in more detail below, where we will consider whether the lower figure for migrants might nonetheless represent an increase over the incomes they might have earned if they had remained in the origin country. In other words, we are not (yet) in a position to conclude that migration has led to a decrease in migrants' happiness via (in part) a reduction in their relative incomes.

The remaining two models in Table 2 consider the impact of absolute income. As noted above, migrants might experience lower happiness as a consequence of reduced incomes in an absolute sense: migration to a poorer country is likely to reduce their standard of living (even if it had, counterfactually, resulted in a higher average relative position). Model C in Table 2 considers the impact of absolute income without including relative income; absolute income in this model has a consequence for the migration coefficient virtually identical to that of the relative income variable. When absolute income is considered as a control variable for gauging the impact of the relative income variable on the happiness gap between migrants and stayers, we see (in Model D) that that impact is virtually negligible: the coefficients from Model B are entirely unchanged by the addition of absolute income to Model D (consistent with Ball and Chernova's 2008 finding that relative income strongly dominates absolute income with regard to happiness).

Why then are migrants less happy than stayers? The question motivating this paper was premised on the notion that migrants might achieve a higher relative position by moving to a poorer country. If the analysis here had shown that migrants were happier than stayers (and had higher relative incomes), it would not be difficult to suggest a plausible explanation for that finding, in the terms of the question.

The fact that migrants are less happy than stayers, however, is more difficult to account for. One possibility is that they have in fact failed to achieve an increase in their relative economic position, or even suffered a reduction. The data do not tell us about migrants' incomes prior to migration, so it is not possible to say with any certainty how their economic status has changed. Migrants' relative/local incomes are significantly lower than those of stayers, as apparent in Figure 1. But migrants have significantly higher incomes than natives in the destination countries – a point apparent in Figure 1 and in a t-test of the difference between the average values of 4.49 for migrants and 3.90 for natives (numbers that again refer to the ten ranges used to measure income).

(Figure 1 here)

Differences in educational attainment provide grounds for a plausible suggestion regarding migrants' lower happiness in connection with economic status (here it becomes important to compare migrants to natives as well, not only to stayers). Migrants have higher rates of educational attainment, in comparison to stayers and (particularly) to natives (Figure 2).[7] Migrants' educational advantage over natives helps explain migrants' higher economic position relative to natives in the destination. But the fact that migrants also attained more education than stayers and yet have a lower relative economic position than stayers raises the possibility that migrants' economic position relative to stayers might have been higher if they had remained in the origin country. Perhaps migrants in the poorer southern European countries find it difficult to capture economic gains from their educational attainment – a feature of migrants' situations in many contexts (e.g. Portes and Bach 1985). Migrants' lower happiness, in

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[7] Rates for vocational qualifications do not differ for the two comparisons, and so those who selected the vocational response are removed from these figures for presentational reasons.

combination with the disjuncture between their educational attainment and their economic position relative to that of stayers, might also indicate that they continue to compare themselves mainly to stayers in the origin rather than adopting a comparison to natives in the destination. Again, Gelatt (2013) finds that migrants continue to compare themselves to stayers, as well as comparing to natives in the destination (a limitation of the analysis here is that there are no data allowing us to know which reference group figures more prominently in their comparisons). Both suggestions provide a basis for explaining why their subjective experiences after migration were not as favorable as they might have hoped.

(Figure 2 here)

Given the cross-sectional nature of the data and the associated analysis, another central issue is whether the difference between migrants and stayers represents a decline in happiness for migrants or whether the migrants were already (i.e., prior to migration) less happy than the stayers (and then migrants' happiness remained stable). As with income, there is no direct way of knowing via ESS data about the pre-migration happiness of the migrants; for this purpose we would require panel data. Research that considers happiness in connection with people's *intention* to migrate (as expressed on surveys) shows that people who say they intend to migrate are less happy than those who do not express this intention (Graham and Markowitz 2011). That article focused on Latin American countries, however, and one might hesitate before assuming via extrapolation that the same pattern pertains to residents of wealthy countries in northern Europe.

One can gain some leverage on this question via a two-stage "treatment effects" model (Table 3).[8] The results indicate that the difference between migrants and stayers is even larger (b=−1.35) when correcting for endogeneity (using controls corresponding to Model A in Table 2). The correlation between the error terms at the two stages is statistically significant (p for λ is 0.027), a figure that provides strong support for preferring this model over the more conventional OLS regression results. In other

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[8] The specification here uses the more conservative "two-step" option in place of full-information maximum likelihood. Use of sample weights is then not possible.

words, there is an indication here of a significant pre-migration difference in happiness between migrants and stayers: migrants were *happier* than stayers prior to migration. The "migrant" coefficient in this model is correspondingly larger, indicating a more substantial decline in happiness for migrants than is apparent in the OLS model.

(Table 3 here)

That implication must be treated with caution. The regression analyses above (including the treatment model) control for a number of variables on the assumption that if migrants hadn't migrated they would be similar to non-migrants with respect to those variables (so that if there is a difference in happiness it can then be ascribed to the act of migration). That assumption, often not articulated in analyses employing regression models[9], is likely to be false in this context. Some variables used as controls here do not change as a consequence of migration (e.g. sex, age) – but other variables might well change following migration. One obvious possibility here is "main activity", but even religiosity and sociability (having someone to discuss intimate matters with) might be altered by having moved to a different country. Gauging the consequences of migration for one's happiness requires considering the possibility that migration might lead to changes in "control" variables that are themselves consequential for happiness.

Another (arguably more sensible) approach to evaluating the happiness difference between migrants and stayers, then, invokes a "counterfactual" perspective and uses "nearest-neighbour matching" (Abadie et al. 2004; see Morgan and Winship 2007 on counterfactual methods more generally). This technique matches cases in a "treatment" category to a number of "controls" selected for their similarity on a set of variables that help explain the key "independent variable" (here, migration) – and then calculates the average difference between the two groups for the dependent variable. This approach is akin to propensity score matching but has the key advantage of minimizing the number of subjective decisions required from the analyst (Guo and Fraser 2010); in

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[9] In regression analysis one typically (if subconsciously) aspires to maximize r-squared, the proportion of variation explained by the model. That aspiration, in combination with the desire to avoid "omitted variable bias", can lead one to add more control variables – perhaps without thinking clearly about what doing so means in the context of one's research question.

particular, it does not require specifying the functional form of a model describing propensity toward "treatment selection" (e.g. migration). This analysis is intuitively attractive for the data used here, particularly if one opts for the "average treatment effect for the treated" (ATT): with a small number of migrants and a very large number of stayers, the software (Stata) can find stayers who are very similar to emigrants on multiple dimensions.

The variables used for matching here are the same as those used in the first stage of the treatment effects model in Table 3 (age, gender, and education, including that of the respondent's parents).[10] Taking the sample as a whole (i.e., without considering differences between the origin countries), the happiness of migrants is on average 0.25 points lower than that of matched stayers (again on the 11-point happiness scale).[11] Under the "ATT" specification, this result suggests that migrants would have been one-quarter of a point happier if they had not in fact become migrants.

It is worth emphasizing that the matching results do not involve any of the compromises associated with the income variable as in the OLS regression analysis – the income variable is not used in the matching analyses. Again, this analysis does not control factors that might have changed as a consequence of migration; instead, it is open to the possibility that such factors are likely to have changed and so should not be controlled in an analysis designed to determine the happiness consequences of migration. The matching procedure, then, focuses on variables that would generally not change following migration and instead are likely to have affected one's propensity towards migration. The key "output" here is the average difference in happiness between migrants and stayers who show similar propensity to migrate; the value for (matched) stayers functions as the counterfactual value for migrants.

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[10] In a probit model of migration, all of those variables except gender are statistically significant at conventional levels.

[11] It might be disconcerting not to see a table providing more detailed information about these results – but the Stata output for matching analyses does not give any additional useful information (the only other figures reported are the standard error of the coefficient, the associated "z", and a confidence interval).

While matching analyses provide a more persuasive framework for thinking about counterfactuals (particularly with respect to use of "control variables"), they involve certain limitations particularly when used with cross-sectional data; some of these are akin to "omitted variable bias" issues that can arise in a regression context. For example, in matching cases on propensity to migration, one would surely want to know about the (un)employment status of migrants prior to migration. In addition, matching does not address the question of reverse causality – and in this instance we cannot directly test the possibility that differences in happiness might contribute to different propensities to migration. On the other hand, the treatment model above suggests that migrants were happier than stayers prior to migration. Taken together, then, the matching analysis and treatment models provide some reasonable support for the conclusion that migration has resulted in lower happiness for the migrants – though that conclusion is subject to the usual caveat about unobserved variables associated with data limitations.

Conclusion

Many migrants aspire to gain entry to a wealthy country such as the USA, the UK or Canada. If migration to a wealthier country leaves the migrants with a lower economic status position, it might not improve their subjective experiences to the extent that they might have hoped. In this frame, a form of migration that might hold more potential to bring increased happiness involves moving from a wealthier country to a poorer country; migrants might be able to wield various forms of capital in ways that enable them to achieve higher economic status positions than they held in their country of origin.

In the analysis here of migration from northern to southern Europe, however, there is no sign of favorable happiness consequences; on the contrary, it appears that migrants experienced a decrease in happiness. The discussion above suggests that their relative economic status might not have increased as anticipated (and perhaps even decreased), and/or that they might continue to compare themselves to stayers in the origin rather than to natives in the destination. Or perhaps they did achieve an increase in status but any positive subjective consequences were outweighed by negative consequences

arising from the more general disruptive effects of international migration on one's life. Another possibility, mentioned above, is that the gap between northern and southern European countries is not large enough to enable an increase in status sufficient to result in greater happiness. In that connection it would be interesting to address this question via research on American migrants who move to countries such as Costa Rica and Panama (which have become popular retirement destinations); an additional though historical example is the movement of Britons to parts of the British Empire such as India. In both cases, however, it does not appear that the required data are available for analysis of the sort undertaken here. The data used here also come with limitations that are worth bearing in mind – in particular, the fact that the data are cross-sectional and that there is no information directly indicating the reference groups migrants use in evaluating their own socio-economic position.

The broader question of whether an increased income brings greater happiness will no doubt remain contentious. There are significant doubts about the happiness benefits of economic growth: if the "relative" aspect of income is what really matters for happiness, then growth might not merit the emphasis it usually receives in government policy in wealthy countries. Increased incomes might result in greater happiness for individuals who increase their economic position relative to others – but perhaps not if reference groups are adjusted upwards and aspirations for further increases persist. Additionally, significant upward mobility is not exactly a common experience in societies marked by high levels of economic stratification; achievable income increases are often quite modest.

Individuals who really wanted to gain a higher economic position might be able to achieve this via migration to a poorer country. Within the European Union opportunities for migration are abundant, and migration flows to poorer countries have reached significant dimensions. Poorer countries in other regions are often happy to receive migrants (and their resources of various forms) from wealthier countries. The analysis in this paper, however, raises doubts about whether migration in this mode will result in greater happiness for the migrants – in part because they do not in fact appear to achieve a higher relative economic position (compared to stayers back home and/or to the position the migrants might have had if they had stayed). An additional question,

not explored here, concerns the impact on natives in the poorer destination countries: one might wonder whether there are negative consequences for the happiness of natives emerging from a decrease in their own economic status following from the arrival of a wealthier immigrant component of the population.

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Table 1

Characteristics of migrants and non-migrants

	Migrants	Non-migrants	Total
Happiness	7.32	7.51	7.50
(sd)	1.86	1.74	1.75
Age	37.7	48.4	48.3
(sd)	13.3	18.4	18.4
Health	4.24	3.84	3.84
(sd)	0.78	0.86	0.86
Religiosity	4.78	4.28	4.28
(sd)	2.92	3.00	3.00
Income	4.49	5.30	5.30
(sd)	2.31	2.46	2.46
Absolute income	23,850	35,783	35,725
(sd)	15,863	26,095	26,068
Education:			
% Primary	8.6	12.0	12.0
% Lower Secondary	16.3	19.0	19.0
% Upper Secondary	32.9	38.4	38.3
% Vocational	2.6	3.2	3.2
% Tertiary	39.6	27.4	27.5
% Male	46.0	47.2	47.2
% Partner	58.1	59.1	59.1
% Unemployed	7.7	4.4	4.4
% Retired	7.0	23.4	23.3
% Friends	93.9	92.5	92.5
N	313	54,197	54,510

Table 2

Determinants of happiness, OLS regression

	Model A				Model B				Model C				Model D			
	b	p	95% Conf. Int.		b	p	95% Conf. Int.		b	p	95% Conf. Int.		b	p	95% Conf. Int.	
Migrant	-0.32	0.008	-0.565	-0.084	-0.20	0.195	-0.511	0.104	-0.21	0.173	-0.522	0.094	-0.20	0.195	-0.511	0.104
Relative income					0.07	0.000	0.060	0.075					0.07	0.000	0.055	0.079
Absolute income									0.05	0.000	0.041	0.054	0.00	0.917	-0.010	0.011
Age	-0.06	0.000	-0.061	-0.051	-0.05	0.000	-0.057	-0.047	-0.05	0.000	-0.058	-0.047	-0.05	0.000	-0.057	-0.047
Age squared/100	0.06	0.000	0.051	0.061	0.05	0.000	0.049	0.060	0.05	0.000	0.049	0.060	0.05	0.000	0.049	0.060
Female	0.06	0.000	0.028	0.085	0.07	0.000	0.043	0.105	0.07	0.000	0.037	0.099	0.07	0.000	0.043	0.105
Religiosity	0.04	0.000	0.038	0.049	0.05	0.000	0.039	0.051	0.04	0.000	0.039	0.051	0.05	0.000	0.039	0.051
Partner	0.69	0.000	0.659	0.727	0.62	0.000	0.586	0.663	0.67	0.000	0.630	0.705	0.62	0.000	0.587	0.663
Main activity:																
Unemployed	-0.73	0.000	-0.815	-0.637	-0.62	0.000	-0.712	-0.518	-0.66	0.000	-0.761	-0.568	-0.62	0.000	-0.712	-0.518
Retired	0.09	0.001	0.039	0.144	0.13	0.000	0.071	0.187	0.12	0.000	0.059	0.174	0.13	0.000	0.071	0.187
Friends	0.65	0.000	0.581	0.716	0.62	0.000	0.548	0.696	0.63	0.000	0.558	0.705	0.62	0.000	0.548	0.696
Health	0.55	0.000	0.527	0.570	0.54	0.000	0.516	0.563	0.55	0.000	0.523	0.570	0.54	0.000	0.516	0.563
Education:																
Lower Secondary	-0.02	0.532	-0.081	0.042	-0.08	0.040	-0.147	-0.004	-0.04	0.238	-0.114	0.028	-0.08	0.040	-0.147	-0.003
Upper Secondary	-0.04	0.163	-0.103	0.017	-0.10	0.005	-0.169	-0.030	-0.06	0.092	-0.129	0.010	-0.10	0.005	-0.169	-0.030
Vocational	0.10	0.033	0.008	0.193	-0.02	0.750	-0.120	0.086	0.03	0.509	-0.068	0.137	-0.02	0.753	-0.120	0.087
Higher	0.08	0.007	0.022	0.142	-0.04	0.220	-0.114	0.026	0.01	0.694	-0.055	0.083	-0.04	0.221	-0.114	0.026
Survey Round:																
2	-0.07	0.003	-0.114	-0.024	-0.03	0.292	-0.079	0.024	-0.03	0.328	-0.077	0.026	-0.03	0.292	-0.079	0.024
3	-0.10	0.000	-0.145	-0.055	-0.05	0.041	-0.103	-0.002	-0.05	0.080	-0.096	0.005	-0.05	0.041	-0.103	-0.002
4	-0.07	0.003	-0.112	-0.022	-0.08	0.002	-0.130	-0.028	0.01	0.734	-0.042	0.059	-0.08	0.004	-0.132	-0.024
5	0.02	0.353	-0.024	0.066	0.02	0.494	-0.033	0.068	0.07	0.006	0.020	0.121	0.02	0.490	-0.033	0.070
Switzerland	0.16	0.000	0.118	0.212	0.10	0.000	0.052	0.156	0.02	0.524	-0.037	0.073	0.10	0.000	0.045	0.160
Germany	-0.34	0.000	-0.388	-0.299	-0.29	0.000	-0.334	-0.236	-0.32	0.000	-0.373	-0.274	-0.29	0.000	-0.335	-0.236
France	-0.36	0.000	-0.409	-0.308	-0.39	0.000	-0.448	-0.335	-0.41	0.000	-0.469	-0.356	-0.39	0.000	-0.448	-0.335
Britain	-0.23	0.000	-0.288	-0.182	-0.23	0.000	-0.286	-0.171	-0.27	0.000	-0.328	-0.212	-0.23	0.000	-0.288	-0.170
Netherlands	0.03	0.115	-0.008	0.075	0.02	0.407	-0.026	0.064	0.00	0.934	-0.047	0.043	0.02	0.414	-0.026	0.064
Constant	5.55	0.000	5.389	5.716	5.13	0.000	4.947	5.321	5.26	0.000	5.068	5.442	5.13	0.000	4.947	5.322
Notes.	N = 53,386				N = 43,038				N = 43,038				N = 43,038			

Table 3

Determinants of happiness, treatment effects regression

	b	p	95% Conf. Int.			b	p	95% Conf. Int.	
Migrant	-1.35	0.004	-2.268	-0.438	Migration equation:				
Age	-0.06	0.000	-0.061	-0.052	Age	-0.02	0.000	-0.025	-0.019
Age squared/100	0.06	0.000	0.052	0.062	Gender	0.02	0.715	-0.073	0.106
Female	0.06	0.000	0.027	0.084	Education				
Religiosity	0.04	0.000	0.039	0.049	Lower Secondary	0.02	0.854	-0.173	0.209
Partner	0.69	0.000	0.658	0.720	Upper Secondary	0.14	0.108	-0.031	0.317
Main activity:					Vocational	0.17	0.289	-0.145	0.485
Unemployed	-0.80	0.000	-0.876	-0.732	Higher	0.43	0.000	0.256	0.604
Retired	0.09	0.001	0.040	0.143	Father's education				
Friends	0.68	0.000	0.622	0.735	Lower Secondary	-0.45	0.000	-0.603	-0.295
Health	0.56	0.000	0.543	0.578	Upper Secondary	-0.58	0.000	-0.733	-0.436
Education:					Vocational	-0.48	0.027	-0.905	-0.055
Lower Secondary	0.00	0.889	-0.051	0.059	Higher	-0.53	0.000	-0.702	-0.354
Upper Secondary	0.00	0.882	-0.057	0.049	Mother's education				
Vocational	0.11	0.018	0.019	0.202	Lower Secondary	-0.44	0.000	-0.588	-0.297
Higher	0.12	0.000	0.071	0.179	Upper Secondary	-0.45	0.000	-0.607	-0.297
Survey Round:					Vocational	-0.50	0.048	-0.994	-0.005
2	-0.05	0.044	-0.092	-0.001	Higher	-0.36	0.000	-0.557	-0.168
3	-0.09	0.000	-0.130	-0.040	Constant	-1.23	0.000	-1.500	-0.965
4	-0.05	0.018	-0.100	-0.010					
5	0.02	0.293	-0.021	0.071	λ	0.396	0.027	0.045	0.746
Switzerland	0.16	0.000	0.109	0.213	ρ	0.260			
Germany	-0.36	0.000	-0.402	-0.308	σ	1.524			
France	-0.40	0.000	-0.448	-0.345					
Britain	-0.23	0.000	-0.283	-0.175					
Netherlands	0.03	0.238	-0.020	0.080					
Constant	5.45	0.000	5.296	5.596					

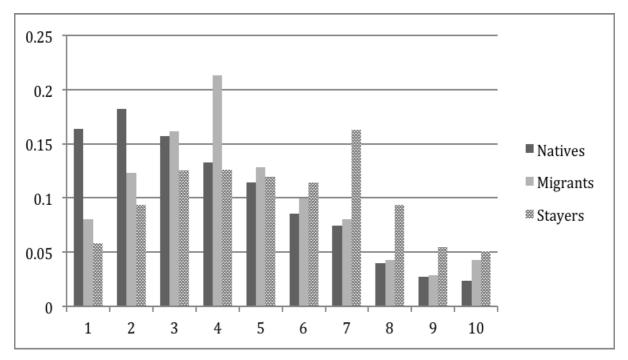Notes.   N = 46,411

Figures

Figure 1. Income distributions. Shows the proportion of respondents in each group reporting an income in the indicated range.
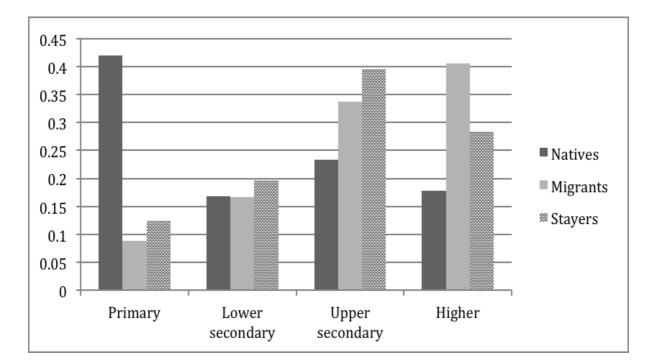

Figure 2. Educational attainment. Shows the proportion of respondents in each group who report highest educational attainment in the indicated category.