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Perception of immigrants in Latin America

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Abstract

What factors are linked to holding a positive perception of immigrants in Latin America? This paper studies the presence of an empathy effect by which individuals who are themselves willing to migrate hold a more positive perception of immigrants relative to those who are not willing to migrate. Using a recent representative survey, this study finds that there is only weak evidence in favour of that effect. There is evidence, however, of a conditional empathy effect among high-trust individuals. This study also finds that individuals who (1) trust others, (2) have a positive outlook of the economic conditions of the country and the family, (3) support democracy, (4) see income distribution as fair, (5) have experience travelling abroad, and (6) are less worried about violence, tend to perceive immigrants more favourably.

Keywords: *Beliefs; Immigrants; Willingness to migrate; Latin America; Trust*

Introduction

According to the 2018 Latinobarometro survey, Paraguay and Uruguay are the countries where, on average, immigrants are seen most positively – 63 and 44% of the population, respectively, see immigrants favourably. The opposite is true for Colombia and Ecuador, where only 11 and 14% of the population, respectively, see immigrants favourably. On the other hand, the percentage of the population voicing willingness to migrate is highest in Dominican Republic (53%) and Venezuela (52%). Chile and Guatemala are on the other extreme with only 14% and 17% of the population voicing an intention to migrate, respectively.

The goal of this research note is to explore the determinants of the perception of immigrants in Latin America. In particular, this note investigates if such perception is linked to willingness to migrate. One would think that those who are themselves willing to migrate see immigrants more positively – this thesis is called here the "empathy effect."

The results of this study show only weak evidence for the empathy effect but are able to identify a set of factors associated with people holding more positive beliefs about immigrants in Latin America. In order of magnitude, they are: (1) trust, (2) perception of the economic conditions of the country and the family, (3) political ideology – in the form of support for democracy, (4) economic ideology – in the form of views on income distribution, (5) experience travelling abroad, and (6) being worried about violence. We find that the empathy effect holds only among high-trust individuals.

The results on the association of trust and the perception of immigrants are robust to different specifications and statistical tests and complement those of Sides and Citrin (2007), Herreros

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and Criado (2009), Halapuu et al., (2014), and Boateng et. al., (2021), who found that trust is directly associated with more positive views of immigrants in European countries.

The findings on the effect of income distribution, support for democracy, and experience travelling abroad are, to the best of our knowledge, novel. Individuals who see income distribution as fair, support democracy, and have experience travelling abroad, see immigrants more positively. These results are also robust in a set of hierarchical logit models and OLS estimations.[3]

Literature review: Beliefs about immigrants

The perception of immigrants is determined by multiple social, political and economic factors, and its understanding requires a multidisciplinary approach. Rustenbach (2010) provides a summary of the most important of these factors (Halapuu, 2014): (1) societal integration, (2) contact theory, (3) cultural marginality, (4) labour market competition, and (5) human capital.

Social integration relates to interpersonal trust, which affects attitudes towards immigrants. Higher trust is positively correlated with more positive attitudes towards immigrants. It also includes social intelligence, as a mechanism that might lead to empathy towards immigrants (Halapuu, 2014; Sides and Citrin, 2007). Our main results, which stress trust's importance, provide further support for this explanation. *Contact theory* suggests that knowing immigrants makes people less afraid of them (Ward and Masgoret, 2006). This implies that having immigrant friends tends to produce less anti-immigrant attitudes (Sides and Citrin, 2007). Indeed, contact with members of minorities can reduce will to expel immigrants; it also helps reduce the perceived threat in contexts of high immigration (McLaren, 2003). As a corollary, decreased contact with immigrants predicts less favourable perception toward them (Leong, 2008).[4] *Cultural marginality* is the thesis that holds that individuals who feel more discriminated against will favour immigrants more favourably (Halapuu et al., 2014). *Labour market competition* emphasizes how immigrants affect the material interests of local people (Sides and Citrin, 2007; Halapuu et al., 2014). Earlier literature stressed that fears of labour market competition among low-skilled and blue-collar workers were "at the heart of much anti-immigrant feeling" (Hainmueller and Hiscox, 2007: 400; Espenshade and Hempstead, 1996). More recent literature found that the effects of immigration on the labour market were small (Hainmueller and Hiscox, 2007). Finally, *human capital* focuses on education. In this regard, it has been found that the less educated a person is the more negative his or her views about immigrants are (Ervasti, 2004). As a corollary, more education is correlated with more positive views about immigrants (Sides and Citrin, 2007; Espenshade and Hempstead, 1996; Hainmueller and Hiscox, 2010; Halapuu et al., 2014). Moreover, the link between education, skills and income, and the perception of immigrants, is contingent on the countries' GDP and the relative skill composition between natives and immigrants (Facchini and Mayda, 2009).[5]

[3] The finding on the association between perceptions of the economic situation of the country and the perception of immigrants is also compatible with existing studies (Espenshade and Hempstead, 1996; Boateng et al., 2021).

[4] Duflo and Benerjee (2019) suggest that the nature or type of contac with immigrants matters.

[5] There are some other determinants of the perception of immigrants that don't clearly fit within these five factors. In particular, immigrants from different origins may not be perceived equally. In the U.S., for example, Mexican immigrants are seen more as a threat to economic resources, and Arab immigrants more as a threat to culture (Hitlan et al., 2007). Regarding the geographic location of natives, individuals living in rural areas tend to oppose immigrants to a larger extent than those in urban areas

Hypothesis

The empathy effect is tested in the context of 18 Latin American countries. These countries receive immigrants from other countries in the region but are also an important source of immigrants to the US and Europe. While only weak evidence for the empathy effect is found in the entire sample, there is strong evidence for a *conditional empathy effect*. If only high-trust individuals are considered, those who voice willingness to migrate do see immigrants more positively.

Data and methodology

Data is derived from the most recent Latinobarometro survey (2018), which includes 20,200 face-to-face interviews in 18 countries in Latin America. The survey represents around 600 million people. The survey includes questions about economic, political, and social issues, and questions about demographic characteristics. For the purposes of this study, the two key questions in the survey are:

1. *View.of.immigants*. "p42nc. From the point of view of you and your family, are immigrants beneficial to your country?" (*yes* = 0.277, *sd* = 0.45, *n* = 17,621).
2. *Migrate*. "s7. Have you and your family thought about the concrete possibility of moving to another country?" (*yes* = 0.28, *sd* = 0.45, *n* = 20,108).

View.of.immigants is the dependent variable and *Migrate* the main independent variable. Due to the binary nature of the dependent variable this study applies logistic regression models using a rich set of control variables.[6] OLS regressions are also performed to assess the robustness of the results. Finally, different statistical procedures to deal with selection bias and to assess the magnitude of hidden bias are also performed.

View of Immigrants in Latin America

This study considers six logit models. The main interest is in the coefficient of the independent variable *Migrate* – willingness to migrate. The regression results are presented hierarchically in Table 1. Model 1 controls for *Trust*. Model 2 adds demographic variables (*Male*, *Age*, *Agesq*, *Indigenous*, *Catholic*, *Married*, and *Education*). Model 3 adds economic variables (*Unemployed*, *Salary*, *Future*, *Econ.perceptions*, and *Income.distribution*).[7] Model 4 adds political ideology variables (*Left.right* and *Democracy*). Model 5 adds *Life.satisfaction* and *Worried.violence*. Finally, *Travel* and

(Espenshade and Hempstead, 1996; Halapuu et al., 2014). Besides, individuals who think the economy is improving, and those who favor trade, have more positive views of immigrants (ibid). This is also true for those who are more satisfied with their lives (Ervasti, 2004; Espenshade and Hempstead, 1996). There are also biased beliefs about immigration and immigrants. For instance, Grigorieff, Roth, and Ubfal (2017) argue that "accurate information about numbers of immigrants changes opinions on whether there are too many immigrants, but not on policy towards them." Indeed, sometimes, attitudes about immigrants are usually buttressed on inaccurate beliefs. For example, the level of immigrants in a country is typically hyped (Sides and Citrin, 2007; Benerjee and Duflo, 2019). In addition, some studies highlight humanitarianism and egalitarianism (Pantoja, 2006), locals' authoritarian personality (Ervasti, 2004), national identity (Hitlan et al., 2007), sense of alienation (Espenshade and Hempstead, 1996), and naturalization and length of residency (Sides and Cintrin, 2007). Attitudes towards immigrant can also change because of certain events, such as 9/11 (Brettell, 2006).

[6] The complete set of variables used in the regressions is listed in the Appendix.

[7] Econ.Perceptions is the average of four variables that ask about perceptions regarding the economic situation of the country and the respondent's family. These questions are: Country.economy (P6STGBSC), Country.economy.2 (P7STGBSC), Future (P8STIC), and Future.2 (P9STGBSC). These four variables were coded in a worst-to-best scale. See the Appendix for the specific questions and descriptive statistics.

National.bias are added in Model 6. The appendix presents survey questions, possible responses, and descriptive statistics for all these variables.

The results indicate only a weak correlation between *Migrate* and *View.of.immigrants*. In Model 6, the most comprehensive, individuals who are willing to migrate are 2% more likely to see immigrants more positively. Moreover, this variable is significant only at the 10 % level. Therefore, it cannot be claimed with high confidence that those who are willing to migrate hold a more positive view of immigrants relative to those who are not willing to migrate. On the other hand, six other covariates are found to be highly significant (at the 1% level) and positively associated with *View.of.immigrants*. They are:

1. *Trust*. Individuals who trust others are 8.9% more likely to see immigrants positively relative to those who do not trust others. This result confirms those of previous literature (Sides and Citrin, 2007; Herreros and Criado, 2009).
2. *Econ.Perceptions*. Positive perceptions about the economy are associated with a positive perception of immigrants. For reference, an increase of one unit in *Econ.Perceptions* increases the probability of seen immigrants more positively by 3.2%.
3. *Democracy*. Supporting democracy is correlated with favoring immigrants. Positioning in the next answer category (in a scale that ranges from 1 to 4), increases the probability of favoring immigrants by 2.2%.
4. *Income.distribution*. Believing that income distribution is fair is associated with supporting immigrants. The effect of moving to the next category in the answer scale is 2.1%.[8]
5. *Travel*. Having traveled abroad, or having done it more often, is correlated with supporting immigrants. The result of moving to the next category in the answer scale is 2%.
6. *Worrried.violence*. Being worried about crime is associated with seeing immigrants more negatively. The outcome of moving to the next category in the answer scale is 2%.[9]

To the best of our knowledge, findings 3, 4, and 5 are novel. An OLS estimation in the last column of Table 1 shows similar results.

Figure 1 shows the odds ratios that correspond to the country control dummies in Model 6 in Table 1. Note that the odds of seen immigrants positively in Paraguay is 8 times the same odds in Peru (the reference country). In fact, immigrants are seen more positively than in Peru in most countries with the exception of El Salvador, Ecuador, Honduras, and Colombia.

Overt bias

Table 1 shows that there is only weak evidence for the empathy effect. However, there is strong evidence indicating that *Trust* is highly correlated with *View.of.immigrants*. This result is further explored below.

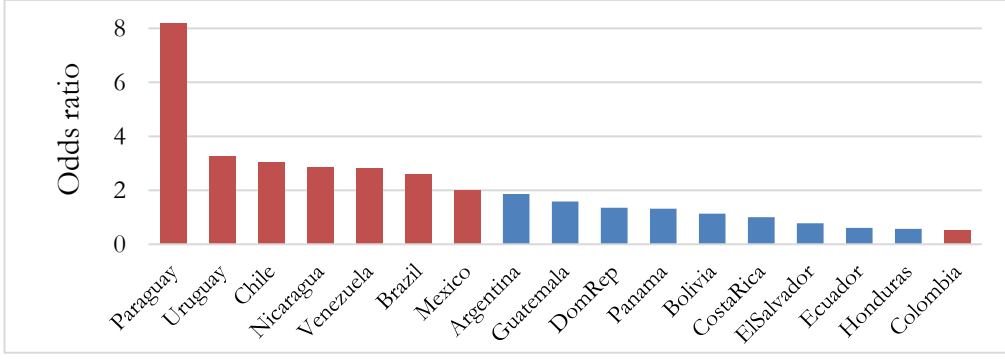
[8] Individuals who see income distribution as fair might not fear the possible negative effects of immigrants in the labor market.
[9] The numerical results assume that all other variables are kept at mean (sample) values.

Table 1. Predicting probability of View.of.immigrants

	Marginal effects						
	Dependent Variable: *View.of.immigrants*						
	Logistic						*OLS*
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Constant							0.046
Migrate	0.030***	0.015	0.024**	0.024**	0.026**	0.020*	0.018*
Trust	0.107***	0.100***	0.098***	0.096***	0.089***	0.089***	0.083***
Male		0.018**	0.010	0.006	0.005	0.002	0.002
Age		-0.004***	-0.002	-0.003**	-0.003**	-0.003**	-0.003*
Agesq		0.00003**	0.00002	0.00003*	0.00003*	0.00003*	0.00003
Indigenous		0.002	-0.003	0.004	0.003	0.003	0.003
Catholic		-0.026***	-0.022**	-0.022**	-0.019**	-0.018*	-0.017*
Married		-0.007	-0.002	-0.0002	0.0003	0.002	0.002
Education		0.004***	0.003***	0.003**	0.003***	0.003**	0.002*
Unemployment			-0.036**	-0.034**	-0.032*	-0.029*	-0.027*
Salary			0.009*	0.007	0.005	0.003	0.003
Econ.perceptions			0.043***	0.037***	0.032***	0.032***	0.030***
Income.distribution			0.026***	0.022***	0.021***	0.021***	0.020***
Leftright				-0.001	-0.0005	-0.001	-0.001
Democracy				0.022***	0.022***	0.022***	0.020***
Life.satisfaction					0.011**	0.012**	0.011**
Worried.violence					-0.017***	-0.017***	-0.016***
Travel						0.020***	0.019***
National.bias						-0.015	-0.014
Country controls	yes	yes	yes	yes	yes	yes	yes
n	17140	13886	12237	10410	10356	10224	10224
McFadden pseudo-R-squared	0.071	0.076	0.088	0.086	0.088	0.088	
Adjusted R^2							0.109

Note: *p<0.1; **p<0.05; ***P<0.01
Standard errors are not reported.

Figure 1. Odds ratios of View of Immigrants, by country (reference: Peru)



Source: Latinobarometro, 2018
Notes: Plotted values correspond to odd ratios of country dummies from Model 6 in Table 1. The odds ratios that correspond to the country variables in red bars are significantly different than the odds ratio that corresponds to Peru (the reference country) - p<0.01.

Two limitations of the analysis in Table 1 are selection bias and hidden bias. Selection bias means that *Trust* is not randomly assigned. Observed confounders can have an influence on it. Hidden bias means that a third, unobserved, variable (or group of variables) can be simultaneously affecting *Trust* and *View.of.immigrants*. If that is happening, then one cannot claim a causal effect of *Trust* over *View.of.immigrants*. Additional tests are performed to address selection bias and to assess the magnitude of hidden bias.

A. Propensity Score Matching

This method starts by estimating a logit model where the dependent variable is *Trust*, and the independent variables are the same confounders used in Table 1. The fitted values are used to predict *Trust*. In other words, the model estimates a predicted probability to trust (the propensity scores). Next, a series of algorithms are used to match observations that have similar propensity scores between high trust and low trust individuals. Observations that do not find a match are dropped out of the analysis. This means that one ends up with two groups – high trust and low trust, but now each observation in one group has a match in the other group – they are similar with respect to confounders. This approximates an experiment in which *Trust* is randomly assigned among comparable individuals. Thus, this method, formally known as Propensity Score Matching (PSM), reduces selection bias. One can then calculate the ATT (average treatment effect on the treated) to examine the effect of *Trust* on *View.of.immigrants* and *Migrate*.

Table 2 present the results. They confirm our findings in Table 1. There is only weak evidence for the link between *Migrate* and *View.of.immigrants*. However, there is strong evidence for the link between *Trust* and *View.of.immigrants*. High-trust individuals have a more positive view of immigrants. *Trust* is statistically significant using four different matching algorithms. Averaging ATTs, high trust individuals, relative to low trust individuals, have a 10.4% higher probability to see immigrants as beneficial for the country.[10]

Table 2. Propensity score matching

		Migrate		*Trust*	
Outcome	Matching algorithm	ATT	standard error	ATT	standard error
View of immigrants	Nearest without replacement	0.015	0.061	0.106***	0.086
	Nearest with replacement	0.024*	0.068	0.099***	0.089
	Nearest with replacement, ratio 2	0.016	0.059	0.095***	0.076
	Nearest with replacement, caliper 0.25	0.009	0.066	0.116***	0.088

Note: *p<0.1; **p<0.05; ***p<0.01

B. Genetic matching

Genetic matching is also used to examine the link between *Trust* and *View.of.immigrants*. Genetic matching is not a propensity-score method (Keller and Tipton, 2016). As seen before, PSM matches observations based on one number – the propensity score. In contrast, genetic matching uses all the covariates and finds an optimal match based on a genetic, iterative, algorithm (Diamond and Sekhon, 2013). The algorithm allows for optimal balance after

[10] The results are produced using the R MatchIt package (https://cran.r-project.org/web/packages/MatchIt/MatchIt.pdf).

matching.[11] The results of genetic matching are similar to those of PSM – and reiterate the initial results in Table 1. High-trust individuals tend to have a 10.5% higher probability to view immigrants more positively (Table 3). In addition, *Migrate* is not significantly related to *View.of.immigrants*.

Table 3. Genetic matching

		Migrate		*Trust*	
Outcome	Matching algorithm	ATT	Standard error	ATT	Standard error
View of immigrants	Genetic with replacement	0.005	0.067	0.105***	0.106

Note: *p<0.1; **p<0.05; ***p<0.01

The Appendix presents a sensitivity analysis to address the magnitude of hidden bias.

The empathy effect reconsidered

The initial hypothesis posited that *Migrate* and *View.of.immigrants* were correlated leading to an empathy effect. As the logit and matching results indicate, however, the link between these variables is statistically weak. Nonetheless, this study finds evidence of a *conditional empathy effect*: *Migrate* and *View.of.immigrants* are significantly correlated among high-trust individuals. Table 4 shows logit results indicating that, when considering only high-trust individuals, those who are themselves willing to migrate do see immigrants much more positively than those who are not willing to migrate. More specifically, high-trust individuals who are willing to migrate are 8.6% more likely to see immigrants positively, relative to those who are not willing to migrate.

Table 4. Marginal effects

Dependent variable: *View of Immigrants*		
	Full samples	
Variable	High trust	Low trust
Migrate	0.086***	0.012
Additional controls	yes	yes
Country controls	yes	yes
n	1512	8712
McFadden pseudo-R-squared	0.128	0.074

Note: ***p<0.01

Conclusion

The initial purpose in this note was to test the presence of an *empathy effect* – meaning that those who are themselves willing to migrate have more positive views about immigrants, in Latin America. Using data from the Latinobarometro (2018), this study finds that there is only weak evidence for that conjecture. Indeed, logit and matching results do not show a consistent and highly significant effect. Instead, this study finds a series of covariates that are more robustly linked to positive perceptions of immigrants. The covariate presenting the largest effect is *Trust*. High-trust individuals tend to see immigrants more positively. Using two matching methods, propensity score matching and genetic matching, this study finds

[11] As described by Sekhon (2011: 3), the method uses a genetic algorithm (Mebane, Jr. and Sekhon, 2011; Sekhon and Mebane, 1998) to optimize balance as much as possible. The method is nonparametric. Sizemore and Alkurdi (2019) argue: "Genetic Matching offers the benefit of combining the merits of traditional PSM and Mahalanobis Distance Matching (MDM) and the benefit of automatically checking balance and searching for best solutions, via software computational support and machine learning algorithms."

consistent evidence that high-trust individuals do see immigrants more positively. Finally, when trust groups are studied more closely, this study finds evidence of a *conditional empathy effect*. That is, the empathy effect holds only among high-trust individuals.

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Appendix

Table 5

		Full sample		
Variable	Values	n	mean	sd
P42NC. Now I would ask you to tell me from your point of view and that of your family if you believe that the coming of immigrants to the country is beneficial or harmful.				
View.of.immigrants	Beneficial = 1	17621	0.28	0.45
	Harmful = 0			
S7. Have you and your family thought about the concrete possibility to move and live in another country?				
Migrate	Yes = 1	20108	0.28	0.45
	No = 0			
Demographics				
SEXO. Male	Male = 1	20204	0.48	0.50
	Female = 0			
S6. Indigenous	Indigenous = 1	17439	0.11	0.32
	Other = 0			
S5. Catholic	Catholic = 1	19984	0.59	0.49
	Other = 0			
S23. Married	Married = 1	20142	0.53	0.50
	Other = 0			
EDAD. Age		20204	41	17
S10. What is the last education grade that you completed?				
Education		18990	8.71	4.15
S14A. What is your occupational status?				
	Unemployed = 1	20204	0.07	0.26
	Other = 0			
S4. The salary or wage that you earn and the total family income, allows you to satisfactorily cover your needs? In which of these situations do you find yourself into?				
Salary	It is not enough, she has great difficulties = 1	19704	2.51	0.89
	It is not enough, she has difficulties = 2			
	It is just enough, without great difficulties = 3			
	It is good enough, she can save = 4			
P6STGBSC. How would you say is the economic situation of your country?				
Country.economy	Very bad = 1	20035	2.55	0.93
	Bad = 2			
	So-so = 3			
	Good = 4			
	Very good = 5			
P7STGBSC. Do you think that the current situation of the country is … than it was twelve months ago?				
Country.economy.2	Much worse = 1	19894	2.54	1.12
	A little worse = 2			
	Same = 3			
	A little better = 4			
	Much better = 5			
P8STIC. In the next twelve months, do you think the economic situation of the country would be … than now?				
Future	Much worse = 1	18702	2.92	1.16
	A little worse = 2			
	Same = 3			
	A little better = 4			
	Much better = 5			
P9STGBSC. In the next twelve months, do you think your economic situation and that of your family will be … than now?				
Future.2	Much worse = 1	19183	3.36	1.09
	A little worse = 2			
	Same = 3			
	A little better = 4			
	Much better = 5			
Econ.perceptions				
		17985	2.84	0.81

P23ST. How fair do you think is income distribution in (country)?				
Income.distribution	Very unfair = 1	19378	1.87	0.72
	Unfair = 2			
	Fair = 3			
	Very fair = 4			
P22ST. In politics it is normally talked about "left" and "right." In a scale where "0" is "left" and "10" is "right," where are you?				
Leftright		16713	5.04	2.98
P24ST. Democracy can have problems but it is the best government system?				
Democracy	Very much disagree = 1	19178	2.81	0.79
	Disagree = 2			
	Agree = 3			
	Very much agree = 4			
P1STC. Generally, would you say you are satisfied with your life? Would you say you are?				
Life.satisfaction	Not satisfied at all = 1	20052	3.05	0.87
	Not satisfied = 2			
	Satisfied = 3			
	Very satisfied = 4			
P11STGBS. In general, would you say one can trust the majority of people or one cannot be too careful when dealing with others?				
Trust	One can trust the majority of people = 1	19628	0.15	0.35
	One cannot be too careful when dealing with others = 0			
P70ST. How often are you worried that you can be a victim of a violent crime?				
Worried.violence	Never = 1	19969	2.94	1.09
	Sometimes = 2			
	Occasionally = 3			
	All or almost all the time = 4			
S13C. Have you traveled abroad any time in your life?				
Travel	Never = 1	19956	1.43	0.77
	A few times = 2			
	Once a year = 3			
	More than once a year = 4			
P55N. If you could choose between two products/services, of the same price, one is produced abroad and belongs to a well-known international brand, the other one is produced in the country and belongs to a well-known national brand. Which one do you choose?				
National.bias	National = 1	19883	0.68	0.47
	Other = 0			

Sensitivity analysis

Matching techniques help reduce selection bias. In other words, matching allows to control for endogeneity due to observable confounders. However, it does not consider the effect of bias due to unobservable confounders (Corbacho et al., 2015) – in spite of the inclusion of a wide set of controls. In order to address the effect of hidden bias on our matching results a sensitivity test is conducted (following Rosenbaum 2002). This sensitivity analysis tells us how large the hidden bias has to be to compromise our matching results. The gamma (Γ) indicator is a measure of the departure from a study that is bias free. Higher values of Γ mean that the results are less sensitive to hidden bias and lower values mean the opposite.

Table 6 shows that, for the variable *Trust*, the upper bound p-value crossed the critical threshold of 10% at $\Gamma = 1.6$. This indicates that if unobservable confounders linked to 40% in the variation of *Trust* are not controlled for, and these confounders are statistically associated with *View.of.immigrants*, *Trust* will no longer be significant at the 10% level of confidence. This suggests that moderate hidden bias cannot explain our results.

Table 6

Gamma	Lower.bound	Upper.bound
1	0	0.00000
1.1	0	0.00000
1.2	0	0.00001
1.3	0	0.00036
1.4	0	0.00573
1.5	0	0.04120
1.6	**0**	**0.15858**
1.7	0	0.37759
1.8	0	0.63080
1.9	0	0.82681
2	0	0.93513

Note: Gamma is odds of differential assignment to treatment due to unobserved factors.

Results correspond to genetic matching.