Comfort and Conformity: A Culture-based Theory of Migration

Ruxanda Berlinschi, Jan Fidrmuc

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Abstract

This paper proposes a theory of migration decisions in which cultural traits play a role. Individuals are assumed to value comfort (high wages) and conformity (interactions with individuals who share similar world views). Regions are assumed to differ economically (average wages) and culturally (average world views and their diversity). The model shows that self-selection of inter-regional migrants on world views is non-monotonic if one region is more diverse than the other, and it weakens with economic gaps between regions. This non-monotonicity can lead to a dichotomy of outcomes: culturally diverse regions become even more diverse because of migration, while culturally homogeneous regions become even more homogeneous. Consequently, Tieboutian sorting (people moving to the region in which world views are closer to theirs) only holds when regions have similar wages and diversity of world views.

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Introduction

It is well known that migrants are generally not representative of their region or country of origin in terms of education, skills and income. Migrant selection can be driven by financial constraints in the origin countries, migration policies in the destination countries, or differences in the skill premia between origin and destination countries (Borjas, 1987; Stark and Taylor, 1989; Jasso and Rosenzweig, 1990; Borjas, 1995; Chiswick, 1999; Grogger and Hanson; 2011; Chiquiar and Hanson, 2005; Belot and Hatton, 2012; McKenzie and Rapoport, 2010; Fernández-Huertas Moraga, 2011; Bertoli 2010). Recent empirical evidence, furthermore, shows that migrants can differ from non-migrants on certain values, beliefs and attitudes (van Dalen et al., 2005; Falco and Rotondi, 2016; Docquier et al., 2017; Berlinschi and Hartunyan, 2018). This paper adds to this last stream in the literature by formulating a theoretical explanation for migrant self-selection on cultural traits.

Our theory rests on the observation that individuals like social interactions with like-minded people. This may be the case for several reasons. Humans have an evolutionary-driven preference for social conformity in certain domains, whereby standing out from the crowd may lead to rejection or ridicule. Such behavioral patterns have been analyzed extensively by psychologists (Janes and Olson, 2000; Kruglanski and Webster, 1991; Miller and Anderson, 1979; Griskevicius et al. 2006) and neuroscientists (Berns et al., 2010; Stallen and Sanfey, 2015). Similarly, individuals experience unpleasant feelings of cognitive dissonance when being exposed to information or behavior which clashes with their core values or beliefs (Festinger, 1954). For instance, religious persons may dislike hearing atheists' arguments on the (non)-existence of God; individuals with socially conservative world views may dislike being confronted with liberal values, and vegetarians find it offensive to share a meal with meat eaters. More importantly, collectively determined outcomes such as public goods, policies, and regulations are more likely to deviate from an individual's first best when the majority determining these rules has different world views from the individual in question.[1] For instance, gender-sensitive legislation is more likely to be implemented if the majority supports it: therefore, individuals who care about gender equality are likely to be happier in a society where the majority espouses similar values.

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[1] The heterogeneity of the population in terms of public good preferences may therefore affect the optimal size and stability of jurisdictions (Alesina and Spolaore, 1997; Desmet et.al, 2011, Alesina et al., 2014, Fidrmuc, 2015).

In order to avoid the discomfort of interacting with unlike-minded individuals, two solutions exist: an individual can align her values to those of the majority or move to a place where values are closer to her preferences.[2] The framework developed in this paper focuses on the second option while emphasizing the possible trade-off between comfort and conformity motives in migration decisions.

The idea that individuals may move to locations where predominant values are more aligned with their own was first suggested by Tiebout (1956). Tiebout argues that individuals choose to live in communities which best satisfy their preference for local public goods. Migration therefore increases the homogeneity of preferences within communities (we refer to this process as 'Tieboutian sorting') and as a consequence improves the efficiency of local public goods provision. This reasoning should hold for internal and international migration alike (although international migration is likely to be associated with greater costs due to formal and informal barriers that international migrants face). Hence, the Tiebout model predicts that migration should increase homogeneity of preferences within countries and as a consequence lead to collective outcomes which are more aligned with individual preferences.

The Tiebout model has been greatly influential in shaping our understanding of political economy of public finance.[3] However, its insights can be equally applied to sorting according to preferences over other attributes: besides taxes and public goods, cultural norms and values can likewise play a role. We formulate a model in the spirit of Tiebout but extend and generalize it by making two assumptions about factors that determine migration decisions. The first factor is economic wellbeing: holding everything else constant, people move to countries or regions where their expected earnings are higher. Second, we assume that migration choices are also affected by the distribution of preferences in the different regions: these preferences can be over cultural and social norms, which is the main concern of our analysis, or about taxes and public goods as in the original Tiebout model. We refer to these two drivers of migration as comfort (higher earnings after migration allow migrants to enjoy a higher level of wellbeing) and conformity (migrants can choose to move because they enjoy living alongside other like-minded people, and/or because they dislike living alongside people whose opinions and values clash with their own), respectively. Importantly, we assume that the conformity motive affects migration in two ways: potential migrants are mindful of the average cultural traits as well as

[2] Geographic disparities in the distribution of values have been analyzed, among others, by Inglehart and Baker (2000), Norris and Inglehart (2004), Tabellini (2010).
[3] See Boadway and Tremblay (2012) and Zodrow (2013) for broad overviews, and Alesina, Baqir and Easterly (1999) and Alesina et al. (2003) for empirical analyses in the spirit of Tiebout.

of their distribution. With respect to the latter, we assume that individuals experience less conformity deprivation in a relatively diverse cultural environment than in a homogeneous one.

Whether migrants are driven by economic or cultural motives, migration has the potential to change the distribution of cultural values in the regions of origin and/or destination.[4] Such changes may have an impact on collective decision making processes and social interactions in those regions, and they may also have important economic consequences.[5] It is therefore surprising that the relationship between cultural traits and the decision to migrate has received little attention in the migration literature thus far. In particular, theoretical analyses of these issues are largely missing. One exception is Falco and Rotondi (2016), who formulate a theoretical framework to support their empirical analysis of the effects of religiosity on the propensity to migrate from Arab countries. They assume that the cost of migration increases with the percentage of co-nationals sharing the same cultural values. Their model predicts a monotonic relationship between religiosity and the propensity to migrate, whereby less religious individuals are more likely to emigrate. However, cultural traits in the destination country do not enter into the migration decision and the model does not specify how cultural values held by co-nationals affect individual utility.

We therefore propose a framework in which individuals take into account both wages and culture in the regions of origin and destination when deciding whether or not to migrate. We show that Tieboutian sorting on preferences only obtains when the two regions are at similar levels of economic development and when they do not differ substantially in terms of diversity in culture. When the regions differ on the two dimensions, the relationship between individual values and the propensity to migrate to another region is non-monotonic. Depending on the initial distribution of cultural traits and wages, migration can either reinforce or reduce cultural heterogeneity within regions.

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[4] The effects of migration on the geographic distribution of cultural traits depends on several factors: the size of migration and self-selection of migrants on values (composition effects); the impact of life experience abroad on migrants' values (assimilation effects); return migration and interactions with communities remaining in the countries of origin (so-called social remittances). Our paper sheds light on composition effects driven by the self-selection of migrants on cultural values.

[5] A number of papers have shown that the distribution of cultural traits affects economic outcomes. See for example Barro and McCleary (2003); Ottaviano and Peri (2006); Guiso et al. (2006, 2009); Tabellini (2010); and Zak and Knack (2001).

Theoretical Framework

Consider a world consisting of two regions, home (H) and foreign (F). Each region $i = H, F$ is characterized by a three-dimensional vector $R_i = (w_i, \bar{v}_i, \sigma_i)$, where w_i is the wage, $\bar{v}_i$ is the average value of a cultural trait in the population and σ_i is the standard deviation of the cultural trait. The cultural trait may represent values and attitudes, such as the degree of religiosity, agreeing with socially liberal vs conservative values, or preferences over the extent of taxation and redistribution. Its standard deviation indicates the dispersion of public opinion on this issue, which can be viewed as a measure of cultural diversity within the region. For simplicity, we assume that all individuals living in the same region earn the same wage, so that the role of wage dispersion within regions is ignored.[6] Without loss of generality, we assume that $w_F \neq w_H$ (there is an economic difference between regions) and $\bar{v}_F > \bar{v}_H$ (there is a cultural difference between regions).[7] Thus an individual moving to a different region expects to receive the average wage in that region.[8] Finally, we assume that economic differences between regions are not correlated with the cultural distance between them, and that the two regions are ex-ante equally sized.[9]

Each individual j is characterized by a two-dimensional vector $I^j = (v^j, c^j)$, where v^j is the individual cultural trait and c^j is the cost incurred in case of migrating to the other region. The individual cultural parameter v^j is assumed to be exogenous, i.e. independent of the region of residence chosen by the individual. This means that we assume away assimilation effects, whereby individuals' world views evolve as their social space changes, and we do not analyze region-contingent world views, such as, for instance, an individual preferring high fiscal redistribution if living in region A and low redistribution if living in region B, or an individual having high general trust if living in region A and low general trust in region B.[10] The individual

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[6] The effects of wage dispersion on migrant self-selection has been analyzed in Borjas (1987), Jasso and Rosenzweig (1990), Chiswick (1999), Chiquiar and Hanson (2005) and Bertoli (2010).

[7] Given the utility function that we assume below, it does not matter which region has a higher value of the cultural parameter. What is important is whether the average values are different.

[8] Our results remain the same if we assume that migrants receive lower wage than the natives in the destination, which could be due to lower productivity because of differences in language, education or skills, or because of discrimination.

[9] Assuming that the two regions are ex-ante equally sized allows us to focus on relative cultural diversity and abstract from critical-mass effects (whereby an individual with given world views would not feel conformity deprived if enough like-minded individuals live in the same region).

[10] Of course, some world views do change in response to changes in one's external cultural and institutional environment, driven for example by migration to a different country. Berlinschi (2016), Doyle and Fidrmuc (2004), Fernández (2007, 2013), Batista and Vicente(2011), Beine et al. (2011), Chauvet and Mercier (2014), Nikolova et al. (2017), and Pfutze (2012) document such changes for voting behavior, political opinions, activism, fertility, and female labor supply. Our exogeneity assumption is appropriate for cultural traits which are stable over time,

cost of migration c^j is a random variable taking values in the interval $[0; \bar{c}]$, with a cumulative distribution function $F(\cdot)$.[11] It represents all migration-related costs, with the exception of changes in cultural conformity, specified separately in the utility function.

The utility of individual j residing in region i is defined as

$$U_i^j = w_i - \beta \frac{|v^j - \bar{v}_i|}{\sigma_i} \tag{1}$$

where β is a positive parameter representing the importance of cultural conformity relative to economic wellbeing. The first term represents the wage when living in region i (comfort) while the second term captures the cultural aspect (conformity). Concerning the latter, we assume that individuals experience disutility when their preferred value deviates from the population average ($v^j \neq \bar{v}_i$) and this disutility is higher when there is little variation in values held by the rest of the population (low σ_i). In other words, it is easier to hold divergent views when cultural diversity is high (that is, many others also hold divergent views) rather than when everybody else has the same or similar cultural preferences. For example, a person holding unusual cultural or religious values (or speaking with a foreign accent) will stand out less in a highly diverse community where many other cultures and religious are represented (or where foreign accents are common), compared to a homogenous location. We refer to this disutility as *conformity deprivation*: the distress experienced from having non-conformist world views.

This utility specification builds upon previous work on the relationship between relative income deprivation and migration (Stark and Yitzhaki, 1988; Stark and Taylor, 1989, 1991; Stark and Wang, 2000), with two modifications. First, we assume that individuals dislike deviations on either sides of the population average; relative deprivation models assume that individuals dislike only having lower than average income. Such a specification is more appropriate in the context of world views, particularly when conformity deprivation is driven by disagreements on public goods and policies.[12] Secondly, deviations from the average are weighted by the

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or at least perceived as being stable by the potential migrants when anticipating the cultural deprivation effects of migration. Similarly, we assume that wages remain stable over time.

[11] The migration cost includes the economic cost of moving as well as psychological and emotional costs. If the two regions are separated by an international border, it can also include the costs of barriers imposed by the destination region, which can be monetary (e.g. visa costs) or non-monetary (hostility towards immigrants).

[12] Our conclusions are robust to assuming asymmetric conformity deprivation, whereby an individual experiences disutility only when the population average is either higher or lower than his value. In this alternative specification, the relationship between individual values and the propensity to migrate is monotonic for a wider range of values than in the symmetric utility formulation, but the main insight of the theory, that self-selection may be non-monotonous, remains valid. This alternative specification is presented in the Appendix.

inverse of the standard deviation of values: holding non-conformist world views is more costly in a culturally homogenous environment than in a highly diverse society.[13]

The interplay between deviations from the mean and the diversity of values is crucial to our results and therefore deserves some further discussion. An alternative to our utility specification (1) would be to introduce diversity and distance from the mean in an additive way.[14] In such alternative specifications, the marginal utility of a higher cultural diversity would not depend on the extent to which the individual is far from the mean, and the marginal utility of being closer to the mean would not depend on the extent to which other people deviate from the mean. In other words, an increase in the diversity of world views, σ_i, would be equally valuable for an individual perfectly aligned with the norm and for one very far away from it; a better alignment with the social norm would be equally valuable in an environment where the norm is strong and where the norm is weak. This alternative specification seems less appropriate, both when the need for conformity is driven by the evolutionary-driven psychological need to fit in, and when it is driven by the utility of collectively determined outcomes such as social norms or policies.[15]

Let's investigate the migration decision of individual j living in region H.[16] The individual observes his values and migration cost and takes regional characteristics as given when deciding whether or not to migrate.[17] Migrating is preferred to staying if:

$$c^j < (w_F - w_H) + \beta \left[\frac{\left|v^j - \overline{v}_H\right|}{\sigma_H} - \frac{\left|v^j - \overline{v}_F\right|}{\sigma_F} \right].$$

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[13] For a more comprehensive analysis of issues underlying migration decisions, see Fan and Stark (2009) and Stark (2017).

[14] If distance from the mean and diversity of preferences enter the utility function in an additive way, such as for example $U_i^j = w_i - \beta \left|v^j - \overline{v}_i\right| + \gamma \sigma_i$, then migrant selection on values is always monotonic and Tieboutian sorting holds. The interaction between σ_i and $\left|v^j - \overline{v}_i\right|$ is thus critical for obtaining non-monotonic sorting.

[15] For instance, consider the social norm on the number of children a woman should have. Imagine that in society A, 100% of women prefer having 1 child, while in society B 50% of women prefer having 2 children and 50% of women prefer having none. The average number of children per woman is 1 in both societies. A woman preferring no children is however less likely to feel ostracized in society B than in society A, even though the distance from the mean is the same. Society B is also likely to choose taxation and social security policies which give more protection to individuals who choose not to have children and markets for goods and services designed to cater to women without children are more likely to develop there.

[16] The reasoning is symmetric for individuals living in region F and considering migrating to H.

[17] Regional parameters can be taken as given if either one individual moves at a time, or the effects of anticipated migration flows by others have been already included in the (expected value of) regional parameters. For simplicity, we abstract from uncertainty over wages and cultural characteristics in the region of destination.

If we observe individual and average cultural preferences and wages in the two regions, but not the individual migration cost,[18] the probability of migration can be estimated as:[19]

$$P(\text{migration}) = F\left\{(w_F - w_H) + \beta \left[\frac{|v^j - \bar{v}_H|}{\sigma_H} - \frac{|v^j - \bar{v}_F|}{\sigma_F}\right]\right\}. \tag{2}$$

The first part of this expression, $w_F - w_H$, represents the comfort (economic gain) aspect of migrating, while the second part, $\frac{|v^j - \bar{v}_H|}{\sigma_H} - \frac{|v^j - \bar{v}_F|}{\sigma_F}$, represents the conformity motive (change in interactions with other cultural values following migration), weighted by its relative importance β. While the economic gain from migrating is assumed to be constant for all individuals and positive if wages are higher in F, the change in conformity deprivation depends on the individual value v^j and can be either positive or negative.

Note that a person may choose to move also to a region with lower wages: such migration occurs if the gain in terms of cultural conformity is large enough and the weight attached to it is sufficiently high to compensate for the loss in income and the migration cost. For example, some people from advanced countries choose to move to rural areas of poorer countries in order to devote themselves to spiritual pursuits in a monastery, temple or ashram, to live in a kibbutz, or simply to live together with people with whom they share some fundamental values. The results on the pattern of cultural self-selection, presented below, hold also in that case.

In order to investigate cultural self-selection, we want to analyze the relationship between the individual value v^j and the probability of migration. This relationship is shown below for migration from H to F.

Result 1. The migration probability of individual j is given by:

- $F\left\{(w_F - w_H) - \beta \left[\frac{\bar{v}_F}{\sigma_F} - \frac{\bar{v}_H}{\sigma_H} + v^j(\frac{1}{\sigma_H} - \frac{1}{\sigma_F})\right]\right\}$ if $v^j \leq \bar{v}_H$;

- $F\left\{(w_F - w_H) - \beta \left[\frac{\bar{v}_F}{\sigma_F} + \frac{\bar{v}_H}{\sigma_H} - v^j(\frac{1}{\sigma_H} + \frac{1}{\sigma_F})\right]\right\}$ if $\bar{v}_H \leq v^j < \bar{v}_F$;

- $F\left\{(w_F - w_H) - \beta \left[\frac{\bar{v}_H}{\sigma_H} - \frac{\bar{v}_F}{\sigma_F} + v^j(\frac{1}{\sigma_F} - \frac{1}{\sigma_H})\right]\right\}$ if $\bar{v}_F \leq v^j$.

<u>Proof</u>. Follows from (1) by rearranging the terms.

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[18] While individual socio-economic characteristics and cultural traits can be observed and measured, migration cost are unobservable because it includes also emotional and psychological aspects such as the cost of leaving one's family, friends and environment in the region of origin, and adjusting to a new environment in the destination region.

[19] The expression in (2) also represents the proportion of individuals with value v^j who are willing to migrate.

A number of insights emerge from Result 1.

First, as F is a cumulative distribution function increasing in its arguments, if the wage differential, $w_F - w_H$, is sufficiently high, the probability of migration is close to one for the majority of individuals, independently of their cultural values and of the distribution of values in each country. In this case, comfort outweighs cultural conformity considerations. Thus, in presence of large differences in living standards between origin and destination countries, cultural self-selection of migrants may be weak or inexistent. This prediction is supported by empirical evidence from Docquier et al (2017), who find that the selection of migrants from the MENA region to the OECD is relatively weak on religiosity and gender views. This also implies, quite intuitively, that the worsening of economic conditions in a country will not only increase migration, but also weaken cultural self-selection among the migrants. Conversely, if regions differ little with respect to economic wellbeing, cultural selection becomes the primary driver of migration, as in the Tiebout model.

Therefore, when economic differences between regions are high, or when the weight attached to conformity, β, is low, migrants should be a representative sample of their region of origin in terms of cultural traits. Rather, the main determinant of migrating will be the individual migration cost. Consequently, migration does not affect the distribution of preferences in the region of origin, and increases cultural heterogeneity in the destination if the distribution of preferences differs between the two regions. This is one case in which Tieboutian sorting into jurisdictions with similar preferences does not hold.

Secondly, the probability to migrate from H to F increases with σ_F and decreases with σ_H for all individuals: cultural diversity encourages immigration and discourages emigration. Intuitively, diversity increases the attractiveness of a location by reducing conformity deprivation.[20]

Thirdly, even in the case of regions with similar levels of economic development, self-selection on values does not necessarily lead to Tieboutian sorting, whereby, given the assumption $\overline{v}_F >$

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[20] The result that diversity increases the attractiveness of a location may seem at odds with the assumption that individuals prefer interacting with like-minded people. In our framework, individuals dislike deviating from the social norm and this disutility is higher the more prevalent the norm, but we do not assume a particular preference for cultural homogeneity. In particular, an individual whose value is exactly equal to the average is not affected by changes in the level of diversity. An alternative model specification could assume that individuals also value cultural homogeneity per se, by adding the standard deviation with a negative sign to the utility function. In this case the effect of diversity on the attractiveness of a location would depend on the extent to which the individual deviates from the average: individuals who are further from the average would prefer higher diversity while individuals close to the average would prefer lower diversity.
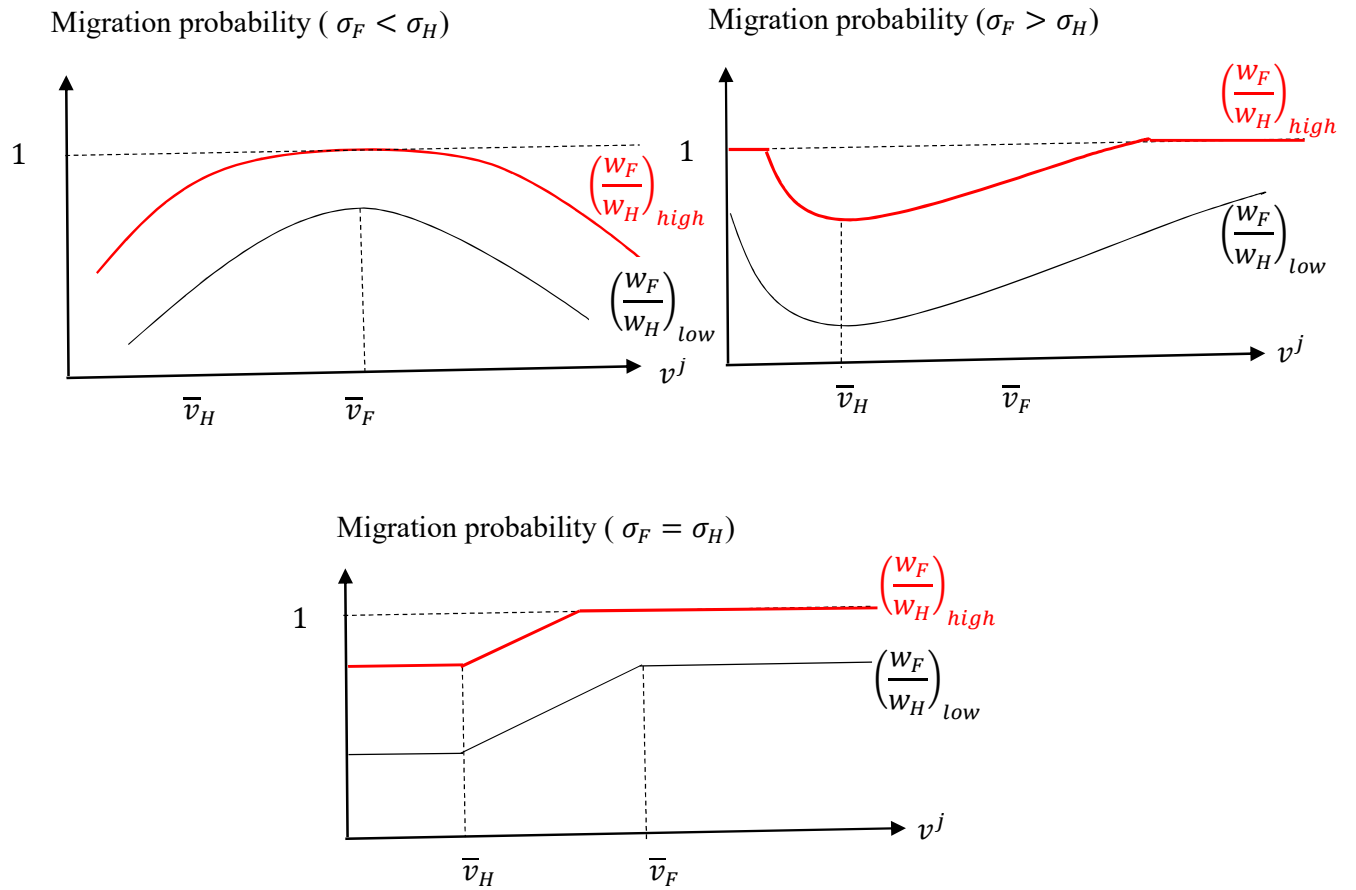
$\overline{v}_H$, individuals with high values of v^j are the most likely to choose to move to region F and individuals with low values are most likely to choose to stay in region H. Instead, the relationship between the individual value v^j and the migration probability depends on the sign of $\sigma_F - \sigma_H$, the relative diversity of values in origin and destination. The shape of this relationship is summarized in Result 2 and presented schematically in Figure 1 for migration from H to F, and it is symmetric for migration from F to H.

Result 2.

i) If $\sigma_F < \sigma_H$, the relationship between the migration probability from H to F and the individual value v^j is hump-shaped. Individuals with values closest to $\overline{v}_F$ have the highest probability to migrate.

ii) If $\sigma_F > \sigma_H$, the relationship between the migration probability from H to F and the individual value v^j is U-shaped. Individuals with values furthest from $\overline{v}_H$ have the highest probability to migrate.

iii) If $\sigma_F = \sigma_H$, the relationship between the migration probability from H to F and the individual value v^j is linear and step-wise increasing. Individuals with higher values are more likely to migrate.

iv) The relationship between the migration probability from H to F and the individual value v^j flattens out as the wage differential, $w_F - w_H$, increases.

Proof. $F(\cdot)$ is a cumulative distribution function, increasing in its arguments. From Result 1, it is obvious that the relationship between v^j and the propensity to emigrate is positive for $\overline{v}_H \leq v^j < \overline{v}_F$. For the other values of v_j, this relationship depends on the sign of $\sigma_F - \sigma_H$. In particular, for $v^j \leq \overline{v}_H$, the relationship is positive if and only if $\sigma_F < \sigma_H$, while for $\overline{v}_F \leq v^j$ the relationship is positive if and only if $\sigma_F > \sigma_H$. When $\sigma_F = \sigma_H$, higher values of v^j increase the probability to emigrate only for $\overline{v}_H \leq v^j < \overline{v}_F$. Likewise, because $F(\cdot)$ is an increasing function, it increases with $w_F - w_H$. This increase represents an upward parallel shift of the relationship between values v^j and the migration probability, as illustrated in Figure 1. For a sufficiently high wage difference, the migration probability becomes 1 for the individuals with the highest migration probability. As the relative wage keeps increasing, the share of individuals for whom the migration probability is equal to 1 also increases, so that the curve becomes flatter. For a sufficiently high wage differential, the migration probability is one for all individuals and the curve becomes a horizontal line. End of Proof.

Figure 1: The probability to emigrate as a function of cultural traits.

Migration probability ($\sigma_F < \sigma_H$)

$\left(\dfrac{w_F}{w_H}\right)_{high}$

$\left(\dfrac{w_F}{w_H}\right)_{low}$

1

$\bar{v}_H$ $\bar{v}_F$ v^j

Migration probability ($\sigma_F > \sigma_H$)

$\left(\dfrac{w_F}{w_H}\right)_{high}$

$\left(\dfrac{w_F}{w_H}\right)_{low}$

1

$\bar{v}_H$ $\bar{v}_F$ v^j

Migration probability ($\sigma_F = \sigma_H$)

$\left(\dfrac{w_F}{w_H}\right)_{high}$

$\left(\dfrac{w_F}{w_H}\right)_{low}$

1

$\bar{v}_H$ $\bar{v}_F$ v^j

The intuition for this result is the following. Migration affects cultural deprivation through two mechanisms: by changing the distance between the individual and the average value in her region of residence, and by moving to a more or less diverse cultural environment. If cultural diversity is lower in F, migrating implies higher conformity deprivation, except for individuals with values sufficiently close to the average in F. The latter individuals therefore have the highest incentives to migrate. In other words, culturally homogenous societies are mostly attractive for individuals who easily fit in by being similar to the prevailing norm. If cultural diversity is higher in F, migrating reduces conformity deprivation, except for individuals with values close to the average in H, with no or small conformity deprivation in H. Such individuals are therefore the least likely to migrate, while individuals who suffer the most from conformity deprivation in H, i.e. those the most distant values, on either side from the average in H, have the highest incentives to migrate. In other words, culturally diverse countries, where conformity deprivation is low because there is no central norm to which most individuals conform to, are an attractive option for individuals who suffer from high conformity deprivation at home, i.e. individuals with non-conformist views living in culturally homogenous societies. Finally, if cultural diversity is similar in F and H, migrating abroad affects conformity deprivation only to the extent that it affects the distance between individual values and the average in the region of residence. In this case, individuals with values closest to or exceeding the average in F are most likely to migrate. This third case corresponds to the Tieboutian sorting.

An alternative way of presenting cultural-self-selection patterns in this context, is to ask what is the maximum migration cost that an individual would be willing to incur, as a function of his values. Denote this cost by $\tilde{c}(v^j)$. By definition, $\tilde{c}(v^j) \equiv (w_F - w_H) + \beta \left[\frac{|v^j - \overline{v}_H|}{\sigma_H} - \frac{|v^j - \overline{v}_F|}{\sigma_F} \right]$. Figure 2 in the Appendix depicts the shape of $\tilde{c}(v^j)$. The relationship is naturally very similar to the relationship between values and the migration probability. When H is more diverse than F, individuals willing to pay the highest cost in order to migrate are those with values closest to the average in F and when F is more diverse than H, the individuals willing to pay the highest migration cost are those with values furthest from H. When the two regions are equally diverse, individuals willing to pay the highest migration cost are those with values closest to, or higher than, the average in F.

Result 2 implies that regions which are relatively diverse tend to attract migrants with non-conformist values, while regions which are relatively homogenous tend to lose individuals with non-conformist values to emigration. Thus, as migration barriers are reduced, culturally diverse

jurisdictions become more diverse, while culturally homogenous jurisdictions become more homogenous.[21] Moreover, as economic differences between regions increase, cultural self-selection weakens: richer regions are attractive for individuals with a larger diversity of cultural world views. Thus, Tiebout's thesis of migrant self-sorting into jurisdictions with similar preferences does not hold when jurisdictions differ in their economic development or in their level of cultural diversity.

These results have a number of testable implications. First, the distance between migrants' preferences and the average preferences at the destination should increase with preference diversity at the destination. Hence, homogenous destinations mostly attract culturally like-minded migrants, while diverse destinations attract heterogeneous migrants. This is because a gain in terms of conformity can be achieved either by moving to a country with like-minded people (with lower $v^j - \overline{v}_i$), or by moving to a more diverse country (with a higher σ_i). Second, the distance between migrants' preferences and the average preferences at the destination should increase with the difference in wages between the destination and the origin country. This is because rich destinations compensate migrants for conformity deprivation by higher economic well-being. Because of this, rich countries are attractive for a larger range of world views. Third, migrants belonging to marginal cultural communities are likely to move to countries that are more heterogeneous than their home country. An example of this would be ethnic or religious minorities without a *homeland* that could serve as a potential migration destination, such as the Roma in Central and Eastern Europe, Kurds and Yazidis in the Middle East, or the Hmong in South-East Asia. Culturally heterogeneous *melting pot* countries offer an opportunity to such groups to reduce their conformity deprivation. Finally, countries that were initially culturally heterogeneous should become more culturally heterogeneous over time at a faster rate than countries that are (or used to be) highly homogenous.[22]

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[21] This process may be reinforced if cultural diversity positively affects economic growth, further attracting more migrants and weakened if rapid increases in diversity induces opposition to further migration in the region's population.

[22] For example, the US, United Kingdom and Germany were initially more heterogeneous religiously than France, Italy, Poland or the Nordic countries, which are all dominated by a single religious denomination

Conclusions

Economic theory tends to view migration as primarily a decision driven by expectations of an economic gain: higher earnings and higher wellbeing. In this paper, we add an additional factor which is likely to affect the choices of migrants: cultural norms and values in the countries of origin and destination. In particular, migrants can move because they feel ostracized in their present country of origin, or because the norms prevailing in the destination country are closer to their own than those in the country of origin, or for a combination of the two reasons. Our theoretical framework shows that such selection on cultural values may be more complex than one would expect: the relationship between individual values and the propensity to migrate may be U-shaped, hump-shaped, stepwise increasing or flat, depending on the relative degree of cultural diversity in the regions of origin and destination and on economic differences between regions. Relatively culturally homogenous countries are mainly attractive for migrants with like-minded views, while relatively diverse countries may also attract for individuals whose values differ significantly from the average in the destination. Moreover, sufficiently well-off countries and regions are attractive for all potential migrants, irrespective of their cultural values.

Such selection patterns can be expected on any cultural traits and preferences for which strong social norms exist. Examples may include religiosity, gender norms, fertility, preferences over economic policies, or over fiscal redistribution. When applying our framework to preferences over redistribution, our results suggest that migration may reduce the efficiency of public good provision by increasing preference heterogeneity in certain regions, contrarily to Tiebout's (1956) thesis of homogenous migrant self-sorting. This may happen when regions differ in the level of economic wellbeing, or in the level of cultural diversity.

One consequence of the cultural self-selection patterns predicted by our theory is that migration reinforces cultural diversity in well-off and culturally diverse locations and reduces it in poor and relatively homogenous locations. If this prediction is to be used in empirical tests or policy recommendations, it is important to keep in mind that the effects of migration on the distribution of cultural traits depends not only on the selection of migrants on values (composition effects), which is the focus of this paper, but also on the evolution of migrants' values at the destination (assimilation/integration effects), as well as on the transmission of newly acquired values to the regions of origin (social/cultural remittances). The predictions of our model are more likely to be empirically observed for cultural traits which are relatively stable, such as religiosity or certain fundamental values. For more dynamic cultural traits and values, such as political

activism or civic engagement, ex ante composition effects may be diminished (or reinforced) by ex-post assimilation effects and cultural remittances.

The insights of this analysis apply to domestic and international migration alike. In particular, our model can help explain why migrants, internal and international alike, tend to be attracted to large and diverse (cosmopolitan) cities while rural areas remain much more homogenous. One important difference in the case of international migration is the existence of constraints to migration, which may affect migrant selectivity. For instance, certain countries have implemented migration polices which reduce cultural diversity resulting from migration by favoring migrants from countries which are culturally less distant: examples include country-specific quotas on visas, bias in favor of family reunification rather than economically driven migration, immigration and residence policies favoring former colonies (e.g. the British Commonwealth), or countries with similar levels of economic development, history and culture (e.g. free mobility of labor in the European Economic Area). In addition, more educated and wealthier individuals face lower financial and administrative barriers to migrate. In presence of these additional constraints, cultural self-selection may not be independent from selection on skills, income and some characteristics of the country of origin. These issues may be worth analyzing further in future research.

Our model can help explain why immigrants and refugees are drawn more to some countries than others. During the 2015-16 refugee crisis, most refugees were hoping to settle in Germany, rather than in the more homogenous transit countries. They preferred Germany even though some of the transit countries – Italy or Austria, for example – are approximately as well off as Germany. Similarly, a large number of illegal immigrants and potential refugees who made it to France are trying to leave that country and move to the United Kingdom instead. Finally, when the EU tried to implement a quota system for redistributing refugees across Europe, this was met with protest not only from the recipient countries, but also from the refugees themselves. Refugees and immigrants in culturally homogenous countries suffer from greater conformity deprivation than those being in culturally diverse countries. As diversity attracts further diversity, some European countries may become migration magnets while others may not be able to attract or retain migrants, even when such migrants are needed because of labor shortages or population ageing.

Appendix (not for publication)

(1) Alternative specification of the utility function: asymmetric conformity deprivation

We consider two alternative utility specifications, in which individuals only dislike having either higher or lower values than the population average. We show below that monotonicity is also obtained in this case, but for a lower range of parameter values.

Case 1. Disutility for values higher than the average

The utility of individual j living in region i is given by $U_i^j = w_i - \beta \frac{|v^j - \overline{v}_i|}{\sigma_i}$ if $v^j > \overline{v}_i$ and $U_i^j = w_i$ if $v^j \leq \overline{v}_i$. In this case, the migration probability is given by:

- $F\{(w_F - w_H)\}$ if $v^j \leq \overline{v}_H$;

- $F\left\{(w_F - w_H) + \beta \left(\frac{v^j - \overline{v}_H}{\sigma_H}\right)\right\}$ if $\overline{v}_H \leq v^j < \overline{v}_F$;

- $F\left\{(w_F - w_H) - \beta \left[\frac{\overline{v}_H}{\sigma_H} - \frac{\overline{v}_F}{\sigma_F} + v^j(\frac{1}{\sigma_F} - \frac{1}{\sigma_H})\right]\right\}$ if $\overline{v}_F \leq v^j$.

It is easy to check that the relationship between the individual value and the migration probability is increasing if $\sigma_H \leq \sigma_F$ and hump-shaped if $\sigma_H > \sigma_F$.
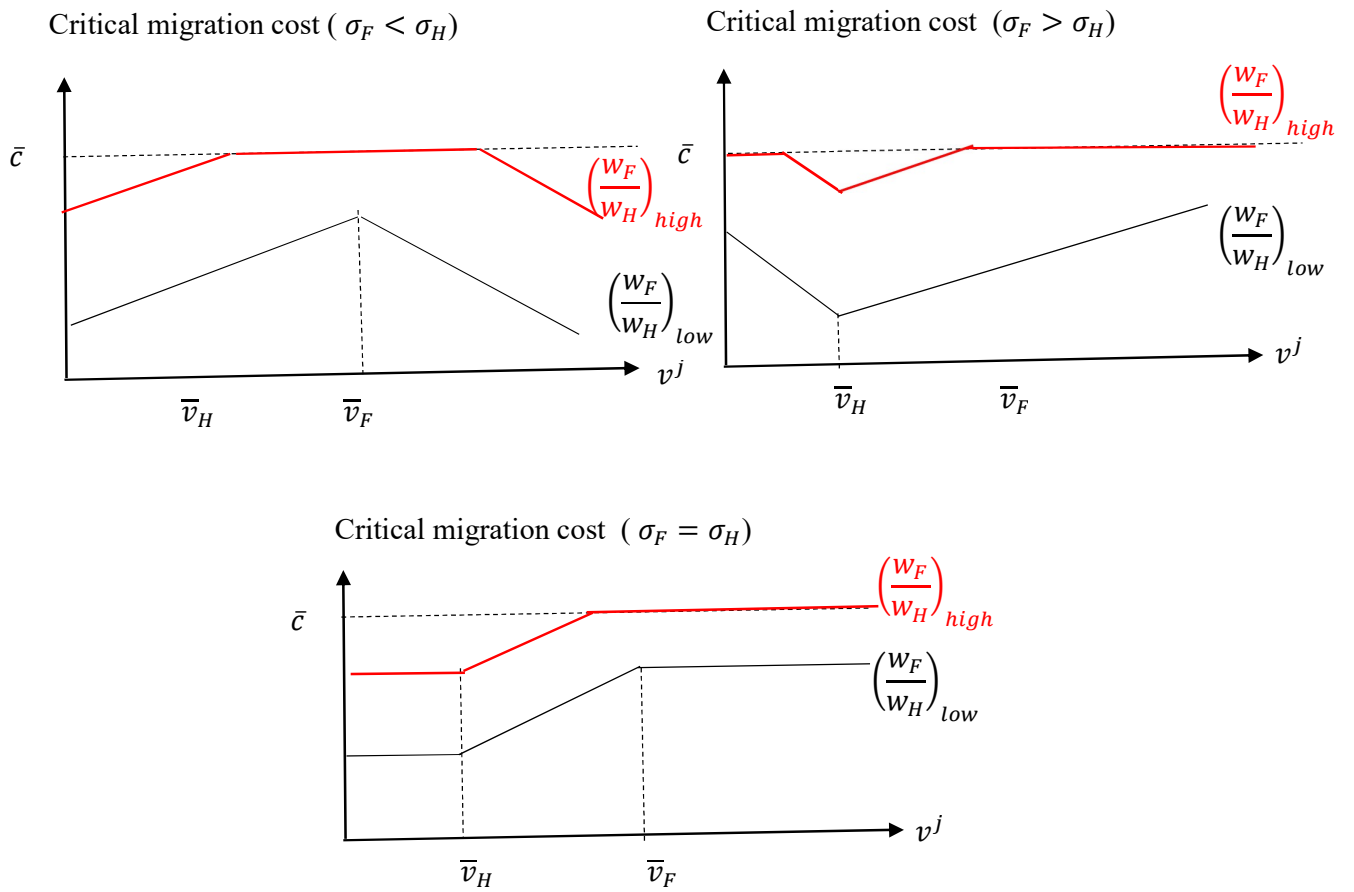

Case 2. Disutility for values lower than the average

The utility of individual j living in region i is given by $U_i^j = w_i$ if $v^j > \overline{v}_i$ and $U_i^j = w_i - \beta \frac{|v^j - \overline{v}_i|}{\sigma_i}$ if $v^j \leq \overline{v}_i$. In this case, the migration probability is given by:

- $F\left\{(w_F - w_H) - \beta \left[\frac{\overline{v}_F}{\sigma_F} - \frac{\overline{v}_H}{\sigma_H} + v^j(\frac{1}{\sigma_H} - \frac{1}{\sigma_F})\right]\right\}$ if $v^j \leq \overline{v}_H$;

- $F\left\{(w_F - w_H) - \beta \left(\frac{\overline{v}_F - v^j}{\sigma_F}\right)\right\}$ if $\overline{v}_H \leq v^j < \overline{v}_F$;

- $F\{(w_F - w_H)\}$ if $\overline{v}_F \leq v^j$.

It is easy to check that the relationship between the individual value and the migration probability is increasing if $\sigma_H \geq \sigma_F$ and U-shaped-shaped if $\sigma_H < \sigma_F$.

(2) The critical migration cost $\tilde{c}$ as a function of cultural traits.

Critical migration cost ($\sigma_F < \sigma_H$)

$\bar{c}$

$\left(\dfrac{w_F}{w_H}\right)_{high}$

$\left(\dfrac{w_F}{w_H}\right)_{low}$

v^j

$\overline{v}_H$ $\overline{v}_F$

Critical migration cost ($\sigma_F > \sigma_H$)

$\left(\dfrac{w_F}{w_H}\right)_{high}$

$\bar{c}$

$\left(\dfrac{w_F}{w_H}\right)_{low}$

v^j

$\overline{v}_H$ $\overline{v}_F$

Critical migration cost ($\sigma_F = \sigma_H$)

$\left(\dfrac{w_F}{w_H}\right)_{high}$

$\bar{c}$

$\left(\dfrac{w_F}{w_H}\right)_{low}$

v^j

$\overline{v}_H$ $\overline{v}_F$

References

Alesina, A. and E. Spolaore (1997). On the Number and Size of Nations. *The Quartely Journal of Economics* 112 (4): 1027-1056.

Alesina, A., R. Baqir and C. Hoxb (2004). Political Jurisdictions in Heterogeneous Communities. *Journal of Political Economy* 112 (2).

Alesina, A., Baqir, R., & Easterly, W. (1999). Public goods and ethnic divisions. *The Quarterly Journal of Economics*, *114*(4), 1243-1284.

Alesina, A., Devleeschauwer, A., Easterly, W., Kurlat, S., & Wacziarg, R. (2003). Fractionalization. *Journal of Economic growth*, *8*(2), 155-194.

Barro, R. and M. McCleary (2003). Religion and Economic Growth across Countries. *American Sociological Review* 68 (5): 760-781.

Batista, A. and P. Vicente (2011). Do migrants improve governance at home? Evidence from a voting experiment. *World Bank Economic Review* 25(1): 77-104.

Beine, M., F. Docquier and M. Schiff (2011). International Migration, transfer of norms and home country fertility. *Canadian Journal of Economics* 46(4): 1406-1430.

Belot, M. and T.J. Hatton (2012). Immigrant selection in the OECD. *Scandinavian Journal of Economics* 114(4): 1105-1128.

Berlinschi, R. (2016). Does working abroad affect political opinions?: Evidence from Moldova. *LICOS Discussion Paper Series*, Discussion Paper 383/2016.

Berlinschi, R. and A. Harutyunyan (2018). Do migrants think differently? Evidence from East-European and post-Soviet States. Forthcoming, *International Migration Review*.

Berns G.S. , C.M. Capra, S. Moore and C. Noussair (2010). Neural mechanisms of the influence of popularity on adolescent ratings of music. NeuroImage 49(3): 2687-2696.

Bertoli, S. (2010). The informational structure of migration decision and migrants self-selection. *Economic Letters* 108, 89-92.

Boadway, R., & Tremblay, J. F. (2012). Reassessment of the Tiebout model. *Journal of public economics*, *96*(11-12), 1063-1078.

Borjas, G. (1987). Self- selection and the earnings of immigrants. *American Economic Review* 77: 531– 553.

Chauvet, L. and M. Mercier (2014). Do return migrants transfer political norms to their origin countries? Evidence from Mali. *Journal of Comparative Economics* 42 (3): 630-651.

Chiquiar, D., and G.H. Hanson (2005). International migration, self-selection, and the distribution of wages: evidence from Mexico and the United States. *Journal of Political Economy* 113 (2), 239–281.

Chiswick, B.R. (1999). Are immigrants favorably self-selected? *American Economic Review* 89 (2), 181–185.

Clemens, M.A. (2011). "Economics and Emigration: Trillion-Dollar Bills on the Sidewalk?" *Journal of Economic Perspectives*, 25 (3): 83-106.

Desmet, K., M. Le Breton and I. Ortuno-Ortin (2011). The stability and breakup of nations: a quantitative analysis. *Journal of Economic Growth* 16: 183-213.

Docquier, F., A. Tansel and R. Turati (2017). Do migrants self-select along cultural traits? Evidence from MENA countries. Mimeo.

Doyle, O., and Fidrmuc, J. (2004). Voice of the Diaspora: An Analysis of Migrant Voting Behaviour, CEPR Discussion Papers 4619.

Falco, C. and V. Rotondi (2016). The Less Extreme, the More You Leave: Radical Islam and Willingness to Migrate. *World Development* 88: 122-133.

Fan, C.S., and Stark, O. (2009). A Theory of Migration as a Response to Occupational Stigma," *International Economic Review* 52(2), 549-571.

Fernández, R. (2007). Women, Work, and Culture. *Journal of the European Economic Association* 5(2–3): 305–332.

Fernández, R. (2013). Cultural Change as Learning: The Evolution of Female Labor Force Participation over a Century. American Economic Review, 103 (1), p.472-50.

Fernández-Huertas Moraga, J. (2011). New evidence on emigrant selection. *The Review of Economics and Statistics* 93 (1): 72-96.

Festinger, L. (1957). *A Theory of cognitive dissonance*. Stanford, CA: Stanford University Press.

Fidrmuc, J. (2015). Political Economy of Fiscal Unions. *European Journal of Political Economy* 40(A): 147-457.

Griskevicius, V., N. J. Goldstein, C. R. Mortensen, R. B. Cialdini, and D. T. Kenrick (2006). Going Along Versus Going Alone: When Fundamental Motives Facilitate Strategic (Non)Conformity. *Journal of Personality and Social Psychology* Vol. 91, No. 2, 281–294

Grogger, J. and G. Hanson (2011): Income maximization and the selection and sorting of international migrants. *Journal of Development Economics* 95(1): 42-57.

Guiso, L., Sapienza, P. and Zingales, L. (2006). Does culture affect economic outcomes?, *Journal of Economic Perspectives* 20 (2): 23–48.

Guiso, L., Sapienza, P. and Zingales, L. (2009). Cultural biases in economic exchange? *The Quarterly Journal of Economics* 124 (3): 1095–1131.

Hall, R.E. and Jones, C.I. (1999), "Why Do Some Countries Produce So Much More Output per Worker than Others?" *Quarterly Journal of Economics*, 83-116.

Inglehart, R. and W. E. Baker (2000). Modernization, Cultural Change, and the Persistence of Traditional Values. A*merican Sociological Review 65 (1): 19-51.*

Jasso, M., and M.R. Rosenzweig (1990). Self-selection and the earnings of immigrants: comment. *American Economic Review* 80 (1), 298–304.

Janes, L. M., and J.M. Olson (2000). Jeer Pressure: The Behavioral Effects of Observing Ridicule of Others. *Personality and Social Psychology bulletin*. 26 (4): 474-485.

Kruglanski, A. W., and D.M. Webster (1991). Group members' reactions to opinion deviates and conformists at varying degrees of proximity to decision deadline and of environmental noise. *Journal of Personality and Social Psychology, 61*(2): 212-225.

McKenzie, D.J. and H. Rapoport (2010). Self-selection patterns in Mexico–U.S. migration: the role of migration networks. *The Review of Economics and Statistics* 92 (4): 811-821.

Miller, C. E., and P. D. Anderson (1979). Group decision rules and the rejection of deviates. *Social Psychology Quarterly,* 42 (4): 354-363.

Miller, C. E., P. Jackson, J. Mueller and C. Schersching (1987). Some social psychological effects of group decision rules. *Journal of Personality and Social Psychology,* 52 *(*2), 325-332.

Ottaviano, G. and G. Peri (2006). The economic value of cultural diversity: evidence from US cities. *Journal of Economic Geography* 6 (1): *9–44.*

Nikolova, M., M. Roman, K.F. Zimmermann (2017). Left behind but doing good? Civic engagement in two post-socialist countries. *Journal of Comparative Economics* 45; 658-684.

Norris, P., and R. Inglehart (2004). *Sacred and Secular: Religion and Politics Worldwide*. New York: Cambridge University Press.

Pfutze, T., 2012. Does migration promote democratization? Evidence from the Mexican transition. *Journal of Comparative Economics* 40 (2), 159–175.

Stark, O. (2017). Migration when Social Preferences are Ordinal: Steady-state Population Distribution and Social Welfare. *Economica* 84(336), 647-666

Stark, O. and J. E. Taylor (1989). Relative Deprivation and International Migration. *Demography* 26 (1): 1-14.

Stark, O., and Y.Q. Wang (2000). A theory of migration as a response to relative deprivation. *German Economic Review* 1, 131 – 143.

Stark, O. and J. E. Taylor (1991). Migration Incentives, Migration Types: The Role of Relative Deprivation. *Economic Journal* 101: 1163-1178.

Stark, O. and S. Yitzhaki (1988). Labour Migration as a Response to Relative Deprivation. *Journal of Population Economics* 1, 57-70.

Stallen, M. and A. G. Sanfey (2015). The neuroscience of social conformity: implications for fundamental and applied research. *Front. Neurosci.* 9:337. doi: 10.3389/fnins.2015.00337.

Tabellini, G. (2010). Culture and Institutions: Economic Development in the Regions of Europe. *Journal of the European Economic Association* 8 (4): 677–716.

Tiebout, C. (1956). A Pure Theory of Local Expenditures. Journal of Political Economy 64(5): 416-242.

van Dalen, H. P, G. Groenewold and J. J. Schoorl (2005). "Out of Africa: What drives the pressure to emigrate?" *Journal of Population Economics* 18 (4): 741–778.

Zak, P. J. and S. Knack (2001). Trust and growth, *The Economic Journal* 111(470): 295–321.

Zodrow, G.R. (Ed.). (2013). *Local provision of public services: The Tiebout model after twenty-five years*. Elsevier.