Immigrants, Trust, and Social Traps

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Abstract

The paper estimates a social interactions model to study the impact of culture on US immigrants' decisions. The paper contributes to the literature as follows. It first estimates a social interactions model of peer effects that models both group formation and the formation of social interactions. In addition, because it is an observational learning model, policy suggestions may be drawn to favor integration of immigrants. Finally, it provides a new empirical strategy to study the impact of both inherited and contemporaneous culture on individual decisions. Findings vary by group of immigrants and by type of social interactions, and they are robust to both additional checks and sensitivity analysis.

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"*Everybody blames the culture without taking responsibility.*"- J.L. Levine, American Musician

"*Trusting is good but not trusting is better.*"- Italian Proverb

"*In God we trust.*"- Statement on the American Bank Notes

1 Introduction

Social interactions models are of interest to economists because they allow investigation of the importance of peer effects, herding behavior, and social capital on individual behavior (Zanella, 2007). The literature has made several contributions towards identifying social interactions and peer effects (Brock and Durlauf, 2001a, 2006; Zanella, 2007; Graham, 2008; Blume et al., 2011; Kasy, 2015) and empirically assessing (e.g., Hoxby, 2000; Sacerdote, 2001; De Giorgi, Pellizzari and Redaelli, 2010) their importance for individual behavior. Following the social interactions literature (Brock and Durlauf, 2006; Zanella, 2007; Blume et al., 2011), this paper estimates a social interactions model of peer effects that models both sorting of individuals and the formation of social interactions, thus providing an empirical framework for identifying social interactions in discrete choice models. The framework can be applied to a broad range of topics; I use it to estimate US immigrants' decisions in order to provide an intuitive application of the theory that could also be of general interest.

What factors explain the sorting of immigrants in a region? And once they decide to live in a region, who among them trusts others and what affects their behavioral decisions? When individuals decide to move and migrate to a region of another country, they should also decide whether to conform to the behavior of individuals living in the host region or to maintain the behavior they used to have in the country of origin. The decision of immigrants to integrate or to segregate themselves in the host country may have socioeconomic consequences. On the one hand, the ability

of immigrants to integrate may have positive effects on economic behavior and performance (Constant and Zimmermann, 2008). On the other hand, after immigrants settle in a region, they may stick to the behavior they used to have in their country of origin, base their behavioral decision more on their interactions with other immigrants (cultural segregation), or adapt to the behavior of a whole society (cultural assimilation).

Conforming to low-level equilibria may generate social traps (Platt, 1973; Rothstein, 2005), that is, the equivalent of poverty traps when dealing with social outcomes, which can make self-reinforcing low equilibria difficult to escape. Thus, understanding the behavior of immigrants is crucial in a country such as the United States, where certain groups of immigrants often live in segregated neighboroods, because residential segregation may reinforce further the presence of social traps.

In this paper, I estimate a social interactions model that models both the sorting of immigrants and the formation of social interactions. In particular, I let US immigrants coming from various areas of the world first choose a low-trust (L-type) or high-trust (H-type) US region (*location decision*) and then undertake a *behavioral decision* (whether to trust others) conditional on the location decision. In the model, immigrants' decisions are influenced, among other variables, by the social interactions term, namely, their expectations about the average level of trust of individuals in a host region. In so doing, the paper aligns with the social interactions literature assessing the importance of peer effects and social networks to explain the existence of segregation and social/poverty traps (Benabou, 1993, 1996; Durlauf, 1996; Brock and Durlauf, 2001a; Topa, 2001; Zanella, 2007). In particular, it adds to the recent developments of the literature addressing selection bias and identification of social interactions (e.g., Graham, 2009; De Giorgi, Pellizzari and Redaelli, 2010; Pinto, 2015; Kasy, 2015; Kirkeboen, Leuven and Mogstad, 2016) and it suggests an empirical framework that permits me to overcome the usual limits of the social interactions models, namely, the self-selection problem and the reflection problem (Manski,

1993; Brock and Durlauf, 2006; Zanella, 2007), through modeling. Indeed, modeling the sorting of immigrants into US regions allows me to model and control for the self-selection of immigrants. Furthermore, the econometric assumptions and properties of the model, together with the characteristics of the data set, allow for solution of other endogeneity problems and the reflection problem.

However, the paper is distinct from the other papers in the social interactions literature. Similar to De Giorgi, Pellizzari and Redaelli (2010), this paper provides a general framework for identifying social interactions, but it differs from their framework in that mine is suitable for nonlinear discrete choice models rather than linear-in-means models; furthermore, the strategy proposed here does not require knowledge of indirect peer connections. The identification strategy of this paper also differs from the one in Graham (2009), who proposes a continuous approach, whereas I propose an empirical framework based on the literature of discrete choice methods (Brock and Durlauf, 2006; Zanella, 2007). Graham (2008) works out a strategy to identify social interactions through conditional variance restrictions. Although its method can be extended to models that do not belong to linear-in-means models under certain conditions, the presence of non-random assignment is problematic to obtaining identification. By contrast, the empirical framework proposed here can be applied also to models of non-random assignment. More recently, Kasy (2015) developed a strategy to identify social interactions in the presence of sorting. However, for a variety of reasons his model differs from social interactions models of peer effects. Finally, unlike other papers, this methodology does not rely on the use of experiments to recover peer effects (Sacerdote, 2001; Falk and Ichino, 2006; Damm and Dustmann, 2014).

The model presented here also facilitates the investigation of whether and the extent to which the results are consistent with cultural assimilation of immigrants and the presence of significant sorting behavior and selection bias. Additionally, the empirical framework is appealing because the pa-

rameter that measures the strength of social interactions and its interplay with private utility may provide suggestions about the possible presence of multiple equilibria and poverty/social traps (e.g., Brock and Durlauf, 2001b, 2006).

Then, motivated by the fact that immigrants when living in a new country may be more influenced by the behavior of other immigrants rather than the entire population, in the second part of the paper, I exploit the availability of the nationality of immigrants living in the United States in the General Social Survey (GSS henceforth) data set and I re-estimate the model using as social interactions terms immigrants' expectations about the average level of trust of either immigrants or similar immigrants (i.e., individuals coming from the immigrant's area of origin) living in a host region. By estimating the model on sub-samples of immigrants, I can investigate whether heterogeneity in behavior exists across them and the possible presence of cultural segregation. Because I am investigating the behavior of US immigrants, the presence of cultural segregation could have drastic implications when combined with residential segregation of immigrants, which is widely documented in the United States (see Cutler, Glaeser and Vigdor, 2008).

Furthermore, the framework allows me to disentangle the impact of both contemporaneous culture (i.e., the social interactions terms) and inherited culture (via the difference in trustworthiness between the host region and the immigrant's country of origin), which are the two main components of culture (Bisin and Verdier, 2001; Benabou and Tirole, 2006; Tabellini, 2008b, 2010), on immigrants' decisions. Thus, the paper also links the migration literature to the cultural economics literature (Bisin and Verdier, 2001; Algan and Cahuc, 2010; Tabellini, 2010). Existing studies show an intergenerational transmission of trust exists in children and that individuals are more likely to adjust to low rather than high levels of trust, suggesting depreciation of social capital is easy, though it is more difficult to build it (Nunn and Wantchekon, 2011; Ljunge, 2014). The paper also refers

to the studies analyzing the impact of trust on immigrants (e.g., Dinesen, 2012*a*,*b*, 2013; Röder and Muhlau, 2011), the presence of acculturation, and the impact of both inherited culture and the environment on the trust of immigrants (Dinesen and Hooghe, 2010; Moschion and Tabasso, 2014).

The paper innovates with respect to the previous literature as follows. First, it is econometrically innovative because it first provides an empirical framework to estimate a social interactions model of peer effects that models both group membership and the formation of social interactions. Because the identification strategy is not specific to the question addressed here, it can be applied to a broad variety of contexts. In addition, this model is an observational learning model (Manski, 2000), that is, a model in which individuals are influenced by other individuals' beliefs and not by preferences. Consequently, the empirical analysis may be useful to provide suggestions for policy-makers, because changes in expectations about other individuals' behavior could be induced, which could conduct a society out of a social trap and favor integration of immigrants. Finally, the study suggests a new empirical strategy to investigate the impact of both the historical component of culture (i.e., via the difference in levels of trustworthiness between the host region and the home country) and its contemporaneous component (i.e., the social interactions term) on individual decisions.

Results, which are robust to additional checks and a sensitivity analysis, suggest the impact of social interactions terms on immigrants' decisions vary both among sub-samples of immigrants and by type of social interactions. In particular, the findings support the existing literature according to which social capital is easy to depreciate but difficult to build (Nunn and Wantchekon, 2011; Ljunge, 2014). Furthermore, both inherited trust and social interactions are relevant to explaining immigrants' decisions.

The paper is structured as follows. Section 2 presents the framework and the data. Section 3 reports the estimation results on the whole sample. Section 4 reports the results for the sub-samples of immigrants. Section 5 provides a sensitivity analysis and robustness checks; section 6 concludes.

2 Data and Framework

2.1 Data

The data come from both the World Values Survey (WVS) data set[1] and the GSS data set. Trust of immigrants is obtained from the GSS data set. The variable used is the following: "*Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?*" Following the literature (e.g., Tabellini, 2008b), I build a dummy variable that takes the value of 1 if the answer is that most people can be trusted, and 0 if the answer is "Can't be too careful." By averaging this indicator for all the individuals living in each region of the GSS, I construct the yearly average trust for each region, which I use in the analysis as the term catching the impact of global social interactions on immigrants' decisions. The second type of social interactions term used in the analysis is the yearly average trust of immigrants living in the same region, and the third social interactions term is the yearly average trust of immigrants coming from the same geographic area.[2] These last two terms have been constructed by averaging the indicator by, respectively, immigrants and immigrants coming from the same area of the world, who live in a same host region.

[1]The former version (2007) of the WVS data set has been used to obtain country average trustworthiness measures because it is more complete than the latter version (2014). This last version, the European Values Survey or interpolation, has been used to integrate the 2007 version of the WVS when needed.

[2]Social interactions are defined as global when individuals assign the same weight to the other individuals of the group, and they form their expectations on a large enough group that they cannot assume to know and interact with every individual in the group (Brock and Durlauf, 2001a). Thus, all our social interactions terms are likely to be global rather than local. The interactions with immigrants living in the host region and coming from the same origin area may be assumed partly local due to strong ties that may link such immigrants; this scenario is more likely to be true when the reference network is circumscribed to geographic entities smaller than the macro-regions used in this paper (e.g., cities). Although more disaggregated data would be available in the GSS, the number of immigrants by ethnicity per each geographic unit in a precise year and region would be too small, which could compromise the quality of the results.

Also, to get the difference in trustworthiness between the host region and home country, I use the same question for trust present in the WVS, which gives me the country of origin's average trustworthiness. Because the wording of the WVS is the same as for the trust question in the GSS, we may assume the two sets of averages can be compared. Then the country of origin's average trustworthiness is subtracted from the yearly average trustworthiness of the respective host regions for each group of immigrants. This allows me to obtain the difference in trustworthiness between the host region and home country.[3] To decide which region is considered an L-type or an H-type region, I used the yearly regional volunteer rate downloaded from the National Community Service: a region is considered an H-type region if the average volunteering rate is higher than the average overall volunteer rate. I chose this variable as a sorting criterion because the volunteer rate, as a form of civic engagement, is correlated with the level of trustworthiness in a region. Therefore, modeling the possible presence of significant (positive or negative) sorting of immigrants is suitable: Individuals who are less willing to pay for public goods (or who come from countries where willingness to pay for public goods is low) may decide to join L-type regions (e.g., Zanella, 2007). Alternatively, they can rather decide to join H-type regions because, for instance, in these regions, highly trusted individuals can be easily cheated (e.g., Butler, Giuliano and Guiso, 2016) or because they are looking for a better life. Similar reasoning can explain the positive or negative sorting of individuals who are willing to pay for public goods. The volunteering rate is also correlated with economic development and other indicators that could motivate the sorting of immigrants, such as GDP and employment rate (Putnam, Leonardi and Nanetti, 1993), so it can also reflect immigrants' sorting decisions based on one of these indicators.

The construction of the variable for the difference in trustworthiness between host and home country limits the time framework of the analysis

[3] I assume that average trust can be considered a measure for trustworthiness in a region, as assumed by the existing literature (e.g., Guiso, Sapienza and Zingales, 2012).

to the years available from the WVS: the first wave of the WVS has to be excluded for lack of data; thus, the regression analysis has to be limited to the years 1989-2014.

Finally, because the aim of the analysis is to investigate immigrants' behavior, after the computation of regional averages for trust, non-immigrants have been dropped. After excluding information on immigrants that did not indicate a specific country, the following countries, representing immigrants coming from the economies worldwide, remain: Africa, Austria, Belgium, Canada, China, Czechoslovakia, Denmark, the United Kingdom, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Japan, Mexico, Netherlands, Norway, Philippines, Poland, Puerto Rico (dropped because not available in the WVS), Russia, Spain, Sweden, Switzerland, India, Portugal, Lithuania, Yugoslavia, Romania, and the Americas. Given the small number of immigrants per each country, in the analysis, immigrants are grouped according to macro-areas of origin (i.e., Africa, Northern Europe, Southern Europe, Eastern Europe, Asia, and the Americas) to run the subsample analysis. After these sample restrictions, the data set that can be used for the empirical analysis is composed of 2,297 (1,475 for the regression analysis) immigrants. The list of variables, their source, and definitions are reported in Appendix I (Table A1).

2.2 Empirical Framework

2.2.1 The Model

The analysis is based on a model in which immigrants choose a group/region (*location decision*) of the United States, $g \in (L, H)$, which can be categorized as an L-type or H-type region, where $L < H$ and L and H, respectively, are the low- and high-trust regions. Once they have chosen where to migrate, they make a *behavioral decision* by choosing a certain behavior

$\omega \in (L_{i\omega|g}, H_{i\omega|g})$.[4]

The estimation strategy is as follows. Drawing on the theoretical literature of social capital, social interactions, and neighborhood effects models (e.g. Brock and Durlauf, 2001a, 2002, 2006, 2007; Durlauf, 2002; Durlauf and Fafchamps, 2005) and its theoretical advances (e.g. Brock and Durlauf, 2006; Zanella, 2007; Blume et al., 2011), the empirical framework is grounded on a theoretical model of social interactions with endogenous group membership that can be summarized as in Figure 1.

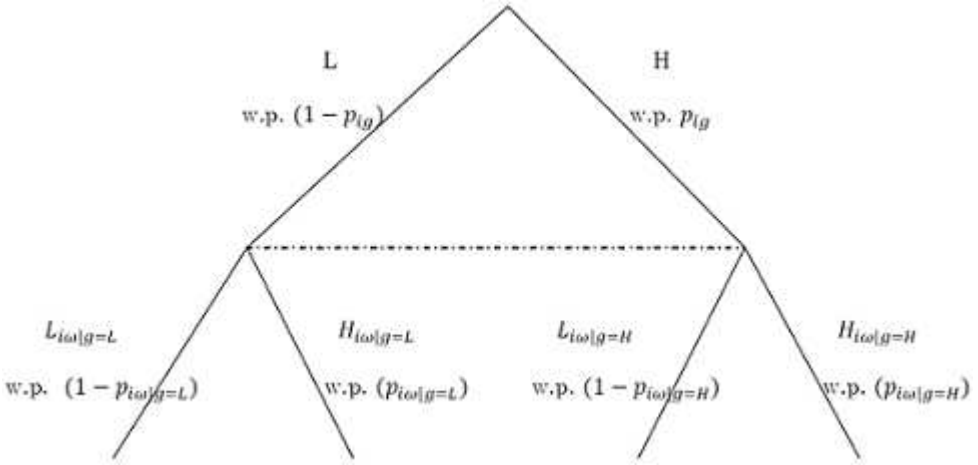

Figure 1: Individual Decision Tree

Immigrants, who are assumed to be rational, want to maximize their

[4]Although the trust question may capture actual *beliefs*, in the cultural economics literature and when using survey questions, the assumption that individuals are rational and behave according to their beliefs is common. Thus, we can assume ω captures the actual *behavior* of immigrants. Furthermore, although immigrants are born in and come from economies worldwide, they have been interviewed while they were already living in the United States. So, we can reasonably assume the absence of substantial differences in the interpretation of the trust question that could be otherwise addressed using alternative strategies (e.g., vignettes; see, e.g., King and Wand (2007)). However, the model accounts for possible further heterogeneity by allowing for the presence of unobserved heterogeneity.

utility function, V, as follows:

$$\underset{g,\omega}{Max} V_i\left(g,\omega\right). \tag{1}$$

They do so by first maximizing the decision regarding which region to join (g) and subsequently maximizing their behavior conditional on the location they joined ($\omega_{i|g}$).

In each decision, they choose outcome H only if:

$$V(H) - V(L) > 0; \tag{2}$$

that is, they decide to migrate to an H-type region, for instance, if the expected payoff from joining an H-type region is greater than the expected payoff from joining an L-type region. Similarly, they decide to trust others if the payoff (conditional on their location decision) is higher than the payoff from not trusting others. This framework is suitable for the research question addressed in this paper. Indeed, the location decision requires some degree of individual mobility; whereas some degree of mobility exists among US natives, investigating the role of inherited and contemporaneous culture on individuals' decisions using a sample of immigrants is worthwhile.

Both the location and the behavioral decision are a function of private utility as well as social utility, so, following the theory of social interactions models (e.g., Brock and Durlauf, 2006; Zanella, 2007), the utility for individual i can be modeled as follows:

$$V_i\left(g,\omega\right) = \nu\left(g,\omega,h_i\right) + s\left(g,\omega,J_g m_{ig}^e\right) + u(u_{ig},u_{ig\omega}), \tag{3}$$

where $\nu\left(\cdot\right)$ indicates the deterministic private utility, $u\left(\cdot\right)$ indicates the random private utility, and $s\left(\cdot\right)$ indicates social utility. Social interactions models (e.g., Brock and Durlauf, 2006; Zanella, 2007) assume $h_i = c + \beta_1^{'} X_i + \beta_2^{'} Y_{ig}$, where c is a constant term, X_i represents individual-specific characteristics, and Y_{ig} represents group/region-specific character-

istics. $J_g m^e_{ig}$ represents the social interactions term (m^e_{ig}) and the parameter that measures its strength (J_g).

I use the "proportional spillovers" specification of social utility that implies that if an individual expects most of the individuals in a group will choose $\omega = 1$, the individual has an incentive to conform to the choice of the majority (Brock and Durlauf, 2001b; Zanella, 2007).

Finally, following Brock and Durlauf (2001b), I assume that in the model, multiple equilbria may arise when $J > 1$ and h_i is homogeneous, and this is a baseline of interest.

The maximization of the utility function is represented by the following optimizations:

$$g_i = \arg\max_g (h_i + J m^e_{ig} + u_{ig}) \tag{4}$$

and

$$\omega_{i|g} = \arg\max_\omega (h_{i\omega} + J_g m^e_{i\omega g} + u_{i\omega g}), \tag{5}$$

sequentially taken by the immigrants. As is conventional in social interactions models (Brock and Durlauf, 2006), I assume immigrants, when forming expectations, do not account for the effect of their own choices on the decisions of others. I also assume self-consistency to close the model. This implies the immigrants' expectations coincide with the objective conditional probability measure generated by the model ($m^e_{ig} = m_{ig}$).[5]

2.2.2 Econometric Framework

Because both the location and behavioral decisions are binary choices, our framework is similar to the one proposed in Zanella (2007). He derives the following log-likelihood function:

[5] I empirically compute the social interactions terms as the average level of trust of the reference group. By doing so, I assume that, for the law of large numbers, the average computed on all the individuals and the average computed on all the individuals but the immigrant making expectations do not differ.

$$L = \sum_i \sum_\omega y_{i\omega} \log p_{i\omega|g_i} + \sum_i \sum_g y_{ig} \log p_{ig}, \tag{6}$$

where y_{ig} and $y_{i\omega}$ are individuals' choices associated with the respective latent variables, $y^*_{ig} = \max_\omega V_i(g,\omega) - \max_{\upsilon \neq g} \max_\omega V_i(\nu,\omega)$ and $y^*_{i\omega|g} = V_i(g_i,H) - V_i(g_i,L)$ and

$$p_{ig} = \frac{\exp\{\beta b \rho_g + \beta \delta' Y_g + \beta W_{ig}\}}{\sum_\nu \exp\{\beta b \rho_\nu + \beta \delta' Y_\nu + \beta W_{i\nu}\}} \tag{7}$$

$$p_{i\omega|g} = \frac{\exp\{a\omega + c'\omega X_i + d'\omega Y_g + J\omega m_g\}}{\sum_w \exp\{aw + c'wX_i + d'wY_g + Jwm_g\}} \tag{8}$$

$$W_{ig} = \log \sum_\omega \exp\{a\omega + c'\omega X_i + d'\omega Y_g + J\omega m_g\}, \tag{9}$$

where W_{ig} is the inclusive value utility, a is a constant, ρ_g represents costs and benefits of living in a region, and c, d, b, δ, and J are parameters. The author suggests estimating the model by means of a nested logit model.

However, this model is based on strong assumptions. Instead, I estimate the model by means of a sequential logit model (Maddala, 1983; Mare, 1980; Buis, 2015), which mainly differs from the nested logit model in that the first stage choice does not depend on the inclusive value utilities, and it is more suitable for the framework under study because we can assume obtaining full information at the first stage about the second stage maximization is too costly for the immigrants (see Nagakura and Kobayashi, 2009, for further explanation about the difference between the sequential and the nested logit model).[6] The sequential logit, as the nested logit, can overcome the problems typical of social interactions models. Indeed, the reflection problem (Manski,1993), which refers to the impossibility, in

[6]In a nested logit model, the presence of W, the inclusive value utility that is equal to the log of the denominator of the lower model, brings information from the second stage choice into the first stage choice; thus, the model assumes that at the time of making the first choice, the individual is capable of anticipating the expected utility (s)he will obtain from the choice in stage two.

linear-in-means models, of identifying and estimating the parameters of the model, due to the co-movement of the contextual effects and the social interactions term, is overcome using a nonlinear estimator (e.g., Brock and Durlauf, 2001b). The self-selection problem, which arises because the model belongs to the neighborhood models with non-random assignment, where individuals endogenously choose their group membership, is solved by modeling self-selection, thus controlling for the presence of endogenous sorting of individuals into groups (Brock and Durlauf, 2006). The likelihood function can be maximized by maximizing the likelihood function of two binary logit models (Amemiya, 1985) where the first maximizes the choice of the location (equation (10)) and the second models the immigrants' decision to trust others conditional on the location decision (equations (11) and (12)).

Therefore, the equations estimated in sections 3 and 4 are as follows:

$$p_{ig} = \frac{\exp\{\beta_{10} + \beta_{11}X_i + \beta_{12}Y_{ig} + \beta_{13}dtr_{igr} + J_1 m_{ig}\}}{\sum_{\nu} \exp\{\beta_{10} + \beta_{11}X_i + \beta_{12}Y_{ig} + \beta_{13}dtr_{igr} + J_1 m_{ig}\}} \tag{10}$$

$$p_{i\omega|g=L} = \frac{\exp\{\beta_{20} + \beta_{21}X_i + \beta_{22}Y_{ig} + \beta_{23}dtr_{igr} + J_2 m_{ig}\}}{\sum_{w} \exp\{\beta_{20} + \beta_{21}X_i + \beta_{22}Y_{ig} + \beta_{23}dtr_{igr} + J_2 m_{ig}\}} \tag{11}$$

$$p_{i\omega|g=H} = \frac{\exp\{\beta_{30} + \beta_{31}X_i + \beta_{32}Y_{ig} + \beta_{33}dtr_{igr} + J_3 m_{ig}\},}{\sum_{w} \exp\{\beta_{30} + \beta_{31}X_i + \beta_{32}Y_{ig} + \beta_{33}dtr_{igr} + J_3 m_{ig}\}} \tag{12}$$

where equation (10) indicates individuals sort into either an H-type region or an L-type region, and equations (11) and (12) indicate the behavioral decision undertaken by the immigrant sorting into, respectively, L-type or H-type region. Both the location (g) and the behavioral (ω) decision are a function of other variables that can be grouped as individual-specific characteristics, X_i (i.e., immigrant's age and age squared, education dummies capturing whether the immigrant has less than 12 or more than 16 years of education, a dummy variable for married and single, a dummy that sig-

nifies if the immigrant is a full-time or a part-time worker, and dummies for religion and race), group-specific characteristics, or contextual effects, Y_{ig} (i.e., the average education of individuals in the host region), the social interactions term, m_{ig} (i.e., the yearly average level of trust of individuals living in the host region, or immigrants living in the host region, or immigrants living in the host region coming from the immigrant's geographic area), and the term capturing the difference in trustworthiness between the host region and home country, dtr_{igr}, which is ethnic-specific (r). In adding this term, the paper follows the literature (Durlauf, 2002; Durlauf and Fafchamps, 2005).[7] Also, J_g measures the strength of social interactions and determines, jointly with both the private and the random utility, the presence of multiple equilibria and eventual social traps arising from conformity to low-level equilibria. Thus, the presence of a sizeable J is a necessary condition for the existence of multiple equilibria.

In addition, following the literature (Train, 2003; Buis, 2011), in the estimation, I control for endogeneity of the social interactions terms by including the unobserved heterogeneity correlated with it. I assume it is normally distributed with standard deviation (σ) equal to 1. Because we can think of unobserved heterogeneity as a weighted sum of all the unobserved variables that are possibly correlated with the social interactions term, the distributional assumption is reasonable. Also, I assume, as a

[7]To avoid reverse causality and endogeneity problems, I assume the difference in trustworthiness is an objective indicator predetermined with respect to the immigrant's location decision. However, we also instrumented the difference in trustworthiness using as instruments the weighted genetic distance between the United States and each ethnicity used by Spolaore and Wacziarg (2009), as well as the yearly family income of the respondent when (s)he was 16 years old, averaged by ethnicity, obtained from the GSS. Because the weighted genetic distance has an effect on economic development (Spolaore and Wacziarg, 2009), we may assume the weighted genetic distance is correlated with and can be used to instrument the difference in trustworthiness. At the same time, we can assume it is not correlated with the error terms of individual decisions. The same can be said for the other instrument. Then, a two-step procedure is applied: the sequential logit is run by adding the estimated residual from the regression as an additional regressor (Heckman, 1979), and standard errors have been bootstrapped. The results do not significantly change.

baseline scenario, the correlation (ρ) of unobserved heterogeneity with the variable of interest is 0.25. I intentionally chose the correlation to be not too high, because the unobserved variables may have either a positive or negative correlation with the variable of interest. Thus, assuming positive but not too high correlation seems a natural choice. Given the distributional assumption on unobserved heterogeneity, the models are estimated using maximum simulated likelihood (MSL) due to the impossibility of getting a closed-form solution (Train, 2003; Buis, 2011). A sensitivity analysis is provided in Table 12. Furthermore, Table A.3 in the Appendix shows the results are also robust to possible endogeneity of immigrants' self-selection into regions.

Therefore, the nonlinearity of the logit model, the intragroup and intergroup variation in the data used, and the econometric framework just described allow me to overcome the usual problems of social interactions models (Manski, 1993; Moffitt, 2001; Brock and Durlauf, 2006).

3 Estimation Results

3.1 Actual Data

Table 1 reports trust averages of immigrants by country. In this table, the entire GSS sample (1972-2014) has been used to get more observations for each ethnicity. For each area and sub-population, the average trust of immigrants sorting in either an L-type (left column) or an H-type (right column) region is reported.[8] The Wilcoxon-Mann-Withney test indicates that only for some countries does the average trust of immigrants in L- and H-type regions differ. However, the Kruskal-Wallis tests show we can reject the null hypothesis of equal means across both areas of the world

[8]New England, East North Central, West North Central, Mountain, and Pacific are classified as H-type regions; Middle Atlantic, South Atlantic, East South Central, and West South Central are classified as L-type regions.

and countries. Although little can be inferred from the table due to data limitations and because we cannot compare the trust of immigrants before and after migration, immigrants coming from the same place in L-type regions have overall lower trust than immigrants from the same area sorting in H-type regions. Also, overall trust is higher for immigrants coming from countries with higher average trustworthiness. This finding provides a preliminary descriptive evidence that immigrants' trust may be influenced by both inherited trust and social interactions.

To check this evidence further, I estimate a sequential logit model. From now onward, the time span of the analysis is restricted to the years 1989-2014. The estimation results on the whole sample always include a time dummy for the years before and after 2000. This time dummy is not included in the sub-sample analysis, because data limitations made obtaining results for some of the groups of immigrants impossible. Thus, for the sake of comparison, I have excluded it from all the sub-sample regressions. This exclusion does not affect the final results. The regression analysis is similar to the empirical framework in Alesina and La Ferrara (2002), who analyze who trusts others in the United States; however, this paper differs from their analysis. Indeed, this work focuses only on immigrants. Also, it does not account for the presence of past traumas and for the logarithm of the respondent income to avoid loss of data and representativeness. I ran regression results including the logarithm of income, but it does not significantly influence the decisions of immigrants, so its omission does not alter the results. Also, this paper controls for the social interactions term as well as for the difference in trustworthiness between the host region and home country to capture the impact of both inherited trust and contemporaneous culture on immigrants' decisions. In all the regressions, the average marginal effects computed at the means for the location decision and the behavioral decision in L-type and H-type regions are reported in columns (1), (3), and (5), respectively. Columns (2), (4), and (6) report relative standard errors robust to the heteroskedasticity. Table A2 (in Appendix

Table 1: Sorting of immigrants in US regions

	L-type regions	H-type regions		L-type regions	H-type regions
Country of origin	Average trust		Country of origin	Average Trust	
South America	0.094*	0.151*	Poland	0.290	0.379
Africa	0.226	0.276	Russia	0.407	0.571
North Europe	0.386*	0.475*	Lithuania	0.000	0.250
Austria	0.385	0.25	Ex-Yugoslavia	0.400	0.571
Denmark	0.333	0.400	Romania	0.363*	0.000*
UK	0.413	0.526	**Asia**	0.377	0.356
Finland	na	0.80	China	0.487	0.437
Germany	0.284	0.400	Japan	0.600	0.348
Ireland	0.500	0.346	Philippines	0.188	0.217
Netherlands	0.429	0.438	India	0.371	0.429
Norway	0.200**	0.750**	**North America**	0.292	0.250
Sweden	0.666	0.625	**South Europe**	0.290	0.274
Switzerland	1.000	na	Greece	0.300	0.400
Belgium	1.000	1.000	France	0.500	0.400
East Europe	0.360	0.422	Italy	0.293	0.302
Czechoslovakia	0.200	0.400	Spain	0.273	0.147
Hungary	0.666	0.400	Portugal	0.000	0.273
Kruskal-Wallis test (by area)	$\chi^2_6 = 74.111$	[0.000]	$\chi^{2+}_6 = 115.868$	[0.000]	
Kruskal-Wallis test (by country)	$\chi^2_{32} = 110.839$	[0.000]	$\chi^{2+}_{32} = 173.291$	[0.000]	

Notes: Averages by immigrants sorting in low- or high-trust regions are reported. Low- and high-trust regions are defined with respect to the yearly average level of trust. Every pair of averages for immigrants sorting in low- and high-trust regions has been tested to check for significant differences using a two-sample Wilcoxon ranksum Mann-Whitney test. + indicates the Kruskal-Wallis (KW) statistics corrected for ties. p-values for the KW statistics are in []. *** Significant at the 1% level, ** Significant at the 5% level, * Significant at the 10% level.

Source: General Social Survey, years 1972-2014.

I) shows the results for the sequential logit model on actual data. Table 2 shows the results on the whole sample using simulated data. Indeed, given the limited number of immigrants per region and year in the GSS data set, and the sequential structure of the regression framework that reduces the observations in the second stage, I simulate a data set that replicates the raw data. Regional and ethnic representativeness are preserved and the

characteristics of the variables match those of the raw data, but the number of observations is increased to get consistent results and to allow me to run the sub-sample analysis. For the sake of brevity, only the results in Table 2 are commented, because this is the regression on the whole sample that should be related to the sub-sample analysis and because these results are more consistent than the ones in Table A2. Also, the behavioral decisions of immigrants in L-type and H-type regions in sections 3.2. and 4 are explained together.

3.2 Results on the Whole Sample

Columns (1) and (2) of Table 2 report the results for immigrants' location decision. The results show females are less likely than men to emigrate to an H-type region. Immigrants with lower education (i.e., less than 12 years) are more likely to move to an H-type region than immigrants with intermediate levels of education (the reference group), immigrants with higher education (i.e., more than 16 years) are less likely to move to an H-type region than the reference group. On average, education levels are higher in H-type regions. Both married and single immigrants are more likely to sort themselves (compared to the reference group, i.e., divorced, widowed, and separated) into an H-type region. Immigrants who work part-time are more likely to sort themselves into an H-type region compared to the ones with other working statuses (i.e., retired, student, housekeeper, -temporarily-unemployed) or immigrants working full-time. Blacks are less likely than whites to join an H-type region: Because the majority of Afro-Americans in the United States are concentrated in southern states (Rastogi et al., 2011), and the H-type regions are mainly northern regions, black immigrants may want to join regions where their ethnicity is more represented. Races other than blacks are more likely than whites to sort themselves into an H-type region. Immigrants with religious affiliations are less likely than immigrants without to sort themselves into an H-type region. This result is expected,

Table 2: Whole Sample and Global Social Interactions

	Location Decision		Behavioral Decision (L-type regions)		Behavioral Decision (H-type regions)	
	(1)	(2)	(3)	(4)	(5)	(6)
age	-0.01***	(0.001)	0.01***	(0.001)	0.00***	(0.001)
age2	0.00*	(0.000)	-0.00***	(0.000)	-0.00***	(0.000)
female	-0.09***	(0.005)	-0.12***	(0.006)	-0.03***	(0.003)
edu<12	0.18***	(0.006)	-0.17***	(0.009)	-0.04***	(0.004)
edu>16	-0.13***	(0.008)	0.26***	(0.007)	0.17***	(0.005)
educavg	0.24***	(0.008)	-0.20***	(0.008)	-0.02***	(0.004)
married	0.04***	(0.006)	0.05***	(0.007)	0.04***	(0.004)
single	0.08***	(0.008)	0.01	(0.010)	-0.04***	(0.005)
ft	0.01	(0.006)	0.08***	(0.007)	0.02***	(0.004)
pt	0.06***	(0.009)	-0.04***	(0.012)	0.07***	(0.005)
Black	-0.30***	(0.012)	-0.20***	(0.012)	-0.02***	(0.008)
Other race	0.10***	(0.006)	-0.12***	(0.007)	-0.03***	(0.003)
Protestant	-0.08***	(0.009)	-0.16***	(0.011)	0.00	(0.005)
Catholic	-0.05***	(0.008)	-0.26***	(0.010)	-0.10***	(0.005)
Jews	-0.62***	(0.023)	-0.14***	(0.018)	-0.04***	(0.014)
Other religion	-0.17***	(0.011)	-0.13***	(0.012)	0.04***	(0.006)
2000	0.10***	(0.006)	0.07***	(0.008)	0.03***	(0.003)
dtr	0.15***	(0.021)	-0.92***	(0.026)	-0.33***	(0.012)
trustavg	6.32***	(0.059)	2.92***	(0.073)	1.10***	(0.029)
$\sigma = 1$; $\rho = 0.25$						
observations			83,241			
log-pseudolikelihood			-78,324.72			

Notes: Estimation Method: Sequential Logit. Columns (1), (3), and (5) report the marginal effects at the mean for, respectively, immigrants' location decision, their behavioral decision in L-type regions, and their behavioral decision in H-type regions. Columns (2), (4), and (6) report the standard errors (in parentheses) for the respective choices. Standard errors are obtained using the delta method and are robust to heteroskedasticity. *** Significant at the 1% level, ** Significant at the 5% level, * Significant at the 10% level.

Source: General Social Survey and World Values Survey, years 1989-2014, and author's calculations.

because the most religious states in the United States are located in the south (e.g., Gallup, 2015) and many of the southern states are L-type regions. On average, from 2000 onward, immigrants are more likely to sort themselves into an H-type region, possibly due to the series of national and international events that have occurred since 2000 that may have made H-

type regions more attractive. Immigrants coming from countries for which the difference in trustworthiness between host and home region is higher are more likely to sort into H-type regions, probably because either they want to improve their living or they want to live in a region where, after balancing for costs and benefits, they can more easily cheat (Butler, Giuliano and Guiso, 2016). Finally, as expected, average trust in H-type regions is higher than in L-type regions.

The results for the behavioral decisions on immigrants' trust indicate females are less likely than men to trust others and less educated immigrants are less likely than immigrants with intermediate levels of education to trust, whereas immigrants with higher levels of education (16 years or more) trust significantly more. These expected results are in line with previous evidence (e.g., Alesina and La Ferrara, 2002). Immigrants living in regions with higher levels of education are less likely to trust than immigrants living in regions with lower levels of education. Interpreting this result may seem hard, but because average education is positively correlated with trust, it is consistent with the literature (e.g., Ljunge, 2014) according to which individuals can adapt more easily to lower levels of trust than to high levels of trust because building trust takes longer than destroying it. Married immigrants trust significantly more than the reference group (i.e., divorced, separated, or widowed) and single ones; singles trust significantly less than the reference group in H-type regions. In both regions, full-time workers are more likely to trust than the reference group, and part-time workers trust significantly less (more) than the reference group in L-type (H-type) regions. Blacks and other races are less likely to trust others than whites, and this finding is also consistent with the previous literature that indicates minorities, who have often been discriminated against, trust less than others (Demaris and Yang, 1994; Alesina and La Ferrara, 2002; Putnam, 2007; Kumlin and Rothstein, 2010). Religious immigrants trust less than immigrants with no religious affiliation in L-type regions; Jews and Catholics (immigrants with other religion) are less (more) likely to trust

others than immigrants with no religion in H-type regions. This finding supports the theory that trust is lower in countries (and individuals) practicing some religion (Harrison, 2008). Since 2000, immigrants sorting into both regions are more likely to trust others than immigrants that joined a region before then, although the estimated parameter is not very high, especially in H-type regions. Although additional investigation is required, the slightly higher impact of the 2000 dummy on the behavioral decision of immigrants in L-type regions may be interpreted as follows. On the one hand, the effect of globalization could have increased the probability of immigrants trusting others in the United States; on the other hand, the negative international and US shocks (e.g., the 9/11 attack and the financial crisis) may have had a greater negative effect on the trust of individuals in H-type regions than in L-type regions because, for instance, individuals living in L-type regions may invest less in the financial markets (see, e.g., Guiso, Sapienza and Zingales, 2004), so they have not been directly affected by the financial crisis, or because they are likely to live in regions of the United States far away from where the attack took place. Immigrants for which the difference in trustworthiness between the host region and home country is bigger are less likely to trust others everywhere, which suggests immigrants coming from countries with comparatively (with respect to the host region) lower average trustworthiness are less likely to trust others. Finally, the social interactions term has a positive and very large impact: immigrants are influenced by (their expectations about) the average trust of individuals living in the region into which they sort themselves.

Overall, the results support the presence of significant sorting of immigrants. Furthermore, inherited trust influences their trusting decisions, and the social interactions terms suggest overall cultural assimilation.

4 Sub-sample Analysis

Given the well-known differences in trust across ethnicities, performing a sub-sample analysis is worthwhile. Tables 3 to 8 replicate the same analysis of Table 2 on sub-samples of immigrants by ethnicity, so that I can investigate differences in both sorting and trust behavior of immigrants coming from different areas of the world. I find controlling for some ethnic or religious dummies for some sub-samples is more important than for others, but controlling for the same variables, when possible, allows a greater degree of comparability across the results. For the sake of brevity, although I present the full set of results, I only provide comments for the variables of interest.

Table 3 reports the results for the African sub-sample.[9] Both inherited trust and contemporaneous culture are important to explain immigrants' decisions. In particular, the higher the difference in trustworthiness between the host region and home country, the more likely immigrants are to sort themselves into L-type regions (column (1)), suggesting the presence of positive sorting. Furthermore, as columns (3) and (5) show, this variable plays a negative role in immigrants' trust, indicating African immigrants who inherited lower levels of trustworthiness (compared to the host region they joined) are less likely to trust others, as suggested by the previous literature. Finally, the social interactions terms are strongly significant in both L-type and H-type regions, although the estimated parameter is very sizeable only for the L-type regions, which may suggest that for African immigrants, fully conforming to high levels of trust is difficult, whereas conformity is easier for lower levels of trust. The results are consistent with the aforementioned theory that conforming to high levels of trust is more difficult (Ljunge, 2014) and that homophily may play a role in the integration of African immigrants, because the social interactions term is larger in regions with a higher percentage of African-Americans (L-type

[9]Dummies for Protestant and Jews have been dropped because only a few African individuals in the sample belong to these categories.

Table 3: Africans and Global Social Interactions

	Location Decision		Behavioral Decision (L-type regions)		Behavioral Decision (H-type regions)	
	(1)	(2)	(3)	(4)	(5)	(6)
age	0.00***	(0.002)	0.01**	(0.002)	-0.00	(0.000)
age2	-0.00***	(0.000)	-0.00	(0.000)	-0.00	(0.000)
female	-0.05***	(0.011)	-0.09***	(0.014)	-0.00	(0.002)
edu<12	0.06***	(0.014)	-0.03	(0.019)	-0.02***	(0.005)
edu>16	-0.09***	(0.017)	0.12***	(0.017)	0.00	(0.003)
educavg	0.27***	(0.116)	0.04***	(0.016)	-0.03***	(0.007)
married	0.03**	(0.014)	-0.03	(0.018)	0.01**	(0.003)
single	-0.06***	(0.018)	0.03	(0.020)	-0.00	(0.003)
ft	-0.09***	(0.012)	-0.05***	(0.015)	-0.02	(0.004)
pt	0.03	(0.019)	-0.11***	(0.030)	-0.03***	(0.008)
Black	-0.06***	(0.014)	0.03*	(0.016)	0.02***	(0.005)
Other race	0.04***	(0.013)	-0.05***	(0.018)	-0.01***	(0.003)
Catholic	0.02*	(0.012)	-0.13***	(0.015)	-0.00	(0.002)
Other religion	0.04**	(0.018)	-0.11***	(0.026)	0.02***	(0.005)
dtr	-2.02***	(0.198)	-2.31***	(0.257)	-0.14***	(0.046)
trustavg	3.96***	(0.213)	2.93***	(0.274)	0.57***	(0.104)
$\sigma = 1$; $\rho = 0.25$						
observations			5,128			
log-pseudolikelihood			-4,155.86			

Notes: Estimation Method: Sequential Logit. Columns (1), (3), and (5) report the marginal effects at the mean for, respectively, immigrants' location decision, their behavioral decision in L-type regions, and their behavioral decision in H-type regions. Columns (2), (4), and (6) report the standard errors (in parentheses) for the respective choices. Standard errors are obtained using the delta method and are robust to heteroskedasticity. *** Significant at the 1% level, ** Significant at the 5% level, * Significant at the 10% level.

Source: General Social Survey and World Values Survey, years 1989-2014, and author's calculations.

regions).

Table 4 reports the regression results for immigrants coming from Northern European countries. Northern Europeans with comparatively lower levels of inherited trust are more likely to join H-type regions, suggesting the presence of significant negative sorting of these groups of immigrants. Regarding the behavioral decisions, columns (3)-(6) show Northern European immigrants with comparatively lower levels of inherited trust are less likely

Table 4: Northern Europeans and Global Social Interactions

	Location Decision		Behavioral Decision (L-type regions)		Behavioral Decision (H-type regions)	
	(1)	(2)	(3)	(4)	(5)	(6)
age	-0.00	(0.002)	0.02***	(0.003)	0.01***	(0.002)
age2	-0.00	(0.000)	-0.00***	(0.000)	-0.00**	(0.000)
female	-0.07***	(0.012)	-0.11***	(0.014)	-0.05***	(0.010)
edu<12	0.18***	(0.015)	-0.13***	(0.020)	-0.09***	(0.014)
edu>16	-0.07***	(0.016)	0.29***	(0.018)	0.29***	(0.015)
educavg	0.67***	(0.023)	-0.12***	(0.019)	0.11***	(0.013)
married	0.11***	(0.015)	0.02	(0.018)	0.13***	(0.013)
single	0.22***	(0.020)	0.03	(0.023)	-0.02	(0.016)
ft	-0.03**	(0.013)	0.08***	(0.016)	-0.05***	(0.011)
pt	0.11***	(0.021)	0.00	(0.027)	0.07***	(0.016)
Black	-0.25***	(0.029)	-0.39***	(0.031)	-0.02	(0.028)
Other race	0.05***	(0.014)	-0.17***	(0.017)	-0.10***	(0.012)
Protestant	-0.13***	(0.018)	-0.27***	(0.024)	0.00	(0.014)
Catholic	-0.10***	(0.018)	-0.35***	(0.024)	-0.26***	(0.015)
Jews	-0.60***	(0.054)	-0.27***	(0.045)	-0.15***	(0.049)
Other religion	-0.15***	(0.025)	-0.22***	(0.029)	-0.03	(0.020)
dtr	0.12**	(0.056)	-0.85***	(0.086)	-0.44***	(0.044)
trustavg	8.96***	(0.168)	2.61***	(0.146)	1.43***	(0.115)
$\sigma = 1$; $\rho = 0.25$						
observations			18,245			
log-pseudolikelihood			-17,236.84			

Notes: Estimation Method: Sequential Logit. Columns (1), (3), and (5) report the marginal effects at the mean for, respectively, immigrants' location decision, their behavioral decision in L-type regions, and their behavioral decision in H-type regions. Columns (2), (4), and (6) report the standard errors (in parentheses) for the respective choices. Standard errors are obtained using the delta method and are robust to heteroskedasticity. *** Significant at the 1% level, ** Significant at the 5% level, * Significant at the 10% level.

Source: General Social Survey and World Values Survey, years 1989-2014, and author's calculations.

to trust others and can easily conform to the average level of trust, disregarding the type of region into which they sort themselves. These findings suggest inherited trust is important in explaining Northern European immigrants' trust and that they can easily integrate. Because these immigrants come from countries with high average trust and trustworthiness, their conformity to high levels of trust is intuitive. At the same time, however, they

may also adjust to low averages of L-type regions, perhaps after they have been cheated (Butler, Giuliano and Guiso, 2016).

The results for Southern Europeans (Table 5) indicate the presence of positive sorting (columns (1) and (2)) for this group of immigrants. As far

Table 5: Southern Europeans and Global Social Interactions

	Location Decision		Behavioral Decision (L-type regions)		Behavioral Decision (H-type regions)	
	(1)	(2)	(3)	(4)	(5)	(6)
age	-0.00**	(0.002)	0.00	(0.003)	0.01**	(0.002)
age2	-0.00	(0.000)	0.00	(0.000)	-0.00**	(0.000)
female	-0.10***	(0.013)	-0.10***	(0.016)	-0.08***	(0.012)
edu<12	0.19***	(0.015)	-0.24***	(0.025)	0.02	(0.014)
edu>16	-0.14***	(0.018)	0.13***	(0.019)	0.22***	(0.019)
educavg	0.30***	(0.017)	-0.17***	(0.019)	-0.15***	(0.015)
married	0.03*	(0.015)	0.01	(0.019)	0.10***	(0.015)
single	0.08***	(0.019)	-0.05*	(0.027)	-0.04**	(0.019)
ft	0.08***	(0.014)	0.11***	(0.018)	0.05***	(0.013)
pt	0.10***	(0.025)	0.02	(0.033)	0.13***	(0.022)
Black	-0.31***	(0.035)	-0.31***	(0.036)	-0.07	(0.043)
Other race	0.04***	(0.014)	-0.19***	(0.019)	0.01	(0.013)
Protestant	-0.01	(0.021)	-0.24***	(0.026)	-0.01	(0.019)
Catholic	0.06***	(0.018)	-0.25***	(0.022)	-0.05***	(0.017)
Other religion	0.01	(0.025)	-0.22***	(0.033)	0.11***	(0.024)
dtr	-1.60***	(0.102)	-2.09***	(0.139)	-0.07	(0.089)
trustavg	6.76***	(0.154)	4.55***	(0.193)	0.45***	(0.153)
$\sigma = 1$; $\rho = 0.25$						
observations			11,190			
log-pseudolikelihood			-10,387.96			

Notes: Estimation Method: Sequential Logit. Columns (1), (3), and (5) report the marginal effects at the mean for, respectively, immigrants' location decision, their behavioral decision in L-type regions, and their behavioral decision in H-type regions. Columns (2), (4), and (6) report the standard errors (in parentheses) for the respective choices. Standard errors are obtained using the delta method and are robust to heteroskedasticity. *** Significant at the 1% level, ** Significant at the 5% level, * Significant at the 10% level.

Source: General Social Survey and World Values Survey, years 1989-2014, and author's calculations.

as the behavioral decision is concerned (columns (3)-(6)), although inherited trust has a negative impact on the decision to trust others in L-type regions, it is insignificant when explaining the trust of Southern European

immigrants in H-type regions. In addition, the social interactions terms are both strongly significant, but the impact is higher in southern regions, suggesting they can conform to lower levels of trust, but less so to higher levels of trust (Ljunge, 2014). Table 6 reports the results for the Eastern Euro-

Table 6: Eastern Europeans and Global Social Interactions

	Location Decision		Behavioral Decision (L-type regions)		Behavioral Decision (H-type regions)	
	(1)	(2)	(3)	(4)	(5)	(6)
age	-0.00	(0.003)	0.01**	(0.004)	-0.00**	(0.002)
age2	-0.00	(0.000)	-0.00	(0.000)	0.00**	(0.000)
female	-0.06***	(0.018)	-0.13***	(0.022)	-0.04***	(0.013)
edu<12	0.14***	(0.022)	-0.29***	(0.038)	-0.04*	(0.019)
edu>16	-0.09***	(0.023)	0.33***	(0.026)	0.10***	(0.016)
educavg	0.10***	(0.022)	0.12***	(0.028)	0.06***	(0.013)
married	-0.02	(0.021)	0.09***	(0.027)	0.10***	(0.016)
single	-0.03	(0.029)	-0.01	(0.038)	0.05**	(0.020)
ft	0.08***	(0.019)	0.00	(0.023)	-0.00	(0.014)
pt	-0.02	(0.031)	-0.11***	(0.040)	0.08***	(0.020)
Black	-0.32***	(0.034)	-0.29***	(0.035)	-0.15***	(0.025)
Other race	0.08***	(0.019)	-0.16***	(0.026)	-0.07***	(0.014)
Protestant	-0.08**	(0.032)	0.00	(0.042)	-0.09***	(0.021)
Catholic	-0.02	(0.030)	-0.03	(0.040)	-0.12***	(0.019)
Jews	-0.57***	(0.047)	0.11**	(0.050)	-0.00	(0.039)
Other religion	-0.23***	(0.035)	0.08*	(0.044)	-0.02	(0.022)
dtr	1.60***	(0.169)	-1.65***	(0.203)	-0.97***	(0.142)
trustavg	4.92***	(0.208)	1.42***	(0.235)	2.07***	(0.138)
$\sigma = 1$; $\rho = 0.25$						
observations			7,036			
log-pseudolikelihood			-7,264.06			

Notes: Estimation Method: Sequential Logit. Columns (1), (3), and (5) report the marginal effects at the mean for, respectively, immigrants' location decision, their behavioral decision in L-type regions, and their behavioral decision in H-type regions. Columns (2), (4), and (6) report the standard errors (in parentheses) for the respective choices. Standard errors are obtained using the delta method and are robust to heteroskedasticity. *** Significant at the 1% level, ** Significant at the 5% level, * Significant at the 10% level.
Source: General Social Survey and World Values Survey, years 1989-2014, and author's calculations.

pean immigrants. The location decision (columns (1) and (2)) suggests the presence of negative sorting of this group of immigrants. Both behavioral decisions (columns (3)-(6)) indicate Eastern European immigrants who in-

herited comparatively lower average trustworthiness are less likely to trust others, and that they can integrate, disregarding the type of region. Thus, although Eastern Europeans are among immigrants that are more likely to experience segregation in the United States (Cutler, Glaeser and Vigdor, 2008), the results suggest they can (or want to) easily conform to any type of trust.

The findings for immigrants from Asia are presented in Table 7. They

Table 7: Asians and Global Social Interactions

	Location Decision		Behavioral Decision (L-type regions)		Behavioral Decision (H-type regions)	
	(1)	(2)	(3)	(4)	(5)	(6)
age	-0.00*	(0.002)	0.01**	(0.003)	0.01***	(0.002)
age2	0.00	(0.000)	-0.00*	(0.000)	-0.00***	(0.000)
female	-0.07***	(0.010)	-0.10***	(0.015)	-0.07***	(0.010)
edu<12	0.15***	(0.013)	-0.18***	(0.023)	-0.06***	(0.013)
edu>16	-0.11***	(0.014)	0.37***	(0.018)	0.26***	(0.014)
educavg	0.11***	(0.015)	-0.34***	(0.016)	0.06***	(0.014)
married	0.02*	(0.013)	0.17***	(0.021)	-0.02	(0.012)
single	0.01	(0.016)	0.09***	(0.025)	-0.14***	(0.016)
ft	0.05***	(0.012)	0.14***	(0.017)	0.10***	(0.012)
pt	0.09***	(0.017)	0.12***	(0.027)	0.17***	(0.016)
Black	-0.29***	(0.025)	-0.29***	(0.033)	-0.14***	(0.031)
Other race	0.08***	(0.010)	-0.01	(0.016)	0.02	(0.010)
Protestant	-0.07***	(0.017)	-0.28***	(0.026)	-0.00	(0.015)
Catholic	-0.05***	(0.015)	-0.36***	(0.025)	-0.15***	(0.014)
Jews	-0.52***	(0.036)	-0.42***	(0.046)	-0.10**	(0.043)
Other religion	-0.17***	(0.019)	-0.27**	(0.027)	0.07***	(0.017)
dtr	0.25***	(0.028)	-0.64***	(0.042)	-0.31***	(0.025)
trustavg	4.20***	(0.092)	1.56***	(0.134)	-0.24**	(0.113)
$\sigma = 1$; $\rho = 0.25$						
observations			17,536			
log-pseudolikelihood			-18,890.44			

Notes: Estimation Method: Sequential Logit. Columns (1), (3), and (5) report the marginal effects at the mean for, respectively, immigrants' location decision, their behavioral decision in L-type regions, and their behavioral decision in H-type regions. Columns (2), (4), and (6) report the standard errors (in parentheses) for the respective choices. Standard errors are obtained using the delta method and are robust to heteroskedasticity. *** Significant at the 1% level, ** Significant at the 5% level, * Significant at the 10% level.

Source: General Social Survey and World Values Survey, years 1989-2014, and author's calculations.

show (columns (1) and (2)) the presence of significant sorting of Asian im-

migrants. Also, the difference in trustworthiness has a negative impact on immigrants' trust. Note that, although they can easily conform to the levels of trust in L-type regions, and the estimated parameter is also high, the social interactions term has a negative impact on trust in H-type regions. This result supports the theory explained above about the difficulty of building social capital (Ljunge, 2014). However, it goes a step further: Although further investigation is needed, it may suggest that when individuals have lower levels of trust or have been previously exposed to low levels of trust, they may be skeptical of too-high levels of trust, so they may behave counter-intuitively. For example, they may not trust others if they notice the average trust of individuals living in a region is too high compared to the level of trust they experienced in their own country. Furthermore, the estimated parameter is not very high, indicating once again they are not as influenced as immigrants coming from other areas of the world by the average level of trust of individuals living in H-type regions. This result could be related to the segregation and isolation this group of immigrants experiences in the United States (Cutler, Glaeser and Vigdor, 2008). By contrast, the social interactions term in L-type regions is very high, significant, and positive.

Finally, Table 8 reports the results for American immigrants. Northern and Southern Americans had to be pulled together due to data limitation, so this pooling limits the possibility of disentangling the behavior of these two types of immigrants; however, we control for a dummy variable for Southern Americans. The results show the presence of negative sorting of American immigrants. Furthermore, the difference in trustworthiness has a negative impact on trust, and the social interactions terms in both L-type and H-type regions are significant and positive, indicating American immigrants adjust to the average level of trust of the host region. However, although the estimated parameter is sizeable for the L-type regions, it is lower for the estimation results in H-type regions, supporting the previous findings. Thus, all in all, the results indicate immigrants behave differently

Table 8: Americans and Global Social Interactions

	Location Decision		Behavioral Decision (L-type regions)		Behavioral Decision (H-type regions)	
	(1)	(2)	(3)	(4)	(5)	(6)
age	-0.01***	(0.002)	0.00***	(0.001)	0.00***	(0.000)
age2	0.00***	(0.000)	-0.00*	(0.000)	-0.00	(0.000)
female	-0.11***	(0.011)	-0.09***	(0.007)	-0.01***	(0.002)
edu<12	0.17***	(0.012)	-0.05***	(0.008)	-0.01***	(0.003)
edu>16	-0.15***	(0.020)	0.11***	(0.009)	0.05***	(0.004)
educavg	0.04*	(0.020)	-0.08***	(0.009)	-0.02***	(0.004)
married	0.03**	(0.015)	0.03***	(0.008)	0.01***	(0.003)
single	0.13***	(0.017)	-0.00	(0.011)	-0.01**	(0.003)
ft	-0.05***	(0.012)	0.02***	(0.007)	0.02***	(0.003)
pt	-0.00	(0.019)	-0.08***	(0.014)	0.03***	(0.004)
Afro-A.	-0.13***	(0.028)	-0.03**	(0.012)	-0.01	(0.005)
Other race	0.15***	(0.012)	-0.03***	(0.007)	-0.00*	(0.002)
Protestant	-0.09***	(0.021)	-0.04***	(0.011)	-0.00	(0.003)
Catholic	-0.08***	(0.019)	-0.12***	(0.012)	-0.03***	(0.003)
Jews	-0.33***	(0.063)	-0.05**	(0.023)	0.02**	(0.009)
Other rel.	-0.25***	(0.027)	-0.03**	(0.012)	0.01***	(0.004)
South A.	0.18***	(0.032)	0.07***	(0.013)	0.01*	(0.006)
dtr	0.55***	(0.110)	-0.71***	(0.061)	-0.06***	(0.018)
trustavg	8.77***	(0.146)	1.45***	(0.119)	0.46***	(0.023)
$\sigma = 1$; $\rho = 0.25$						
observations			24,106			
log-pseudolikelihood			-14,601.57			

Notes: Estimation Method: Sequential Logit. Columns (1), (3), and (5) report the marginal effects at the mean for, respectively, immigrants' location decision, their behavioral decision in L-type regions, and their behavioral decision in H-type regions. Columns (2), (4), and (6) report the standard errors (in parentheses) for the respective choices. Standard errors are obtained using the delta method and are robust to heteroskedasticity. *** Significant at the 1% level, ** Significant at the 5% level, * Significant at the 10% level.

Source: General Social Survey and World Values Survey, years 1989-2014, and author's calculations.

in both sorting and trust decisions.

5 Alternative Measures of Social Interactions and Robustness Checks

5.1 Alternative Measures of Social Interactions

So far we have assumed immigrants are influenced only by what they think is the average trust of all the individuals living in their region. Nonetheless, as the previous literature (Tabellini, 2008a) notes, in countries endowed with lower average trustworthiness, the spread of trust is circumscribed to a generally small community (friends or the family), whereas opportunistic behavior is allowed toward the rest of a society. This attitude may prevent immigrants from such countries to conform to the average level of trust of *all* individuals living in a region where they are less integrated and feel less part of a whole society. If this theory holds, the more likely scenario is that (some) immigrants interact with other immigrants and base their decision of whether to trust on their beliefs about the average trust of other immigrants. Even more realistic is the assumption that their decision to trust others depends on what they think is the average trust of the immigrants living in their region who came from their same area of the world. I thus replicate the analysis of Tables 2-8, keeping as social interactions term either the (belief about the) yearly average trust of immigrants living in a region (*trustimmig*, Table 9), or the (belief about the) yearly average trust of immigrants coming from the same region of the world (*trustworld*, Table 10) and now living in a same host region, which can both represent the propensity of immigrants to cultural segregation. For the sake of exposition, once again, I report and comment on only the results for the difference in trustworthiness and the social interactions terms for the three transitions because they are the variables of greater interest.

Tables 9 and 10 show that, disregarding the sample analyzed, when differences in trustworthiness are higher, immigrants prefer to sort into H-type regions, and the average trust of immigrants is overall higher in L-type

regions. This finding confirms that integration of immigrants is more likely to happen in L-type regions. Regarding the behavioral decision, Table 9 suggests all sub-samples of immigrants are positively and significantly influenced by the average trust of other immigrants, and that trust of other immigrants has a larger impact on the behavior decision in L-type regions than in H-type regions. Most of the estimated parameters are above unity, and all the social interactions terms (except for American immigrants) are higher in L-type regions than in H-type regions. Results in Table 10 have a similar interpretation.

Regarding the behavioral decisions of each sub-sample of immigrants, overall (whole sample), immigrants conform more to the average level of trust of all individuals in a region (Table 2) than to the average level of trust of other (similar) immigrants (Tables 9 and 10).

However, findings may vary by sub-sample. In comparing Table 3 and 9,[10] we see African immigrants are more likely to conform to the average level of trust than to the average level of immigrants, and this finding is true for both types of regions. By contrast, Northern Europeans (Tables 4, 9 and 10) conform similarly to the three levels of social interactions: All the social interactions terms are strong and significant in the three tables. This result provides further evidence of the tendency of immigrants coming from Northern European countries to easily integrate(Ljunge, 2014; Butler, Giuliano and Guiso, 2016). Findings in Tables 5, 9, and 10, suggest Southern European immigrants are likely to be influenced by both trust of immigrants and similar immigrants. However, a comparison of the three tables suggests that, once again, individuals coming from countries with lower average trustworthiness can easily adapt to lower levels of trust, but in regions where trust is high, they may experience more difficulty and end up conforming more to the behavior of other immigrants than to the behavior of the whole society (Ljunge, 2014). Furthermore, they seem to conform

[10]For the African sample, estimating the model in Table 10 has been impossible due to the lack of variability in the data.

Table 9: All Samples and Immigrants' Social Interactions

	Location Decision		Behavioral Decision (L-type regions)		Behavioral Decision (H-type regions)	
	(1)	(2)	(3)	(4)	(5)	(6)
Whole Sample						
dtr	0.90***	(0.019)	-0.51***	(0.020)	-0.30***	(0.014)
trustimmig	-0.47***	(0.015)	1.29***	(0.023)	0.70***	(0.015)
Africa						
dtr	2.04***	(0.109)	-0.16	(0.097)	-0.05**	(0.022)
trustimmig	-0.19***	(0.042)	0.97***	(0.059)	0.10***	(0.027)
Northern Europe						
dtr	1.60***	(0.049)	-0.78***	(0.082)	-0.48***	(0.55)
trustimmig	-0.63***	(0.028)	1.75***	(0.052)	1.66***	(0.053)
Southern Europe						
dtr	2.18***	(0.077)	0.06	(0.111)	-0.33***	(0.080)
trustimmig	-0.18***	(0.034)	1.61***	(0.075)	0.71***	(0.040)
Eastern Europe						
dtr	4.46***	(0.131)	-1.12***	(0.175)	0.26**	(0.111)
trustimmig	0.03	(0.055)	1.79***	(0.135)	0.72***	(0.037)
Asia						
dtr	0.45***	(0.025)	-0.49***	(0.039)	-0.27***	(0.025)
trustimmig	-0.67***	(0.033)	1.06***	(0.057)	0.41***	(0.043)
Americas						
dtr	4.37***	(0.085)	-0.07**	(0.029)	-0.07**	(0.029)
trustimmig	-1.07***	(0.040)	0.24***	(0.016)	0.29***	(0.020)
$\sigma = 1$; $\rho = 0.25$						

Notes: Estimation Method: Sequential Logit. Columns (1), (3), and (5) report the marginal effects at the mean for, respectively, immigrants' location decision, their behavioral decision in L-type regions, and their behavioral decision in H-type regions. Columns (2), (4), and (6) report the standard errors (in parentheses) for the respective choices. Standard errors are obtained using the delta method and are robust to heteroskedasticity. *** Significant at the 1% level, ** Significant at the 5% level, * Significant at the 10% level.

Source: General Social Survey and World Values Survey, years 1989-2014, and author's calculations.

more to the trust of other immigrants than to the trust of other similar immigrants. This may happen if the radius of trust is so small (Tabellini, 2008a) that also similar immigrants not belonging to the circle of family and friends are treated opportunistically. This result is also consistent with findings that show people of various ethnic backgrounds may trust other races

Table 10: All Samples and Similar Immigrants' Social Interactions

	Location Decision		Behavioral Decision (L-type regions)		Behavioral Decision (H-type regions)	
	(1)	(2)	(3)	(4)	(5)	(6)
Whole Sample						
dtr	0.91***	(0.019)	-0.21***	(0.020)	-0.09***	(0.012)
trustworld	-0.12***	(0.008)	1.13***	(0.017)	0.66***	(0.011)
Northern Europe						
dtr	1.53***	(0.049)	-1.10***	(0.092)	-0.33***	(0.057)
trustworld	-0.16***	(0.018)	1.67***	(0.040)	1.17***	(0.030)
Southern Europe						
dtr	2.24***	(0.076)	0.53***	(0.116)	0.06	(0.040)
trustworld	-0.11***	(0.021)	1.26***	(0.042)	0.50***	(0.031)
Eastern Europe						
dtr	4.73***	(0.131)	-1.40***	(0.144)	-1.85***	(0.223)
trustworld	-0.36***	(0.026)	1.51***	(0.065)	1.52***	(0.097)
Asia						
dtr	0.46***	(0.025)	-0.63***	(0.045)	-0.34***	(0.029)
trustworld	-0.23***	(0.017)	1.74***	(0.048)	1.35***	(0.040)
Americas						
dtr	4.12***	(0.084)	0.22***	(0.037)	-0.04*	(0.021)
trustworld	-0.21***	(0.030)	0.38***	(0.031)	0.33***	(0.021)
$\sigma = 1$; $\rho = 0.25$						

Notes: Estimation Method: Sequential Logit. Columns (1), (3), and (5) report the marginal effects at the mean for, respectively, immigrants' location decision, their behavioral decision in L-type regions, and their behavioral decision in H-type regions. Columns (2), (4), and (6) report the standard errors (in parentheses) for the respective choices. Standard errors are obtained using the delta method and are robust to heteroskedasticity. *** Significant at the 1% level, ** Significant at the 5% level, * Significant at the 10% level.

Source: General Social Survey and World Values Survey, years 1989-2014, and author's calculations.

and ethnicities less (including their own), especially in more diverse neighborhoods (Putnam, 2007; Kumlin and Rothstein, 2010). Also, although the difference in trustworthiness does not significantly explain trust of immigrants in L-type regions in Table 9 and in H-type regions in Table 10, it still has a negative impact on the trust of Southern Europeans in H-type regions. By contrast, it has a positive and significant impact on trust of immigrants in L-type regions in Table 10.

The results for the three tables (6, 9 and 10) are qualitatively similar for Eastern European immigrants sorting into L-type regions, yet the results are slightly different for immigrants in H-type regions: The difference in trustworthiness has a positive impact in Table 9, indicating Eastern European immigrants coming from countries with comparatively lower average trustworthiness are more likely to trust others. Also, they are influenced by the average level of other immigrants in a region, but not as much as they are influenced by the average level of trust of other individuals (Table 6) or other similar immigrants (Table 10) in a region. This finding is consistent with the literature (Putnam, 2007; Kumlin and Rothstein, 2010).

Results for Asian immigrants are interesting. Indeed, the difference in trustworthiness indicates, in Tables 7, 9, and 10, that Asians coming from countries with comparatively lower average trustworthiness are less likely to trust others. The social interactions terms indicate Asian immigrants in L-type regions are less likely to conform to the behavior of other immigrants (Table 9) than to the behavior of either all the individuals living in a region (Table 7) or to other Asian immigrants (Table 10). In addition, although they were negatively influenced by the average level of trust of other individuals in H-type regions, the influence of trust of other similar immigrants is positive and significant. In fact, a comparison of Tables 9 and 10 show they are more likely to conform to the behavior of other Asian immigrants than to the behavior of other immigrants. This result shows a tendency toward cultural segregation and is confirmed by the literature (see Cutler, Glaeser and Vigdor, 2008) as well as by the US reality, given the presence of such neighborhoods as "Chinatown".

Finally, Tables 8, 9, and 10 report the results for Americans. Americans coming from countries with comparatively lower average trustworthiness are less likely to trust others when the reference network includes other immigrants (Table 9) and for H-type regions in Table 10. This term has a positive impact on the trust of immigrants in L-type regions in Table 10. The social interactions terms are significant and positive, but not very

large, indicating American immigrants are not very influenced by other (similar) immigrants in their decisions to trust others. Instead, they are more influenced by the average level of trust of other individuals in a region when looking at immigrants in L-type regions.

In summary, the results are in line with findings that groups of immigrants who more differ culturally and racially from natives are more likely to experience segregation (Cutler, Glaeser and Vigdor, 2008).

5.2 Sample Representativeness

I now perform robustness checks. The first check (reported in Table 11) concerns the structure of the GSS data. One could argue that the GSS

Table 11: Robustness Checks (Whole Sample)-Representativeness

	Location Decision		Behavioral Decision (L-type regions)		Behavioral Decision (H-type regions)	
	(1)	(2)	(3)	(4)	(5)	(6)
(2004-2014)						
dtr	0.02	(0.031)	-0.68***	(0.028)	-0.44***	(0.016)
trustavg	7.98***	(0.098)	2.65***	(0.111)	1.05***	(0.031)
(2004-2014)						
dtr	1.01***	(0.027)	-0.32***	(0.018)	-0.44***	(0.019)
trustimmig	-0.39***	(0.026)	0.81***	(0.034)	0.77***	(0.028)
(2006-2014)						
dtr	1.04***	(0.029)	-0.36***	(0.018)	-0.44***	(0.020)
trustimmig	-0.41***	(0.029)	0.87***	(0.035)	0.77***	(0.031)
$\sigma = 1$; $\rho = 0.25$						

Notes: Estimation Method: Sequential Logit. Columns (1), (3), and (5) report the marginal effects at the mean for, respectively, immigrants' location decision, their behavioral decision in L-type regions, and their behavioral decision in H-type regions. Columns (2), (4), and (6) report the standard errors (in parentheses) for the respective choices. Standard errors are obtained using the delta method and are robust to heteroskedasticity. *** Significant at the 1% level, ** Significant at the 5% level, * Significant at the 10% level.

Source: General Social Survey and World Values Survey, years 2002-2014, and author's calculations.

data set has become representative of the US population since 2006, when

Spanish speakers also started to be interviewed and included in the sample. This drawback could put into question the results obtained in the analysis. For this reason, I run the same analysis on the sample from 2006 to 2014 to check whether the social interactions terms maintain their significance. Unfortunately, the reduced variability of the data does not allow me to obtain results for the regressions in which immigrants are influenced by the average trust of other individuals living in their region (first definition of the social interactions term). The regression using this definition is feasible only when we include the years from 2004 onward and drop the dummy for Jews. Thus, we repeat the empirical analysis in Table 2 on the reduced sample (2004-2014). The regression on the representative sample (2006-2014), however, can be run when the social interactions term is the average trust of immigrants. Hence, we report the results for both reduced samples (2004-2014 and 2006-2014) using this definition. They show the social interactions terms are still strongly significant, so we may conclude that as far as the significance of the social interactions terms is concerned, the whole sample is not significantly different from the *representative sample*. The significance and the importance of the social interactions terms are maintained, so we can conclude the survey composition did not qualitatively alter the results.

5.3 Sensitivity Analysis

Finally, I perform a sensitivity analysis (Table 12). The models estimated so far assume a positive and intermediate level (0.25) of correlation (ρ) between unobserved heterogeneity and the social interactions term and unobserved heterogeneity has standard deviation (σ) equal to 1. To check whether the estimation results are biased due to the presence of unobserved heterogeneity, we perform a sensitivity analysis. Indeed, the presence of unobservables may give rise to two phenomena, namely, the averaging mechanism and the selection mechanism, arising from the necessity to model a stylized discrete

model.[11] I hence estimate the models using different degrees of correlation between unobservables and the regressors (Buis, 2011), as well as assuming different standard deviations for the variable correlated with the social interactions term. If the estimation results were sensitive, the presence of unobserved heterogeneity would be a problem and would alter the results, and in this case, the sensitivity analysis could be useful for understanding the source of the problem. If the results were not sensitive to changing the scenarios, we could conclude the presence of unobserved heterogeneity is not a problem, as indicated by previous studies (e.g., Cameron and Heckman, 1998), for our framework.

Thus, assuming that the unobserved heterogeneity would represent, for example, the transmission of cultural values from parents to children and the individual willingness to pay for public goods, estimating the model with 0.2 and 0.3 implies we are considering both individuals and societies with low and high willingness to pay for public goods. Then the model is re-estimated assuming alternative scenarios presented in Table 12. The results are not qualitatively sensitive to changing scenarios, so we can conclude the presence of unobserved heterogeneity is not a problem for the analysis. At this point, note that although by performing a sensitivity analysis, findings suggest changing assumptions about unobserved heterogeneity does not alter the results, the cross-sectional empirical framework analyzed here is somehow still subject to the critique by Cameron and Heckman (1998), according to which single decisions made at a certain point (e.g., the location decision and the behavioral decision) are the outcome of previous

[11]The averaging mechanism refers to the fact that estimating a model without modeling the presence of unobserved heterogeneity is problematic because in a non-linear model, the impact of the regressors on the averaged probability differ from their impact on the probability (Cameron and Heckman, 1998; Allison, 1999). The selection mechanism, instead, refers to the possibility that a variable that is not problematic in the first transition can become a confounding variable from the second transition due to the self-selection process (Mare, 1980; Cameron and Heckman, 1998), because the decision modeled is the final outcome of a dynamic process influenced by factors that could enter the results but are omitted from the empirical model.

Table 12: Sensitivity Analysis: Whole Sample and Global Social Interactions

	Location Decision		Behavioral Decision (L-type regions)		Behavioral Decision (H-type regions)	
	(1)	(2)	(3)	(4)	(5)	(6)
$\sigma = 0.5$	$\rho = 0.25$					
dtr	0.14***	(0.019)	-0.78***	(0.022)	-0.40***	(0.014)
trustavg	6.07***	(0.055)	2.32***	(0.062)	1.29***	(0.036)
$\sigma = 0$	$\rho = 0.25$					
dtr	0.13***	(0.018)	-0.73***	(0.020)	-0.42***	(0.014)
trustavg	6.25***	(0.054)	2.31***	(0.058)	1.53***	(0.038)
$\sigma = 1$	$\rho = 0.20$					
dtr	0.15***	(0.021)	-0.92***	(0.026)	-0.32***	(0.012)
trustavg	6.50***	(0.059)	3.10***	(0.073)	1.17***	(0.028)
$\sigma = 1$	$\rho = 0.30$					
dtr	0.15***	(0.021)	-0.91***	(0.026)	-0.33***	(0.012)
trustavg	6.12***	(0.059)	2.73***	(0.072)	1.02***	(0.029)

Notes: Estimation Method: Sequential Logit. Columns (1), (3), and (5) report the marginal effects at the mean for, respectively, immigrants' location decision, their behavioral decision in L-type regions, and their behavioral decision in H-type regions. Columns (2), (4), and (6) report the standard errors (in parentheses) for the respective choices. Standard errors are obtained using the delta method and are robust to heteroskedasticity. *** Significant at the 1% level, ** Significant at the 5% level, * Significant at the 10% level.

Source: General Social Survey and World Values Survey, years 1989-2014, and author's calculations.

experience. Thus, although controlling for unobserved heterogeneity may take this into account, in this paper, identifying either all the historical reasons that drive immigrants' decisions (e.g. the influences of family ties and networks in their home country), or checking whether their behavioral decision is different from the behavior they used to have in their own country is impossible. This is beyond the scope of the present work, but it could be investigated using a panel of immigrants.

6 Conclusions

Understanding heterogeneities in the behavior of different immigrants is crucial in countries such as the United States, where immigrants are often concentrated in some residential areas (e.g., "Chinatown" and "Little Italy"), because residencial segregation of some ethnic groups can amplify the presence and resilience of social segregation (e.g., conformity to the behavior of similar immigrants and segregation with respect to the entire population).

Using a sample of immigrants living in the Unites States, I estimate a social interactions model of peer effects that models both sorting of immigrants in US regions and their decisions to trust others. In so doing, I propose a framework to identify the social interactions in discrete choice models that can be used to address other questions. After controlling for the presence of significant self-selection in the sorting of immigrants, I study the importance of different types of networks on the behavior of immigrants. In addition, by repeating the analysis by sub-sample of immigrants, I investigate the presence of heterogeneities in behavior of different groups of immigrants. Finally, the paper proposes a new strategy to assess the importance of both inherited and contemporaneous culture to explain individual decisions.

The findings support the presence of significant sorting of immigrants that should be taken into account and modeled to address selection bias. Also, both the historical and the contemporaneous component of culture have a large influence on immigrants. Furthermore, although *overall* cultural assimilation of immigrants exists, the results vary by sub-sample of immigrants, and sometimes they differ between the immigrants sorting into H-type and L-type regions. In particular, I find that immigrants coming from countries with lower levels of trustworthiness are more likely to trust other immigrants than to conform to the average trust of an entire region (i.e., segregation). By contrast, immigrants coming from countries with

higher levels of trustworthiness (e.g., Northern Europeans) are more willing to integrate.

Finally, the use of an observational learning model makes the model appealing because it can be used for policy simulations and analysis. Indeed, the paper provides an empirical framework that integrates economics and sociology to explain and modify, through policy implementation, individual behavior, which has to be encouraged (Brock and Durlauf, 2006). Group-specific policies and government "price" policies (e.g., subsidies or other instruments selectively assigned to one group; Moffitt, 2001) aimed at changing expectations or fundamentals of subsets of immigrants (via interventions on m_{ig}, components of X_i and/or Y_{ig}) may help a society prevent segregation, favor integration of immigrants, and avoid social traps. This is important because the results, which are robust to additional checks and to a sensitivity analysis, suggest different policies should be implemented, for instance, to promote integration as well as a higher trust behavior of different ethnic groups. Involving immigrants in social and civic activities, increasing their average education, and incentivizing residentially mixed groups are some examples of possible policies.

A Appendix I

Table A1 reports the list of variables, definitions, and sources.

Table A1: List of Variables, Definitions, and Source

Variables	Definition	Source
age	age of respondent (r henceforth)	GSS
age2	age of r squared	GSS
female	dummy variable taking value 1 if r is female, 0 otherwise	GSS
edu<12	dummy variable taking value 1 if r has less than 12	GSS
	years of schooling, 0 otherwise	GSS
edu>16	dummy variable taking value 1 if r has more than 16	GSS
	years of schooling, 0 otherwise	GSS
educavg	yearly regional average years of education	GSS
married	dummy variable taking value 1 if r is married, 0	GSS
	otherwise	
single	dummy variable taking value 1 if r is single, 0	GSS
	otherwise	
ft	dummy variable taking value 1 if r works full-time,	GSS
	0 otherwise	
pt	dummy variable taking value 1 if r works part-time,	GSS
	0 otherwise	
Black/	dummy variable taking value 1 if r is Black or	GSS
Afro-A.	Afro-American, 0 otherwise	
Other race	dummy variable taking value 1 if r's is other than	GSS
	Afro-A. or White, 0 otherwise	GSS
Protestant	dummy variable taking value 1 if r is Protestant, 0	GSS
	otherwise	
Catholic	dummy variable taking value 1 if r is Catholic, 0	GSS
	otherwise	
Jews	dummy variable taking value 1 if r is Jew, 0 otherwise	GSS
Other religion	dummy variable taking value 1 if r's religion	GSS
	is other than Protestantism Catholicism or Judaism,	
	0 otherwise	
2000	dummy variable taking value 1 for years 2000-2014,	GSS
	0 otherwise	
dtr	difference in trustworthiness between host region	GSS,
	and home country computed using the yearly average	WVS
	trust on both the host region and home country	
trustavg	yearly average trust of all the r living in a region	
trustimmig	yearly average trust of r immigrants living in a region	GSS
trustworld	yearly average trust of r immigrants living in a region	GSS
	coming from the same geographic area of the world	

Table A2 reports the estimation results on the whole sample using actual data.

Table A2: Actual Data and Global Social Interactions

	Location Decision		Behavioral Decision (L-type regions)		Behavioral Decision (H-type regions)	
	(1)	(2)	(3)	(4)	(5)	(6)
age	-0.00	(0.007)	0.00	(0.009)	0.00	(0.005)
age2	-0.00	(0.000)	0.00	(0.000)	-0.00	(0.000)
female	-0.10***	(0.039)	-0.06	(0.049)	-0.03	(0.030)
edu<12	0.15***	(0.044)	-0.20***	(0.067)	-0.07*	(0.037)
edu>16	-0.11**	(0.053)	0.22***	(0.055)	0.15***	(0.038)
educavg	0.11**	(0.049)	-0.05	(0.058)	-0.03	(0.037)
married	-0.01	(0.047)	0.04	(0.060)	0.05	(0.036)
single	-0.06	(0.065)	0.01	(0.083)	0.01	(0.053)
ft	-0.07	(0.047)	0.06	(0.061)	0.02	(0.036)
pt	0.01	(0.065)	0.02	(0.085)	0.13***	(0.045)
Black	-0.36***	(0.084)	-0.07	(0.090)	0.01	(0.072)
other race	0.05	(0.040)	-0.09	(0.054)	-0.01	(0.030)
Protestant	-0.04	(0.061)	-0.08	(0.077)	-0.00	(0.043)
Catholic	-0.06	(0.058)	-0.13*	(0.078)	-0.09**	(0.042)
Jews	-0.43***	(0.160)	-0.12	(0.138)	-0.11	(0.109)
other religion	-0.16**	(0.073)	-0.09	(0.088)	0.03	(0.051)
2000	0.16***	(0.042)	-0.02	(0.059)	0.02	(0.031)
difftrust	0.25	(0.156)	-0.55***	(0.202)	-0.22**	(0.101)
trustavg	4.08***	(0.388)	1.26***	(0.447)	0.61**	(0.272)
$\sigma = 1$; $\rho = 0.25$						
observations			1,460			
log-pseudolikelihood			-1,551.81			

Notes: Estimation Method: Sequential Logit. Columns (1), (3), and (5) report the marginal effects at the mean for, respectively, immigrants' location decision, their behavioral decision in L-type regions, and their behavioral decision in H-type regions. Columns (2), (4), and (6) report the standard errors (in parentheses) for the respective choices. Standard errors are obtained using the delta method and are robust to heteroskedasticity. *** Significant at the 1% level, ** Significant at the 5% level, * Significant at the 10% level.

Source: General Social Survey and World Values Survey, years 1989-2014.

In Table A3, I report the estimation results on the whole sample using actual data and control further for the presence of endogenous sorting of immigrants into regions. Tables 9 and 10 already showed, by allowing correlation between unobserved heterogeneity and the average level of trust of immigrants, that the possible endogeneity of sorting of immigrants (coming from the same area of origin of the immigrant making the decision) does not affect, from an econometric point of view, the results. In this table, I show that allowing for a further stage where individuals decide whether to migrate, does not alter the results, thus controlling for the further possible presence of endogeneity. Thus, individuals first decide whether to migrate, and then immigrants decide where they want to migrate (in an L-type or H-type region of the United States), and finally they decide whether to trust others. So, the framework is identical to the one described in the methodological section, with the addition of a further initial stage. These two approaches offer different ways to control for the endogeneity of immigrants' decisions.[12] The results are reported in the following table and can be interpreted similarly to the other tables of the paper. Note that the results do not qualitatively change: The social interactions term is still high and significant.

[12]I did not use this framework design in the main analysis, because the data are cross-sectional and not panel data, and these three stage choices could be considered as being constructed "ad hoc". An analysis using dynamic panel data could eventually be conducted using the econometric specification used in this table.

Table A3: Actual Data and Global Social Interactions with endogeneous sorting

	Migration Decision		Location Decision (Migration Decision)		Behavioral Decision (L-type regions)		Behavioral Decision (H-type regions)	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
age	0.00	(0.000)	0.00	(0.006)	0.00	(0.008)	0.00	(0.004)
age2	-0.00	(0.000)	-0.00	(0.000)	0.00	(0.000)	-0.00	(0.000)
female	0.00	(0.002)	-0.09***	(0.033)	-0.05	(0.042)	-0.02	(0.021)
edu<12	0.02***	(0.002)	0.14***	(0.037)	-0.16***	(0.061)	-0.04	(0.027)
edu>16	0.01***	(0.002)	-0.08*	(0.046)	0.20***	(0.048)	0.11***	(0.028)
educavg			0.09**	(0.042)	-0.05	(0.051)	-0.02	(0.027)
married	0.01***	(0.002)	-0.00	(0.040)	0.04	(0.052)	0.04	(0.026)
single	-0.01***	(0.003)	-0.06	(0.054)	0.00	(0.072)	0.00	(0.038)
ft	0.00	(0.002)	-0.06	(0.040)	0.06	(0.052)	0.01	(0.026)
pt	-0.00	(0.003)	0.01	(0.055)	0.02	(0.074)	0.09***	(0.033)
Black	0.00	(0.003)	-0.31***	(0.070)	-0.06	(0.077)	0.01	(0.052)
other race	0.07***	(0.003)	0.11***	(0.033)	-0.02	(0.047)	0.03	(0.021)
Protestant	-0.02***	(0.003)	-0.04	(0.052)	-0.07	(0.066)	-0.01	(0.030)
Catholic	0.01***	(0.003)	-0.04	(0.049)	-0.11	(0.067)	-0.06*	(0.030)
Jews	0.02***	(0.006)	-0.35***	(0.135)	-0.09	(0.120)	-0.06	(0.077)
other religion	0.02***	(0.004)	-0.12*	(0.062)	-0.06	(0.076)	0.03	(0.036)
2000	0.01***	(0.002)	0.14***	(0.038)	-0.01	(0.051)	0.02	(0.022)
difftrust			0.22*	(0.128)	-0.47**	(0.192)	-0.15*	(0.079)
trustavg			3.56***	(0.403)	1.12***	(0.414)	0.46**	(0.205)
$\sigma = 1$; $\rho = 0.25$								
observations				24,095				
log-pseudolikelihood				-6,182.20				

Notes: Estimation Method: Sequential Logit. Columns (1), (3), (5), and (7) report the marginal effects at the mean for, respectively, immigrants' migration and location decision, their behavioral decision in L-type regions, and their behavioral decision in H-type regions. Columns (2), (4), (6), and (8) report the standard errors (in parentheses) for the respective choices. Standard errors are obtained using the delta method and are robust to heteroskedasticity. *** Significant at the 1% level, ** Significant at the 5% level, * Significant at the 10% level.

Source: General Social Survey and World Values Survey, years 1989-2014.

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