

Are migrants selected on motivational orientations?

Selectivity patterns amongst international migrants in Europe

1. Introduction

Over the past decade research on migrants' selectivity has become a central issue in migration studies (see Feliciano, 2005a; 2005b; Pedersen et al., 2008; Belot and Hatton, 2012; Ichou, 2014; Ichou et al., 2017). Most of these studies (but not all) have found that migrants are, on average, positively selected on educational qualifications when compared to their non-migrant counterparts. Migration scholars have also often assumed migrants differ from their non-migrating equivalents in a number of usually unobserved motivational characteristics that make them more willing to seek the opportunities and take the risks involved in the migration decision. Chiswick (1978) and Portes and Rumbaut (1996), for example, argued that migrants are the most ambitious, motivated and risk-taking persons of their home countries. Of course, *if they are*, this should also reflect in their labour-market performance at destination, since motivational orientations are also productivity-enhancing traits, that is, personal characteristics leading to higher labour-market returns (Cunha and Heckman, 2007; Heckman, 2006). Potential motivational selectivity is thus highly consequential not only for the migration decision but also for the study of immigrants' structural incorporation.

Despite theoretical claims, selectivity on motivational orientations has rarely been tested empirically. A few exceptions can be found in the field of social psychology. Research in this field suggests that migration is associated to high achievement motivation (Boneva et al., 1998), high power motivation (Boneva et al., 1998; Frieze et al., 2004), high work centrality (Frieze et al., 2004), low family centrality (Frieze et al., 2006) and low affiliation motivation (Boneva et al., 1998). In addition, evidence suggests there is also selection on

relevant personality traits such as openness to experience, agreeableness (Jokela, 2009), neuroticism or extraversion (Silventoinen et al., 2008); in temperament traits like sociability, activity and emotionality (Jokela et al., 2008); as well as in attachment styles (Polek et al., 2011). This association between certain motivational and psychological dispositions and the migration decision has given support to the idea of a “migrant personality”, i.e. a personality pattern that, together with other psychological characteristics, interacts with environmental factors and opportunities to produce the actual migratory behaviour (Boneva et al., 1998; Boneva and Frieze, 2001; Polek et al., 2011; Frieze et al., 2006).

Insightful as it is, the pioneering work of social psychologists suffers, in our view, from three important limitations. First, the samples used in these studies are usually student samples not representative of the migrant population. Second, most of these studies compare immigrants’ traits to those of natives with the same sociodemographic characteristics, instead of comparing migrants to their non-migrating co-nationals (Bonin et al., 2009). Third, to our knowledge, all these studies are single-country studies and this means we still lack a systematic comparison of motivational selectivity patterns across origin and destination countries. Because selectivity is likely to depend on the combination of both origin and destination characteristics, single-country studies can only offer a partial account of selection on motivational traits.

This study provides the first systematic assessment of the selectivity of migration flows on achievement-related motivational orientations (ARMOs) for a set of origin and destination countries. We focus on international migrants to European destinations from nine different origins (i.e. France, Germany, United Kingdom, Poland, Romania, Turkey, Morocco, Brazil and Andean countries). We compare the ARMOs of recently-arrived migrants sampled at different European destinations with those of their non-migrating co-nationals sampled at each respective country of origin (stayers). This allows us to test several empirical predictions drawn from different theoretical arguments, which we review and develop below.

2. Motivational orientations: definition

We define achievement-related motivational orientations as deeply internalized value-orientations that guide people's attainment-related actions in hierarchical and competitive contexts. ARMOs capture people's drive for social and economic attainment and their willingness to take risks in order to succeed. Achievement-oriented individuals should thus be more likely to make the investments, take the risks and seize the opportunities necessary to improve on their chances of socio-economic success, including those investments, risks and opportunities involved in the decision to migrate internationally. ARMOs are thus part of what economists call non-cognitive productivity-enhancing traits (see e.g. Bowles et al. 2001; Cunha and Heckman 2007), which also include a number of psychological and behavioural dimensions, which are represented graphically in Figure 1. Exploring the connection between these different dimensions is beyond the scope of this study.¹

[Figure 1 about here]

ARMOs are most probably acquired through early socialization processes, likely in interaction with psychological characteristics (see e.g. Boer and Boehnke, 2016; Bowles et al., 2001). As other value-orientations, ARMOs are considered long lasting and largely stable traits in adulthood (Milfont et al 2016; Schwartz 2006). Also, because they are motivational, ARMOs are expected to increase individuals' capacity to act in the face of constraints (Polavieja and Platt 2014). Our definition of ARMOs thus connects to a long sociological tradition that sees values and orientations as internalized engines of action (for reviews see Vassey 2009; Polavieja 2015). We note, however, this long sociological tradition (often called the Weberian or Parsonian tradition) has been contested by so-called "repertoire" approaches. Repertoire scholars conceptualize values as part of a cultural tool-kit people use strategically to make sense of their previously chosen courses of action, as well as of the constraints they face (see e.g. Swidler 2001). Translated to the context of our

¹ Ideally, we would have liked to complement ARMOs measures with indicators of psychological traits as typically used in the social psychology and the behavioural economics literatures. Yet psychological measures are simply not available for large cross-national samples.

research question, the *repertoire critique* would imply ARMOs are not real motivating factors in the migration decision but a mere ex-post rationalization of migrants' lived experiences of migration. This possibility is discussed below under the more general rubric of destination bias (see section 4.2).

2. Self-selection into migration: framework and hypotheses

Prior studies in the social sciences have almost exclusively focused on migrants' selectivity on standard human capital variables and sociodemographic characteristics, particularly education, age and socioeconomic status, which are easy to observe.² Most of these studies (but not all) find that migrants are, on average, more educated than their non-migrating counterparts from the same cohort and with the same background characteristics, although the degree of educational selectivity varies significantly depending on the country of origin and the timing of migration (Chiquiar and Hanson, 2002; Feliciano, 2005a; Belot and Hatton, 2012; Ichou 2014; Ichou et al., 2017).³ Feliciano (2005a), for example, finds positive selection on education in the US is higher for immigrants coming from distant countries and it decreases over time as successive waves of migrants settle in the destination society, a pattern that has also been noted by Takenaka and Pren (2010) and Beine et al. (2011), among others (see also Massey 1999). Belot and Hatton (2012) find that the occurrence of positive selection in education also decreases when there are colonial legacies and/or cultural similarities between origin and destination countries.

There are several theories of migration, each of which has implications for selectivity theorizing. Standard economic theories stress the role of expected benefits and costs in the migration decision. Expected benefits depend on the returns to migrants' skills relative to the origin country: the greater these returns are at destination (compared to the source country), the stronger the positive selection on skills will be, other things equal (Borjas,

² To our knowledge, Jaeger et al (2010) is the only study that addresses the connection between migration and risk-attitudes but the analysis is circumscribed to the case of internal migration in Germany.

³ Some studies have actually found negative educational selection for some groups in both Western Europe (Dronkers and de Heus 2010) and the US (Fernandez-Huertas 2011).

1987). Migrants can also consider access to welfare benefits in their allocation decisions. Arguments about the ‘welfare magnet’ contend that very generous welfare states can lead to negative skill selectivity, a possibility that has been a particular concern in Scandinavian countries (see e.g. Razin and Wahba 2015). International migration also entails costs (e.g. transportation, transit fees, settlement, job-search and other transaction and adjustment costs). Because not all individuals can assume these costs, immigrants are expected to be disproportionately drawn from the middle and upper-middle echelons of the income distribution (see Massey et al. 1993). Sociological theories also stress the role of social networks in reducing migration costs and argue that selectivity should decline over time as migrant networks expand (Massey 1999). This argument has been readily incorporated into mainstream economic thinking (see e.g. Beine et al. 2011).

The logic of standard economic theories can be easily applied to the study of motivational selectivity simply by noting that there are certain value orientations (e.g. ambition, adventurousness, risk orientations) and personality traits (e.g. conscientiousness, flexibility, openness to change) that increase the potential benefits and reduce the expected costs of migration. These typically unobserved characteristics will be all the more important if certain facilitating factors such as a common language or established networks of co-nationals are lacking at destination. The expectations for motivational orientations that follow from standard economic models are thus identical to those of skill selectivity: i.e. economic migrants will tend to be positively selected on motivational traits and the degree of motivational selectivity will depend on expected benefits and costs.

Standard economic theories of migration have, however, been criticized for providing an over-individualistic account of the migration decision. Stark (1991), for example, argues that decisions are actually made by households rather than individual agents as a means to diversify family risks. In a similar vein, sociological theories stress migration decisions are always embedded in social structures, networks and pre-existing cultural schemas, including gender norms (Massey, 1990; 1999; Portes and Sensenbrenne, 1993; Ryan, 2004; Hadler, 2006; Donato and Gabaccia, 2015). We would argue that an implication of these theories is that those who are “sent away” by their families need not be particularly selected on ARMOs (in fact, the opposite might be true). A case in point is women from gender-

traditional societies migrating for family (re)unification purposes (De Jong 2010).⁴

A number of specific empirical predictions can be derived from these arguments: First, we should expect that richer countries, as well as countries with more flexible labour markets and greater earnings inequality, will attract more achievement-oriented migrants than poorer countries and countries with more compressed earnings. This is because the economic returns to motivation should be higher in richer and more unequal societies. Relatedly, according to the welfare magnet hypothesis, we should expect migrants into countries with very generous welfare provision to be negatively selected on ARMOs. Third, we should expect motivational selectivity to be greater the wider the linguistic/cultural distance between origin and destination, since distance increases migration costs. Fourth, for the same reason, selectivity should be higher the greater the geographical distance between origin and destination.⁵ Fifth, in the particular case of Europe, we should expect selectivity to be lower for people migrating within the European Economic Area (EEA) as free-movement of labour obviously reduces migration costs. Finally, we would also expect women from highly traditional societies migrating for family-related reasons to be negatively (or at least not positively) selected on ARMOs. All these empirical expectations can be tested against the backdrop of the common migrant personality model, according to which we should expect positive selectivity across the board.

4. Data, measures and research design

We use data from the first (2002) to the seventh (2014) rounds of the European Social Survey (ESS), as well as the fifth (2005-2009) and sixth (2010-2014) waves of the World Value Survey (WVS), which contain comparable formulations in the variables of interest. The analyses are restricted to recent migrants to Europe (observed in the ESS dataset) born in countries covered by the ESS or the WVS, that is, to migrants in Europe for whom we

⁴ Note forced migration and asylum seeking should also have implications for motivational selectivity. These types of migration are, however, not represented in the migrant groups analysed in this study.

⁵ Unfortunately, we cannot test network density effects in our data because we lack micro-level measures for network contact at destination.

have corresponding non-migrating equivalents sampled at their countries of origin. Migrants recently-arrived to Europe are defined as those that have been living in a given destination country (covered by the ESS) no longer than five years.⁶ These migrants are then matched to the representative samples of non-migrant co-nationals. For migrants coming from European countries we use the ESS,⁷ while for migrant coming from non-European countries we use the WVS.⁸ Because we logically need a sufficiently large number of migrant observations in the ESS dataset to carry out our analyses, we focus on migrant groups with at least 50 observations in each single destination considered. This leaves us with the following nine ethnic origins: Andean countries (Colombia, Ecuador and Peru), Brazil, France, Germany, Morocco, Poland, Romania, Turkey and the United Kingdom.

Focusing on recently arrived migrants takes a toll on sample size. To increase potential statistical power we combine most destination countries into meaningful clusters defined by GDP, welfare type, and linguistic distance. Seven out of the nine migrant groups can only be observed in one single country/type of destination. Only Polish and Romanians migrants can be observed in two different destinations each. The final analytical sample comprises over 71,645 individuals, 70,828 of which are non-migrants and 817 are migrants recently arrived in Europe.

⁶ Unfortunately, both sample-size limitations and variable coding restrictions make it impossible for us to use a more restricted definition of recent migration.

⁷ We use the ESS as the sample for European stayers (including Turkish respondents) because the ESS ensures optimum levels of harmonization across countries and because it provides much larger sample sizes than the WVS.

⁸ We have tested for potential sampling bias by comparing selectivity coefficients estimated using the ESS and the WVS as alternative samples for European stayers. These tests, which are presented and discussed in the robustness checks section below, suggest our findings for non-European migrants are not driven by systematic sampling bias. Yet we recommend caution when comparing selectivity estimates for European and non-European migrants as the sampling procedures of the ESS and the WVS are not identical.

4.1. Measuring ARMOS

Both the ESS and the WVS include a short version of the Portrait Values Questionnaire (PVQ), which comprises ten different types of value-orientations that have cross-country validity (Schwartz 2006). The PVQ is framed in the surveys as a short verbal portrait of people describing their aims or aspirations, which implicitly indicates the importance that respondents give to a certain value-orientation. For example, “Being very successful is important to her/him. S/he hopes people will recognize her/his achievements” describes a person for whom success and social recognition are important. Once presented with ten such descriptions, respondents are asked to compare the portrait to themselves. Respondents’ own orientations are then inferred from their self-reported similarity to people described in the item.

Out of the ten orientations of the PVQ, we use the three items that have the most obvious attainment-related motivational content: success orientations, risk orientations and money orientations. Principal component factor analysis (with orthogonal rotation) shows these three items form part of the same underlying construct, yielding the largest factor loadings of the PVQ. Because these loadings are similar in size, we have constructed an additive scale, which is the summed average of the three items. The scale ranges from 1 to 6, has an average inter item covariance of 0.75 and a Cronbach’s Alpha of .6, which is relatively high for only three items (see e.g. Cortina 1993). Table 1 shows the three components of the ARMOS scale along with the motivational goal that each of them denotes, their specific formulation in the surveys and their respective factor loadings.

[Table 1 here]

4.2. Addressing potential destination bias

Even though it has been shown that value-orientations and personality characteristics are relatively stable and enduring in people’s lives (Roberts et al., 2008; McAdams and Olson, 2010; Milfont et al 2016; Cieciuch et al., 2015), we cannot rule out the possibility that particular experiences at destination change immigrants’ motivational orientations. One major source of concern is that migrants experience substantial barriers to a successful

socio-economic integration at destination, as a result of which their (originally high) levels of motivation eventually wane (even to appoint where they appear as negatively selected on ARMOs). We address this concern in two main ways: First, because destination influences are unlikely to operate in the short term, we restrict our analytical sample to recently-arrived migrants. Second, we investigate empirically whether our estimates for migrants ARMOs are affected by what we would argue are the three destination experiences with the largest transforming potential on motivation, namely, involuntary unemployment, extreme social isolation and discrimination. We focus on these three experiences because all three are known to have severe consequences for people's health, psychological well-being and self-esteem (see e.g. Pascoe and Richman 2009; Jefferis et al. 2011; Yang et al. 2016) and hence they are potentially likely to also affect motivation. Finding that ARMOs scores are unaffected by controls for these extreme experiences would thus provide strong support to the interpretation of differences in ARMOs between migrant as stayers as reflecting true migrant selectivity.

4.3. Model Specification

Selectivity coefficients are estimated using Ordinary Least Squares (OLS) regression following a simple estimation procedure. First, migrants observed at different European destinations are matched to their non-migrating co-national in a “national-group” sample. Then for each of these analytical samples we estimate net differences in ARMOs between migrants observed at different European destinations and stayers observed at the home country. We estimate three nested models:

The baseline model (equation 1) just includes *current country of residence* along with the control variables for gender and survey years, represented in the equation with the matrix \mathbf{X}_1 . Note that the current country of residence is the country of birth for stayers and the destination country for migrants. Model 2 (equation 2) adds two indicators of human capital, education and age (including its squared term) (matrix \mathbf{X}_2), since they are relevant

predictors of migratory behaviour.⁹ These two specifications allow us to measure the differential in ARMOs between migrants and stayers from the same country with and without human capital controls.¹⁰ Comparing these estimates across equations 1 and 2 thus allows us to test whether motivational selectivity is driven by educational selectivity or constitutes a distinct form of selection hitherto understudied. Model 3 introduces controls for unemployment experiences and social isolation (the latter variable only available for respondents migrating within the EEA) as a means to test for potential experiential bias, as explained above.¹¹ This set of variables is denoted by matrix \mathbf{X}_3 in equation 3. The effect of perceived discrimination on ARMOs is tested in a separate model fitted to migrants only.¹²

The three models are nested and specified as follows:

$$\mathbf{y} = \beta_0 + \beta_1 \mathbf{country} + \mathbf{X}_1 \boldsymbol{\delta} + \boldsymbol{\varepsilon} \quad (1)$$

$$\mathbf{y} = \beta_0 + \beta_1 \mathbf{country} + \mathbf{X}_1 \boldsymbol{\delta} + \mathbf{X}_2 \boldsymbol{\gamma} + \boldsymbol{\varepsilon} \quad (2)$$

⁹ Note because we are comparing migrants with stayers, human capital controls capture potential differences in ‘contextual’ educational attainment, i.e. attainment relative to origin not to destination (Feliciano and Lanuza 2017).

¹⁰ Because WVS and ESS use different educational variables, we have constructed a harmonized educational scale with the following four categories: 1) Low education (comprising incomplete secondary school/lower secondary and below); 2) medium education (comprising complete secondary/advanced vocational degree, lower tier upper secondary and upper tier upper secondary); 3) higher education (comprising all education above upper secondary); and 4) Other (Refusal/Other/DK/DA). We note there are differences in the distribution of this scale across the ESS and the WVS, which are most likely due to the different coding of the low and medium levels of education in the two surveys. Yet our selectivity estimates are robust to using alternative harmonization codes, as well as to using ISCED and years of schooling as alternative measures of education (the latter two variables available only for ESS data).

¹¹ In order to purge the ARMOs scale from the potentially confounding influence of people’s hedonism, all regression models include an additional control for respondents’ gratification orientations, which are measured in the PVQ using the following formulation: “It is important to this person to have a good time; to ‘‘spoil’’ oneself”. Hedonism contamination is a particular issue for the risk item of the scale, the wording of which conflates risk orientations proper with hedonistic attitudes.

¹² Note the vast majority of stayers are most unlikely to be discriminated against on the basis of language, religion, ethnicity or race in their own home countries and cannot be discriminated against on the basis of nationality. This means we cannot test whether ARMOs gaps between migrants and stayers are affected by perceived discrimination, but we can test whether migrants’ ARMOs are.

$$\mathbf{y} = \beta_0 + \beta_1 \mathbf{country} + \mathbf{X}_1 \boldsymbol{\delta} + \mathbf{X}_2 \boldsymbol{\gamma} + \mathbf{X}_3 \boldsymbol{\phi} + \boldsymbol{\varepsilon} \quad (3)$$

The reference category for *country of residence* in all specifications is stayers. This provides a straightforward interpretation of the coefficient for this variable (β_1) as the difference in motivational orientations between migrants living in a given European destination and their non-migrating co-nationals.

5. Descriptive statistics

Table 2 below presents summary statistics for the ARMOs scale and the main explanatory variables used in the empirical analyses. Note that there are significant differences in the gender composition of migration flows. Outflows from the Andean countries are slightly feminized while those from Turkey and Morocco are strongly masculinized (outflows from the remaining migrant groups are more sex-balanced). Note also that most migrant groups are, on average, more educated than non-migrants with the exception of Andean migrants, which seem less educated on average, in line with the results of previous studies (Bertoli et al. 2013).¹³ Distributions of ARMOs for recently arrived migrants and stayers across European destinations are shown in Figure 2.

[Table 2 here]

[Figure 2 here]

6. Results

Selectivity estimates for the main specification models are summarized in Table 3 (full tables for each ethnic group are available upon request) and presented graphically in Figure

¹³ We have further investigated educational selectivity using multinomial logistic models that control for respondents' age, age squared, gender and survey year. These models yield positive and significant educational selectivity estimates at the 95% level of confidence for British in Ireland, Germans in German-speaking EEA countries and French in French-speaking EEA countries; and at the 90% level also for Turkish migrants in rich countries (results available upon request).

3.¹⁴ The first three rows of Table 3 report selectivity coefficients for recent EU migrants from rich countries migrating into rich EEA countries with a common official (or co-official) language. According to standard economic arguments, these are the cases where we should expect the least motivational selectivity since migration costs between rich and culturally closed EEA countries should be low. Yet surprisingly we find the exact opposite pattern: high positive selectivity for British migrants into Ireland, German migrants into Austria and Switzerland and French migrants into Belgium, Luxemburg and Switzerland. Introducing human capital variables (model 2) reduces the size of the selectivity coefficient in all cases but cannot explain selectivity away. Also, although we find some differences by gender in the size of the coefficients, these differences are not statistically significant in pooled interacted models.¹⁵ Estimates are robust to experiential controls (model 3).

[Figure 3 about here]

The next two rows present the selectivity coefficients for migrants from two Eastern European countries, Poland and Romania. In this case, sample sizes allow us to compare two different destinations for each national group. Recent Polish migrants are found in sufficient numbers in Britain and Ireland, on the one hand, and in Scandinavian countries (Finland, Denmark, Sweden, and Norway) on the other. The interest of this comparison is that UK and Ireland are “Liberal” welfare states with deregulated labour markets and high wage dispersion, whereas Scandinavian countries are the home of the “Social-Democratic” model characterized by generous welfare provision and a very compressed income distribution (after taxes). According to standard economic models, we should expect

¹⁴ We report unweighted estimates because the Romanian sample in the 2006 ESS does not include country weights. We note, however, that the selectivity estimates for all the remaining origin-destination pairs tested in this study are fully robust to using country of origin weights for stayers and country of destination weights for migrants (results available upon request). This is hardly surprising since our regression models control for the standard sociodemographic variables that are used to produce post-stratification weights, which also means unweighted estimates are likely more consistent, unbiased and precise than weighted ones (see Winship and Radbill 1994; see also Gellman 2007).

¹⁵ For efficiency of presentation, we do not show the coefficients for gender interactions, which are available upon request. Significant gender interactions are presented graphically below (see Figure 4).

positive selection in the former two countries, while welfare magnet arguments would lead us to expect negative selection in the latter. Polish migrants into UK and Ireland do indeed seem positively selected in model 1 but note motivational differences between migrants and stayers disappear once we introduce human capital controls in model 2. Hence we must conclude motivational selectivity of Polish migrants into UK and Ireland is entirely driven by human capital selectivity. In contrast, Polish migrants in Scandinavia seem to be negatively selected on ARMOs once differences in human capital between migrants and stayers are accounted for. Results seem therefore consistent with the magnet hypothesis. Yet we note this effect is small when compared to other selectivity coefficients found in this study. Model 3 also shows estimates are robust to experiential controls. There are no significant gender differences in selectivity for Polish migrants in any of the two destinations considered.

Romania is the least economically developed country of the EEA in our dataset. It is also the latest country that accessed the EU (in 2007). Restrictions to the free movement of Romanian workers were imposed across the EEA. In most EU countries in our dataset (Spain, France, Germany, Austria, the Netherlands, Luxemburg, Belgium and United Kingdom) free-movement restrictions lasted up until 2014. Despite these restrictions, Romanian migrants have become the largest migrant group in Spain (accounting for roughly 700,000 by 2016). Romanian is a Romance language and hence it is close to Spanish. We also note up until 2012 all migrants in Spain, including undocumented migrants, had free and unrestricted access to healthcare (Björngren-Cuadra 2012). Sample sizes allows us to compare the selectivity patters of recent Romanian migrants into Spain with those migrating to all other rich EEA countries combined (Austria, Belgium Denmark, Finland, France, Germany, Ireland, the Netherlands, Norway, Sweden, Switzerland and United Kingdom). Partially consistent with standard economic and magnet models, we find clear signs of negative motivational selectivity for Romanians in Spain although we do not find signs of positive selectivity in rich EEA countries combined (particularly after controls for human capital are introduced). Negative selectivity in Spain is found for both male and female Romanian migrants alike (not shown). Estimates are robust to experiential controls (model 3).

The samples for recent migrants from Morocco and Turkey in the ESS are the smallest in our dataset and this takes a toll on statistical power. To improve on statistical efficiency, we have considered again rich EEA countries as one single destination for Turkish migrants. Results for Turkish migrants are suggestive of negative selectivity but the coefficients do not reach statistical significance (in magnitude the values are similar to those found for Polish migrants in Scandinavia). Recently-arrived Moroccans are only found in sufficient numbers in Spain, where they are the second largest migrant group after Romanians. Moroccan migrants into Spain appear again as clearly negatively selected on ARMOs. Interestingly in this case, and in consonance with the gender-traditionalism hypothesis, we find this effect seems driven by Moroccan women, the majority of whom migrate for family reasons.¹⁶ This is revealed by a significant gender interaction, which is presented graphically in Figure 4 below.

[Figure 4 about here]

Finally, we can estimate ARMOs selectivity for two Latin American groups. Brazilians in Portugal and Andean migrants in Spain. Again there are no language barriers for these two groups of migrants, although geographic distance for Latin American migrants is obviously the largest of all groups considered in this study. Interestingly, we find strong positive motivational selectivity for recent Brazilian migrants, both men and women, into Portugal. Indeed Brazilian migrants seem the most positively selected on ARMOs of all the migrant groups observed in this study. Finally, we also find signs suggestive of positive selectivity for Andean migrants in Spain, although in this case the selectivity estimate does not reach statistical significance after controlling for human capital. Pooled gender interactions reveal, however, larger positive selectivity for Andean men (see Figure 3).

¹⁶ According to data from the 2014 European Labour Force Survey-ad hoc module, as much as 70 per cent of female North African migrants report family reasons as the main motive for migration. In contrast, only 36 per cent of migrant women from EU-15 and EFTA countries report family motives. Unfortunately, ELFS data do not allow to identify specific countries of origin and hence we cannot study variation in migration motives for specific ethnic groups across different destinations.

6.2. Robustness checks

Two types of potential estimation bias are of particular concern in this study: systematic sampling bias and what we have termed destination bias. We have carried out several checks to tests for the robustness of our findings to these potential sources of bias.

Concerns about potential sampling bias arise from using two different samples for origin countries, the ESS and the WVS. To address these concerns, we have replicated our models for migrants from ESS-sampled countries (i.e. France, Britain, Germany, Poland, Romania and Turkey) using this time the WVS as the sample for stayers (see Table 4). This way we can replicate the estimation method we use for the three migrant groups for which we only have the WVS as the sample frame for stayers (i.e. Moroccan, Brazilian and Andean migrants) and thus test, indirectly, whether the WVS introduces systematic sampling bias in our estimates. We note only in two cases, French migrants in French-speaking EEA countries and German migrants in German-speaking EEA countries, we fail to replicate our selectivity findings when we change the sample (for stayers) from the ESS to the WVS. For all remaining origin-destination pairs tested (i.e. six out of eight), the main findings for model 2 hold regardless of the sample used.¹⁷ Note ESS country samples are much larger than those of the WVS (more than ten times larger for French stayers and more than four times larger for German stayers). This means our failure to replicate selectivity estimates for French and German migrants is most probably due to the loss of statistical power that comes with the drastic reduction in sample size. Although we would indeed recommend caution when comparing selectivity estimates across samples (i.e. across European and non-European migrants), based on this replication exercise, we cannot conclude using the WVS to sample stayers introduces systematic bias in our estimates for non-European migrants.

[Table 4 about here]

¹⁷ Note we cannot accurately replicate model 3 for European migrants using the WVS because the WVS contains no information on social isolation. Hence, our focus is on model 2.

Robustness tests also suggest our main findings are not spuriously driven by destination bias. This conclusion is based on two sets of findings. First, we have shown (see models 3 in Table 3) all coefficients capturing average differences between migrants and stayers are robust to controls for unemployment and extreme social isolation (the latter variable only available for stayers from ESS countries). Second, we further find perceived discrimination at destination, an experience that obviously can only be tested on migrant respondents, shows no significant association with migrants' ARMOs. Indeed none of the three extreme experiences tested does (see Table 5). We conclude that if such potentially traumatic experiences as involuntary unemployment, social isolation and perceived discrimination at destination have no impact on migrants ARMOs it is unlikely that other less extreme experiences currently unobserved would. The most plausible interpretation of the reported findings is therefore selectivity of migration flows on motivational orientations.

[Table 5 about here]

7. Discussion

Studying selectivity on motivational orientations is important because it helps better understand the migration decision as well as to assess what economists heartlessly call the “quality” of migrant workers. This has obvious implications for the ongoing debates about the drains and gains of international migration. If migrant-sending countries lose their most achievement-oriented individuals, the potential economic costs of migration will go beyond human capital drains. We find, however, no universal pattern of positive selectivity in our data and no sign that the poorest countries are necessarily those most affected by positive motivational selectivity (what we could term the *heart drain*). For example, of the two poorest migrant-sending origins in our dataset, Morocco and Andean countries, we find signs of positive selectivity for (male) Andean migrants but negative for (female) Moroccans. Likewise, of the four upper-middle income countries in our dataset (Brazil, Turkey, Poland and Romania), we find clear signs of positive selection for Brazilian migrants into Portugal but negative for Romanians into Spain (selectivity coefficients for Turkish migrants are also negative but do not reach statistical significance). Finally, and perhaps most surprisingly, we find clear signs of positive selectivity on motivational traits

for individuals from rich European countries migrating into rich and culturally close European destinations (i.e. French migrants into Belgium, Luxemburg and Switzerland, German migrants into Austria and Switzerland, and British migrants into Ireland). These findings contradict the predictions of standard economic models (according to which positive selectivity should increase with migration costs and/or with the difference in GDP between sending and receiving countries), as well as those of the common migrant personality model in social psychology (according to which we should expect positive selectivity across the board).¹⁸ Only two of our theoretically-driven expectations seem to be (at least partially) borne by the evidence: *First*, and in accordance with the welfare magnet hypothesis, we find negative selectivity for Polish migrants in Scandinavia (but not in UK and Ireland); *second*, and in accordance with the gender traditionalism hypothesis, we find negative motivational selectivity for Moroccan women in Spain. Overall, our findings suggest a complex and non-universal pattern of motivational selectivity. This pattern calls into question the idea that migrants are *always* the most motivated and ambitious individuals of their home countries.

The positive selectivity of migrants moving between rich and culturally close European societies is a particularly puzzling finding that invites an explanation. Perhaps in very affluent societies, where macroeconomic push factors are largely absent, motivational differences between individuals come to the fore as predictors of the migration decision, thus leading to the observed positive selectivity patterns found for Britons, French and Germans in our data. These patterns, which cannot be explained by standard theories of international migration, are probably best interpreted as reflecting the specific features of what we could call, following Favel (2008), the mobility of the ‘Eurostars’. In sharp contrast, in low-income European societies, the combination of harsh domestic economic conditions and very low migration costs (after the EU enlargement), could explain negative motivational selectivity, particularly amongst those migrants attracted to EU countries with a high demand for low-skilled labour. This combination of domestic and destination

¹⁸ Obviously our findings can only be seen as a test of the migrant personality hypothesis if motivational orientations are considered part of the migrant personality prototype.

factors, in the specific context of European integration, could explain, in particular, the negative motivational selectivity of Romanians in Spain. The evidence on motivational selectivity presented in this study reveals the highly segmented nature of internal migration in Europe.

Studying motivational selectivity can contribute to two interrelated strands of sociological research. First, it can contribute to the so-called epidemiological literature dealing with the socioeconomic impact of culture. Epidemiological approaches exploit the migration phenomenon as a source of causal identification of cultural effects by studying how culture of ancestry influences migrants' behaviour at the country of destination (for a review see Fernandez 2011). The epidemiological method rests on the crucial assumption that migrants are not selected on either the cultural trait of interest nor on unobserved traits potentially affecting migrants' behaviour at destination (see e.g. Fernandez and Fogli 2009; Polavieja 2015; Finseraas and Kotsadam 2017). This assumption has been the subject of intense debate in the literature (see e.g. Chou 2017; Polavieja 2017). The present study suggests that, although motivational selectivity is clearly not a universal phenomenon, it should be taken into account as a potential source of estimation bias in epidemiological research on culture, particularly when studying female migrants coming from highly traditional societies, as our findings for Moroccan women suggest.

Second, the study of motivational selectivity is also highly relevant for structural incorporation research. Researchers in this field typically compare the labour-market outcomes of migrants from different origins to those of the native population net of observed human capital characteristics to compute estimates of "ethnic gaps". These estimates have often been interpreted as reflecting the "barriers" to a successful labour-market integration of migrants (for a discussion see e.g. Heath and Cheung 2006). But estimates of ethnic gaps could be highly biased by unobserved heterogeneity in migration flows. Accounting for migrants' selectivity in typically unobserved productivity-enhancing orientations can help us better assess the magnitude of these barriers because it helps us better distinguish between supply and demand drivers of ethnic differences in labour market performance. For example, according to our findings, we should expect to find larger ethnic gaps for Romanian migrants in Spain than in other rich EEA countries, not

because barriers to integration are necessarily larger in the former country but because Romanians migrating into Spain are negatively selected on motivational orientations that are potentially relevant for their economic success. Note testable hypotheses of this kind can bridge migration selectivity and structural incorporation research, two strands of the literature that usually run in parallel.

Before we conclude, we would like to acknowledge a number of limitations of the present study that future research should seek to address. First, we need larger samples both to improve on statistical power as well as to better exploit the identification potential of having migrants from one single origin observed at different destinations. Second, researchers should seek to devise new tests for potential destination bias. Our approach here has been to test for the robustness of our findings to accounting for three of the most potentially traumatic experiences migrants can face at destination (unemployment, social isolation and discrimination). Although we believe this extreme-experience test is a useful approach to address concerns about potential experiential bias, future research should also seek to test directly for the potentially biasing impact of acculturation in the host society.¹⁹ Third, we also need to address potential immigrant-sampling bias, that is, the possibility that our migrant observations for specific origins are not representative of the true immigrant populations. This is likely to occur if the survey design introduces barriers for the selection of specific migrants into the sample. A case in point is host language skills, which are required to complete most surveys, including the ESS. If such skills are positively correlated with migrants' ARMOs, then the sampling criteria will inevitably lead to the overestimation of positive selectivity and the underestimation of negative selectivity of migrant groups whose home language is different from the language spoken at destination. We note we have no cases of positive selectivity for such groups in this study (all cases of positive selectivity found are native speakers of the host-country language) but we do have cases of negative selectivity (i.e. Polish in Scandinavia, Moroccans and Romanians in Spain, and possibly also Turkish in rich EEA countries). This means we

¹⁹ Note eventual tests for acculturation bias will be inevitably hindered by the fact that variables measuring socio-cultural incorporation at destination are by definition not measured for non-migrants. A possible way forward is the use of two-step approaches with residualized variables as recently proposed by Safi (2017).

cannot rule out the possibility that our reported estimates of negative selectivity are downwardly biased (i.e. that negative motivational selectivity is actually larger for all these groups than our reported estimates suggest). Fourth, another limitation of the present study is our inability to address the potential biasing impact of return and secondary migration (i.e. the possibility that migrants particularly selected on ARMOs are more likely to return or leave to another destination country). In this case, we cannot even predict what the direction of this potential source of bias might be, as we do not observe these migrants (Dumont and Spielvogel 2008). We note, however, that the selectivity estimates reported in this study will still provide an accurate description of the motivational qualities of the migrants that we do observe.

This study has provided the first systematic comparative analysis of motivational selectivity for a set of origin and destination countries. Our findings strongly suggest motivational selectivity is not a mere epiphenomenon of educational selectivity. Because ARMOs are likely implicated in labour-market attainment over and above migrants' education, motivational selectivity has clear implications for the structural incorporation of the first generation, as discussed above. Moreover, if ARMOs are transmitted from parents to children, motivational selectivity will also have clear implications for the second generation. For all these reasons, we believe the study of motivational selectivity constitutes a very promising area of research that should attract the attention of both migration and stratification scholars.

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Figures and tables

Figure 1. A heuristic classification of productivity-enhancing (non-cognitive) traits

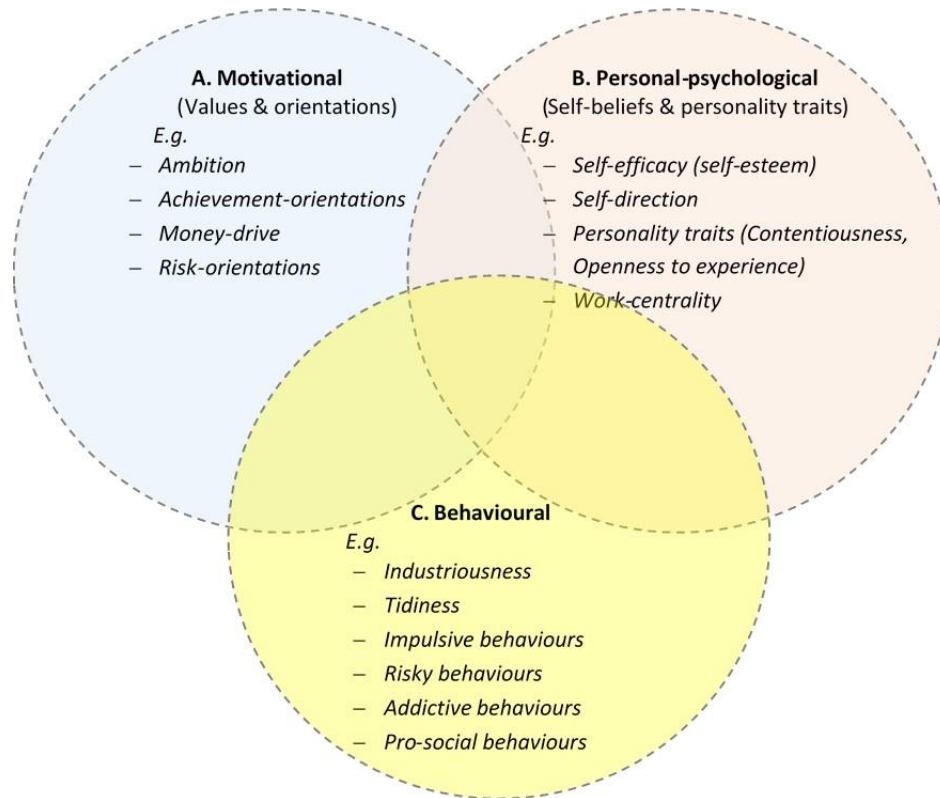


Figure 2. Distribution of ARMOs for recently arrived migrants and stayers

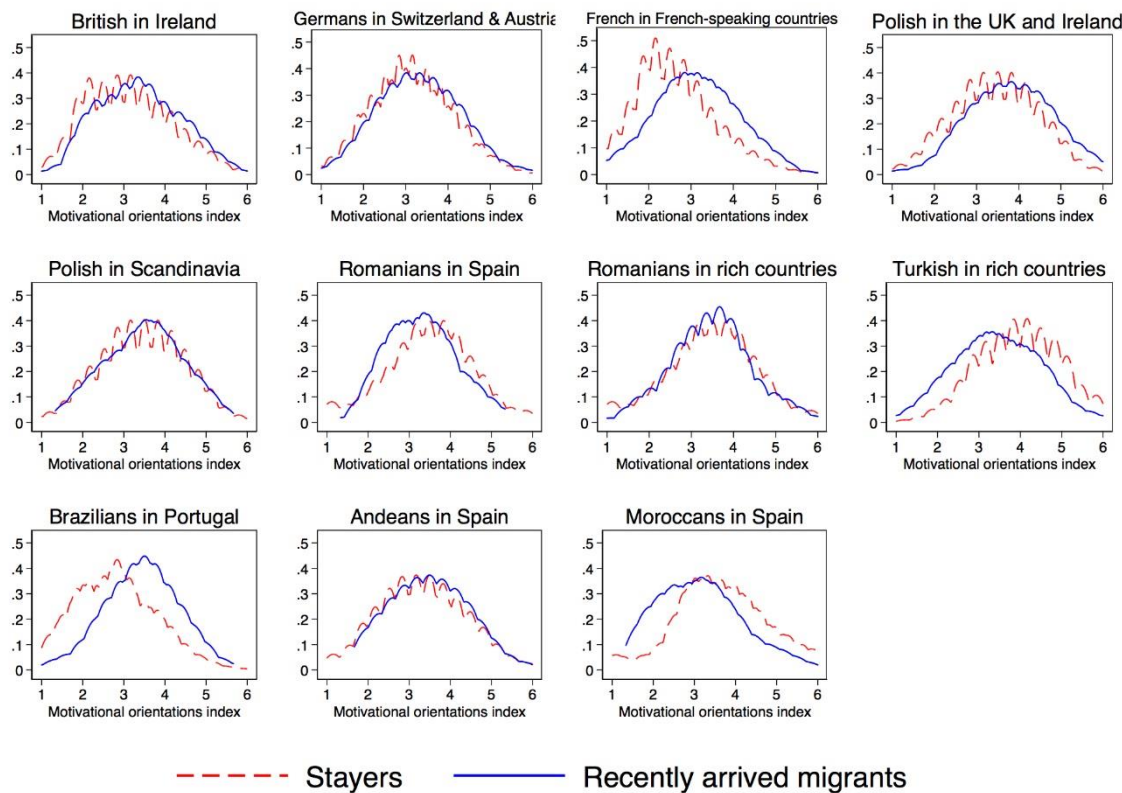
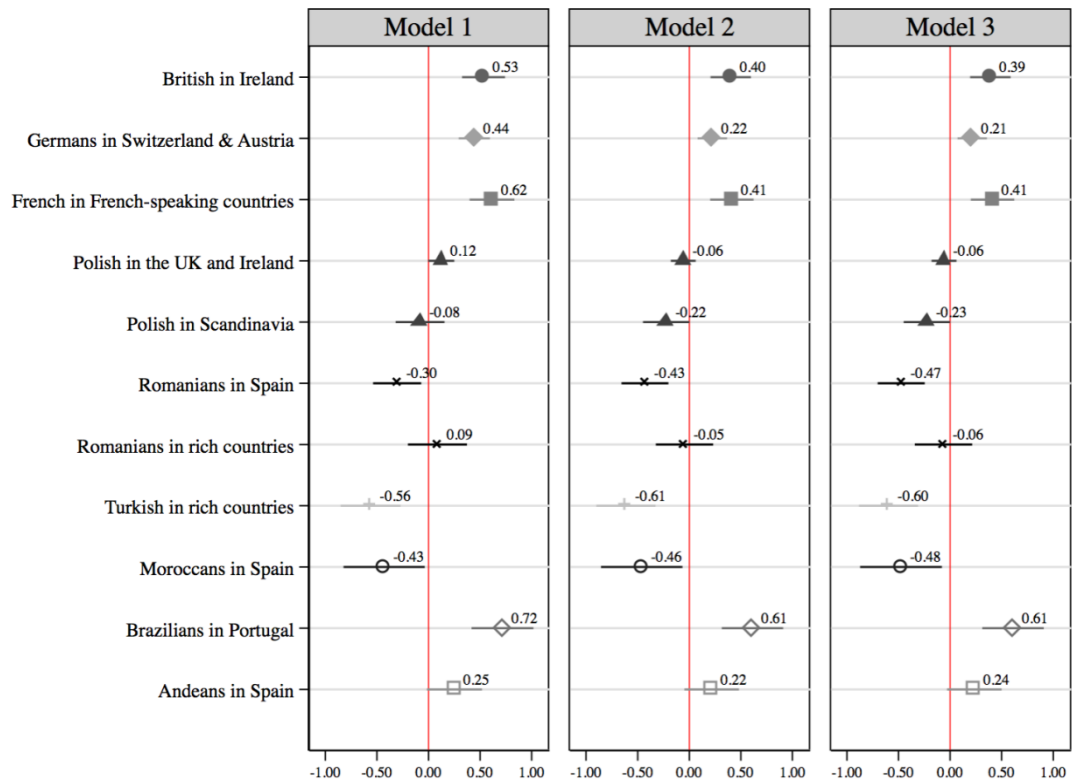


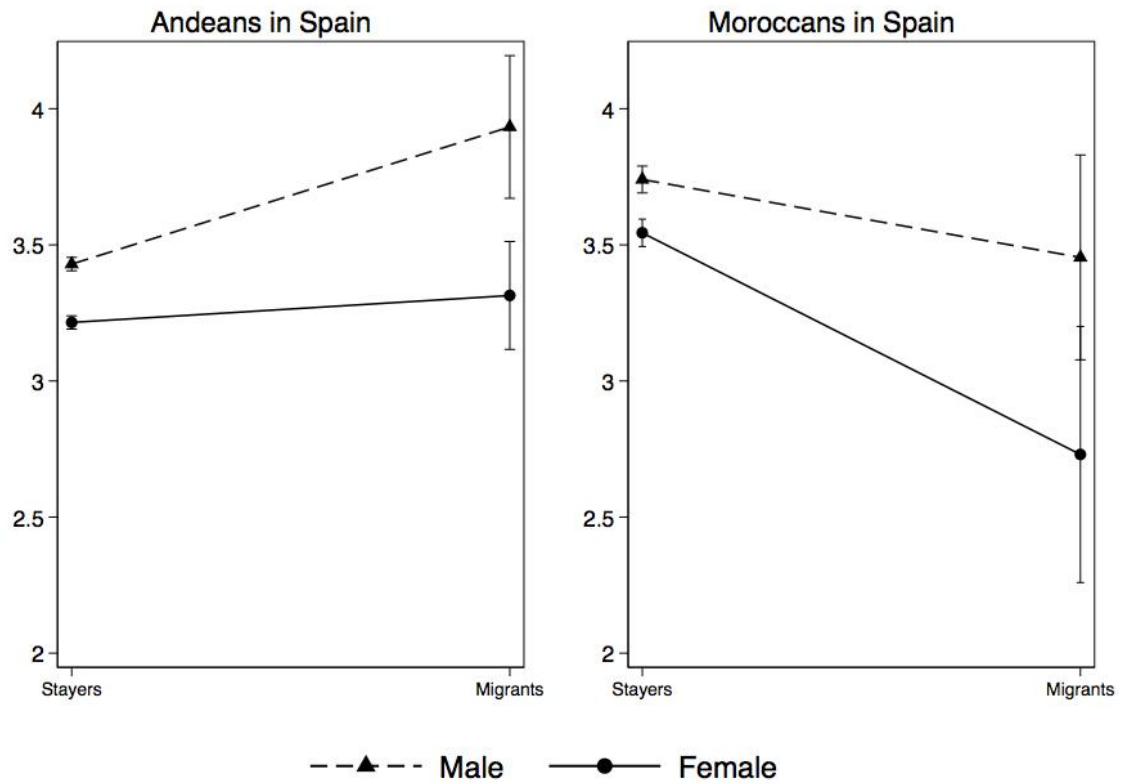
Figure 3. OLS regression coefficients (unweighted models) - Migrants that have been living continuously in destination country for up to 5 years



Confidence intervals 95%

Control variables: Gender, survey year and hedonism (model 1) + age, age squared and education (model 2) + social isolation and labour market experiences (model 3)

Figure 4. Estimated ARMOs for recently arrived migrants and stayers by gender. Models with an interaction term of gender and migration status



Level of confidence: 0.90

Table 1. Components of the ARMOs Scale

Variable	Description	Formulation in the questionnaire	Factor loadings (rotated)
Achievement	Personal success through demonstrating competence according to social standards	<i>Being very successful is important to this person; to have people recognize one's achievements</i>	0.70
Risk	Excitement, novelty, and challenge in life	<i>Adventure and taking risks are important to this person; to have an exciting life</i>	0.69
Money	Social power, authority, wealth	<i>It is important to this person to be rich; to have a lot of money and expensive things</i>	0.77

Complete formulation in the questionnaire: *Now I will briefly describe some people. Would you please indicate for each description whether that person is very much like you, like you, somewhat like you, not like you, or not at all like you? (6-point scale: 1 - Not like me at all / 6 - Very much like me).*

Table 2. Summary statistics

		<i>Education</i>						<i>Labour market history</i>				Social isolation	N
		ARMOs	Age	Female	<i>Low</i>	<i>Middle</i>	<i>High</i>	<i>Never unemployed in last 5 years</i>	<i>Currently unemployed</i>	<i>Currently inactive</i>	<i>Currently employed, past unemployed</i>		
United Kingdom	Stayers	3.20 (0.01)	47.81 (0.18)	53.6 (0.5)	44.65 (0.47)	25.86 (0.43)	27.49 (0.42)	39.9 (0.5)	4.6 (0.2)	42.5 (0.5)	12.2 (0.3)	18.6 (0.4)	13,455
	British in Ireland	3.70 (0.11)	40.34 (1.98)	54.9 (6.3)	18.53 (4.88)	34.13 (6.0)	47.32 (6.35)	28.8 (5.6)	22.5 (5.2)	35.7 (6.2)	12.3 (4.2)	32.6 (6.1)	71
Germany	Stayers	3.16 (0.01)	48.18 (0.14)	49.5 (0.4)	14.56 (0.28)	66.15 (0.37)	18.93 (0.31)	36.1 (0.4)	4.6 (0.2)	44.9 (0.4)	13.2 (0.3)	16.9 (0.3)	18,156
	Germans in Switzerland & Austria	3.72 (0.07)	34.38 (0.92)	51.7 (4.6)	4.91 (1.97)	59.36 (4.51)	35.73 (4.37)	50.3 (4.6)	3.3 (1.6)	26.1 (4.2)	20.3 (3.8)	13.3 (3.3)	127
France	Stayers	2.66 (0.01)	46.36 (0.19)	52.5 (0.5)	28.71 (0.47)	53.31 (0.52)	17.86 (0.40)	31.7 (0.5)	5.9 (0.3)	40.9 (0.5)	20.4 (0.4)	11.1 (0.3)	11,392
	French in French- speaking countries	3.38 (0.12)	32.54 (1.11)	46.4 (6.5)	10.53 (3.89)	43.36 (6.51)	46.11 (6.52)	49.7 (6.6)	3.9 (2.3)	16.8 (4.8)	25.0 (5.6)	8.8 (3.5)	66
Poland	Stayers	3.44 (0.01)	43.71 (0.17)	51.9 (0.5)	35.08 (0.45)	49.26 (0.47)	15.47 (0.33)	28.4 (0.4)	7.0 (0.2)	45.8 (0.5)	18.2 (0.4)	33.5 (0.4)	11,782
	Polish in UK & Ireland	3.85 (0.08)	29.32 (0.70)	45.9 (4.4)	28.40 (4.18)	35.56 (4.04)	30.87 (3.95)	44.6 (4.4)	20.9 (3.6)	16.8 (3.1)	17.1 (3.0)	24.6 (3.5)	169
	Polish in Scandinavia	3.68 (0.13)	32.96 (1.29)	51.1 (7.4)	12.84 (4.95)	48.71 (7.38)	38.45 (7.19)	46.4 (7.4)	17.1 (5.6)	12.8 (4.9)	21.6 (6.1)	19.3 (5.8)	47

Romania	Stayers*	3.68 (0.03)	45.97 (0.41)	53.9 (1.3)	34.33 (1.21)	50.87 (1.27)	12.37 (0.87)	28.9 (1.2)	4.4 (0.6)	50.6 (1.3)	10.6 (0.8)	41.6 (1.3)	3,945
	Romanians in Spain	3.46 (0.14)	31.93 (1.11)	57.6 (7.3)	47.15 (7.41)	40.18 (7.32)	12.66 (4.96)	46.0 (7.4)	19.5 (5.7)	14.5 (5.3)	20.0 (5.8)	17.2 (5.5)	48
	Romanians in rich countries	3.90 (0.16)	32.09 (1.24)	56.1 (7.3)	33.54 (6.75)	44.70 (7.45)	21.76 (5.92)	37.2 (7.3)	22.0 (6.6)	26.1 (6.1)	14.7 (4.7)	23.0 (6.5)	55
Turkey	Stayers	4.08 (0.02)	37.15 (0.29)	52.4 (1.0)	73.40 (0.78)	19.26 (0.70)	7.09 (0.43)	19.4 (0.7)	14.2 (0.7)	56.9 (0.9)	5.8 (0.4)	22.9 (0.7)	3,836
	Turks in rich countries	3.47 (0.15)	32.83 (1.46)	37.7 (7.8)	30.81 (7.27)	42.69 (7.91)	24.03 (6.75)	21.8 (6.5)	15.2 (5.4)	31.4 (7.4)	29.4 (7.4)	9.9 (4.8)	43

*Survey weights not available for Romania in the ESS rounds.

Source: European Social Survey (2002-2014)

		<i>Education</i>						<i>Labour market history</i>				N
		ARMO s	Age	Female	Low	Middle	High	Employed	Unemployed	Inactive	Other/NA	
Morocco	Stayers	3.64 (0.02)	36.30 (0.28)	49.0 (1.1)	72.92 (0.97)	22.37 (0.91)	4.66 (0.46)	86.3 (0.7)	2.0 (0.3)	9.1 (0.6)	2.6 (0.3)	2,106
	Moroccans in Spain	3.30 (0.16)	31.02 (1.37)	31.4 (7.2)	76.63 (6.51)	11.89 (5.16)	8.21 (4.03)	63.8 (7.5)	11.5 (5.0)	24.6 (6.7)	0.0 (omitted)	45
Brazil	Stayers	2.83 (0.02)	41.42 (0.30)	52.3 (0.9)	51.71 (0.93)	31.47 (0.87)	16.36 (0.69)	53.0 (0.9)	14.3 (0.7)	31.2 (0.9)	1.5 (0.2)	2,956
	Brazilians in Portugal	3.47 (0.12)	30.55 (1.42)	56.7 (7.2)	36.51 (7.01)	48.83 (7.04)	14.66 (4.62)	54.4 (7.1)	15.7 (5.0)	30.0 (6.9)	0.0 (omitted)	73
Andean countries	Stayers	3.32 (0.01)	39.04 (0.22)	50.5 (0.7)	33.38 (0.65)	41.14 (0.68)	25.17 (0.60)	59.1 (0.7)	7.5 (0.4)	30.9 (0.6)	2.5 (0.2)	5,223
	Andeans in Spain	3.49 (0.11)	31.70 (1.33)	52.8 (6.1)	41.10 (5.98)	40.51 (6.00)	18.39 (4.59)	71.6 (5.6)	10.9 (3.9)	17.6 (4.7)	0.0 (omitted)	73

Source: European Social Survey (2002-2014) and World Value Survey (waves 2004-2009 and 2010-2014)

Table 3. OLS regression coefficients (unweighted models) - Migrants that have been living continuously in destination country for up to 5 years. Summary table of main models

	M1	M2	M3
British in Ireland	0.534***	0.402***	0.391***
	(0.106)	(0.100)	(0.100)
N	13,526	13,526	13,526
R ²	0.271	0.357	0.358
Germans in Switzerland and Austria	0.444***	0.223**	0.215**
	(0.0772)	(0.0728)	(0.0727)
N	18,283	18,283	18,283
R ²	0.175	0.271	0.273
French in French speaking countries ¹	0.615***	0.413***	0.411***
	(0.111)	(0.107)	(0.107)
N	11,458	11,458	11,458
R ²	0.117	0.177	0.178
Polish in the UK and Ireland	0.124+	-0.0587	-0.0587
	(0.0643)	(0.0616)	(0.0617)
Polish in Scandinavia ²	-0.0818	-0.224+	-0.225*
	(0.121)	(0.115)	(0.115)
N	11,998	11,998	11,998
R ²	0.342	0.407	0.408
Romanians in Spain	-0.304*	-0.430***	-0.474***
	(0.119)	(0.116)	(0.116)
Romanians in rich countries ³	0.0866	-0.0468	-0.0637
	(0.146)	(0.142)	(0.142)
N	4,048	4,048	4,048
R ²	0.337	0.377	0.380
Turkish in rich countries ⁴	-0.561***	-0.614***	-0.597***
	(0.148)	(0.146)	(0.146)
N	3,879	3,879	3,879

R ²	0.228	0.261	0.262
Brazilians in Portugal	0.717***	0.612***	0.610***
	(0.153)	(0.152)	(0.152)
N	3,029	3,029	3,029
R ²	0.107	0.129	0.130
Andeans in Spain	0.251+	0.217	0.235+
	(0.136)	(0.135)	(0.135)
N	5,296	5,296	5,296
R ²	0.200	0.220	0.222
Moroccans in Spain	-0.430*	-0.461*	-0.476*
	(0.201)	(0.201)	(0.202)
N	2,151	2,151	2,151
R ²	0.240	0.243	0.249
Gender, survey year and hedonism	Yes	Yes	Yes
Human capital variables	No	Yes	Yes
Isolation and labour market experiences	No	No	Yes

Reference category: non-migrants (stayers).

+ p<0.10, * p<0.05, ** p<0.01, *** p<0.001

Notes: ¹ Belgium, Luxembourg and Switzerland; ² Denmark, Finland, Norway and Sweden; ³ Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Luxembourg, Netherlands, Norway, Sweden, Switzerland, and United Kingdom; ⁴ Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Netherlands, Norway, Sweden, Switzerland, and United Kingdom; ⁵ Belgium, France, Luxembourg and Switzerland.

Table 4: Comparing selectivity estimates (OLS) across ESS and WVS origin samples -
Migrants that have been living continuously in destination country for up to 5 years.
Summary table of main models

	M2 ESS for stayers	M2 WVS for stayers
British in Ireland	0.402*** (0.100)	0.351* (0.170)
N	13,526	1,102
R ²	0.357	0.357
Germans in Switzerland and Austria	0.223** (0.0728)	-0.0392 (0.0981)
N	18,283	4,092
R ²	0.271	0.296
French in French speaking countries ¹	0.413*** (0.107)	-0.0366 (0.164)
N	11,458	1,049
R ²	0.177	0.246
Polish in the UK and Ireland	-0.0587 (0.0616)	-0.158 (0.0996)
Polish in Scandinavia ²	-0.224+ (0.115)	-0.362** (0.112)
N	11,998	2,132
R ²	0.407	0.360
Romanians in Spain	-0.430*** (0.116)	-0.279+ (0.161)
Romanians in rich countries ³	-0.0468 (0.142)	0.0342 (0.136)
N	4,048	3,034
R ²	0.377	0.400
Turkish in rich countries ⁴	-0.614*** (0.146)	-0.542* (0.240)
N	3,879	2,886
R ²	0.261	0.205
Gender, survey years and hedonism orientation	Yes	Yes
Human capital variables	Yes	Yes
Isolation and labour market experiences	No	No

Reference category: non-migrants (stayers) p<0.10, * p<0.05, ** p<0.01, *** p<0.001

Notes: ¹ Belgium, Luxembourg and Switzerland; ² Denmark, Finland, Norway and Sweden; ³ Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Luxembourg, Netherlands, Norway, Sweden, Switzerland, and United Kingdom; ⁴ Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Netherlands, Norway, Sweden, Switzerland, and United Kingdom; ⁵ Belgium, France, Luxembourg and Switzerland.

Table 5. Migrants' ARMOs scores are unaffected by extreme experiences at destination - Fixed effects OLS regression coefficients

Social isolation (respondent meets socially only once a month or less)	0.009 (0.065)
<i>Labour market history</i> (ref. never unemployed in last 5 years)	
Currently unemployed	0.072 (0.082)
Currently inactive	-0.032 (0.07)
Currently employed, past unemployed	0.012 (0.067)
Perceived discrimination	0.023 (0.068)
Constant	2.953*** (0.261)
Observations	1,171
R-squared	0.217
Sigma u	0.171
Sigma e	0.842
Rho	0.040

+ p<0.10, * p<0.05, ** p<0.01, *** p<0.001

All models control for gender, age, age squared, education, survey years and hedonism orientation.