



Working Paper Series

Number 15, Winter 2013

Reconciling context and contact with immigrants effects: An examination of the Catalan case

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Abstract

Contact theory and threat group theory offer contradictory hypotheses regarding the effect of contact with immigrants. Despite recent efforts to test the validity of both approaches, we still lack a definitive conclusion. This article integrates both approaches and tests the effect of contact towards immigrants and how this changes when different contexts are considered. Mainly, we investigate the effect of the economic environment and the immigrant group size on modifying attitudes toward immigration. The hypotheses, which are tested in Catalonia, show that contact with immigrants reduce negative attitudes towards immigration, especially friendship and family contact. However, mixed results are reported regarding the effect of economic environment and immigrant group size. Whereas the former modifies positively the effect of workplace contact, the latter has no effect. Findings have implications for the impact of context when dealing with the impact of contact on attitudes towards immigration.

Keywords

contact theory; threat-group theory; immigration; economy; Catalonia

Author's biographical note

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Núria Franco-Guillén is a PhD Candidate at Universitat Pompeu Fabra. Her thesis focuses on the interaction between Stateless Nationalist and Regionalist Parties and Immigration in contexts of minority nations. She bases her analysis on the exploration of the centre-periphery cleavage. She is a researcher at GRITIM-UPF and is coordinating the Project Diversidad. Her recent publications include: (Forthcoming 2013) "Catalunya terra d'acollida: Stateless Nationalist Parties' discourses on immigration in Catalonia, 1999-2010" with R. Zapata-Barrero in: E. Hepburn and R. Zapata-Barrero: "The New European Agenda for Integration: Regions, Multi-level Governance and Immigrant Integration in the EU" (2012).

Introduction

Contact with immigrants helps reducing prejudices, boosts mutual interests and creates a more intercultural society with intercultural societal interests (Pettigrew and Tropp 2006). Indeed, knowing the others lead to a fading away of prejudices, false opinions or biased perceptions.

Parallel to that, group threat theory suggests that inter-ethnic contact lead to negative attitudes toward immigration. In this sense, immigrant group-size fosters latent negative attitudes toward immigration especially when the economic context entails competition over scarce resources, notably among lower status citizens.

Both theories offer two different approaches, which are sometimes linked to two different conclusions. Despite recent efforts to test the validity of one or the other, we still lack a definitive conclusion. In this article we integrate contact theory perspective and group theory perspective and test whether the impact of contact is modified when context is taken into account. Hence, this article puts into test the contradictory findings of past research and checks whether contact has positive or negative effects on attitudes towards immigration and whether the type of contact is important.

We expect that the effect of contact is modified when the environment is taken into account, mainly when bad and good economic situations are contemplated and when the “opportunity of contact” (the size of the immigrant group) is considered. In other words, does contact with immigrants still have an impact when the economy performs badly? Do bad economic figures affect differently lower status citizens’ perceptions? Do respondents with foreign acquaintances or friends express lower levels of exclusionism than those without, regardless of the immigrant group size in which the individuals live?

We acknowledge that individual and self-reported measures of immigrant contact are endogenous to attitudes toward immigration. However, this should not preclude researchers from testing the different hypotheses, but rather to avoid causal terminology. Moreover, scholars have found that the relationship between contact and attitudes toward immigration sustains even when taking into consideration participant selection (Herek and Capitanio 1996). Hypotheses are tested in Catalonia (for year 2010), the Spanish region that received more immigration during the early 2000 and that has experienced a harsh economic period since 2007. Our knowledge about contact theory in new immigrant countries is still scarce (Martinez and Hernández 2009). We

carry out the empirical analysis by developing a multi-level model, which takes into account the economic conditions and the size of the immigrant group.

We prove that contact with immigrants has an effect in reducing negative attitudes toward immigration. We find that close contact and family contact are significant, whereas contact at the workplace does not modify attitudes toward immigration. Moreover, against other findings, our analysis proves that this latter type of contact is positive for individuals' attitudes towards immigration and that bad economic context increase its effects. However, we find that workplace contact does not increase negative attitudes toward immigration in bad economic contexts. Finally, immigrant group-size does not modify the effect of different types of contact.

2. When contact with immigrants matters

High levels of worldwide migration paired with increasingly negative attitudes toward immigrants (Esses, Jackson, and Armstrong 1998). This worldwide phenomenon has not only had implications on our everyday lives, but it has also triggered a vivid debate on different fields. One of the most productive subfields is related to perceptions towards foreigners among the native population (Simon and Keri 2007; Nelson 2009; Rustenbach 2010). In particular, great efforts have been devoted in order to explore the factors that can reduce the negative reaction toward immigrant population.

One of the most explored lines of research within the study of individuals' attitudes towards this always-changing phenomenon is the so-called *contact theory*. *Contact theory* (or the *hypothesis of contact*) (Allport 1954), tries to see whether frequent contact between natives and immigrants generates an impact on natives' prejudices against immigrants. According to the conventional wisdom, by building social connections between natives and migrants, contact is supposed to diminish discrimination attitudes, as well as emerges as a powerful tool to deal with the ghettoization of some societies¹.

The original idea of early theorists was that intergroup contact facilitated learning about the out-group, and this new knowledge in turn reduced prejudice. There is not, however, a clear and unidirectional link between contact and positive attitudes toward immigrants. Although some authors have proved that contact with immigrants

¹ It is important to mention that public policies follow suit and foster contact between immigrants and natives, as it is believed that it has a positive impact in society. See for example the Intercultural Cities project led by the Council of Europe and the European Commission (<http://www.coe.int/t/dg4/cultureheritage/culture/cities/>)

reduces negative attitudes towards immigration (Pettigrew and Tropp 2006)², others have proved that contact has no effect or even increase anti-immigrant attitudes (Fetzer 2000; Rustenbach 2010).

Part of these discrepancies are based on the fact that two factors remain partially unexplored and, when included, can provide a clearer picture of why contact is framed as negative or positive (or even neutral). The first nuisance to highlight is that, according to some authors, what matters is not contact *per se* but the type of contact that individuals are exposed to. In this sense, not all types of contact have the same implications on natives' individual attitudes. For example, having a foreign family member (mainly due to inter-racial marriages) or foreign friends (what is referred to as close contact) seem to be the type of contact that have a higher impact on reducing anti-foreigner exclusionism (Hamberger and Hewstone 1997).

The second factor is that, even when the type of contact is considered, the literature often disregards that certain contextual factors can alter the conditionings in which contact can take place (Pettigrew 2008). Contextual variation can be crucial when studying contact effects because different contexts make some individuals more likely to develop positive or negative attitudes. As Pettigrew stresses (2008, 187), "rather than just a situational phenomenon, intergroup contact needs to be placed in a longitudinal, multilevel social context".

The first contextual factor refers to the size of the immigrant group. In fact, this goes back to the fundamentals, because when Williams (1947) and Allport (1954) were fashioning intergroup contact theory. Hence, they sought to specify the positive features of those contact situations that could maximize the potential for contact to promote positive intergroup outcomes. Consequently, "opportunity of contact" constitutes a precondition for contact theory. Following this reasoning, one might expect that those citizens living in foreign-populated areas are more likely to be in contact with immigrants and, according to Allport's insights, ultimately develop positive attitudes toward immigration. Some research seems to confirm this idea. Wagner et al. show that an increase in the percentage of ethnic minority members affords the majority greater opportunity for intergroup contact and thus reduces the majority's prejudices (Wagner et al. 2006). Stevens et al. also confirm that individuals living in a multicultural environment express lower feelings of exclusion (Stevens, Plaut, and Sanchez-Burks

² Meta-analysis carried out by Pettigrew and Tropp (2000) reached the same conclusion.

2008). McLaren (2003) showed that intimate contact with members of minority groups in the form of friendship reduces levels of willingness to expel legal immigrants from the country. In order to introduce the role of context, she found that the environment mediates the effect of contact, helping to produce lower levels of threat perception in contexts of high immigration (see also Strabac, 2011).

However, “opportunity of contact” has not always been framed as positive. In another perspective, group conflict theory proposes that contact promotes negative attitudes toward immigration (LeVine and Campbell 1972). Group threat theory suggests two reasons for why inter-ethnic contact lead to negative attitudes toward immigration:

The first one is that contact enhances the prejudices against immigrants, especially when contact is superficial (Pettigrew et al. 2007). Latent underlying prejudices against immigrants can emerge when the environment becomes multi-ethnic. Consequently, where there is an important presence of immigrants or in contexts where immigrants represent a higher part of the population, contact can result in an increase of threat perception (Stephan and Stephan 1985; Pettigrew et al. 2007, 41–425; Savelkoul et al. 2011). Moreover, Meuleman et al. (2009) show that country-specific evolutions in attitudes toward immigration are shown to coincide with national context factors, such as immigration flows (Meuleman, Davidov, and Billiet 2009; Schlueter and Scheepers 2010)³.

The second factor is based on the idea that natives and immigrants compete over scarce resources. In this sense, it has been proposed that when competition over resources is present, proximity and contact increase intergroup hostility (Esses, Jackson, and Armstrong 1998, 170). It is argued that competition exists between members of the native population, especially between those with lower occupational status and educational skills, on the one hand, and immigrants, on the other. As argued by Simon (1987), immigrants pose the greatest threat to those of lower status – defined in terms of education, and income – because those of lower status fear competition for jobs, housing, schools and social services (see also Hoskin and Mishler, 1983).

In times of economic hardship, the idea that migrants “steal our jobs” becomes common in the public sphere. According to this idea, when the economy is glooming, the impact

³ Theory of symbolic racism generally contends that negative attitudes toward immigration are static and rarely change. However, even if the later is true, context and social conditions shape these underlying attitudes (Bobo 1983; Glaser 2003; Zárate et al. 2004)

of contact diminishes, especially contact in the work place. In general, immigrants are more likely to work on unskilled and bad-paid jobs. This also holds for those immigrants that are better educated and have been in the country for a longer period (Simón, Ramos, and Sanromá 2011).

However, even the compete for resources hypothesis remains doubtful. In a recent research, Rustenbach (2010) addressed this issue and included economic indicators to measure the interaction of economic competition and other sources of negative perceptions towards immigration. In his work, no significant correlations were found with regard to contact. Moreover, after analysing different European contexts, Schneider concluded that economic and social competition between groups play a lesser role in the explanation of cross-national differences in anti-immigrant attitudes than often assumed (Schneider 2008).

Hypotheses

In light with the contradictory findings in the literature, we put into test different hypothesis regarding the effect of contact over different contextual scenarios. We first hypothesise that contact with immigrants engender positive attitudes towards immigrants. Therefore, citizens who have friendly interactions with immigrants express less prejudice and bigotry, as contact can lessen prejudice in racially and ethnically diverse settings. Formally,

H₁: Contact with immigrants fosters positive attitudes towards immigration.

Although some researchers have found that the impact of contact is negative or neutral (Fetzer 2000; Rustenbach 2010), we stick to Pettigrew and Tropp (2006) findings: according to a recent meta-analysis of more than 713 independent samples, they found only 34 (less than 5%) in which intergroup contact related to greater prejudice.

The type of contact is also necessary to take into account. As shown by Hamberger and Hewston (1997), friendship and kinship contact have a stronger effect on positive attitudes towards immigrants than the effect engendered by family contact. At the same time, a weaker effect of workplace contact is also expected.

H_{1a}: Friendship or family contact and family contact with immigrants impact positively on the attitudes toward immigration, being the impact of the first one more important than the latter.

However, according to the group conflict theory, workplace contact with immigrants is supposed to trigger interethnic conflict, especially among those of lower status.

H_{1b}: Workplace contact with immigrants fosters negative attitudes towards immigration, especially among lower status citizens.

Our argument is that the effects of friendships and acquaintanceship, family contact or workplace contact are not constant across different contextual situations. In some occasions its predictive power will be higher but in other occasions its capacity to modulate the attitudes toward immigrants will simply decrease or disappear. Therefore, we hypothesise that contacts' capacity to lower the levels of exclusionism does not remain constant and it fundamentally varies depending on different contextual scenarios.

The first contextual factor to take into account is the economy. During times of economic hardship, the positive effect of contact with foreigners may be eclipsed by perceptions of the threat that immigrants may pose to native population. During gloomy economic periods, job competition between migrants and native population increases and as a consequence negative perceptions about immigrants are more likely to be spread. This idea brings forward the first hypothesis:

H₂: When the economy is shrinking, the positive effects of contact are reduced or disappear.

As mentioned previously, it is among lower status citizens that the effect should be more prominent. Hence:

H_{2a}: In contexts of economic hardship, the effect of workplace contact is especially negative among lower status citizens.

The relative size of the immigrant population is the second contextual factor to take into account. As shown in the previous part, immigration in Catalonia has significantly increased in the past decade. Even though the increase of the immigrant group had an impact on the likelihood of contact in different areas related to the everyday life (school, neighbourhoods, work-place...), a higher presence of immigrants may foster foreigner exclusionism as it sparks social and racial tensions (Strabac 2011). Recent comparative research demonstrates that group-size operates through individuals' perceptions, that is, perception of group size is much more important than real group size (Hjerm 2007; Sides and Citrin 2007; Strabac 2011). However, we still do not know whether real-group size modifies the effect of contact. For some, the "opportunity of contact" may provide the opportunity to reduce stereotypes and thus have a positive impact on attitudes toward immigration. For others, a higher presence of immigrants

sparks racial tensions and trigger underlying negative attitudes toward immigration. Formally:

H₃: Immigrant group-size has an effect (positive or negative) on attitudes toward immigration

2.1 Contact in context: the Catalan model

In this article we put these ideas into test by analysing the Catalan case. Next to the ambiguity of the results when testing contact theory, the Catalan case emerges as an interesting case of study because of two aspects that deserve to be highlighted: First, most of research has focused on perception towards immigration in the United States (Allport 1954; Dixon and Rosenbaum 2004; McLaren 2003). Research focused in Europe has received growing attention (Hjerm 2007; Strabac 2011), albeit centred in northern Europe or “old” immigration countries, such as the Netherlands (Martinovic, Van Tubergen, and Maas 2009), the United Kingdom (Andreescu 2011), Germany or France (Hamberger and Hewstone 1997). Less attention has been paid to southern European countries such as Italy (Vezzali and Giovannini 2011) or Spain (Escandell and Ceobanu 2008). This is so despite the fact that in few years the fast arrival of immigrants has led these countries to host similar levels of non-EU residents to the aforementioned ones.

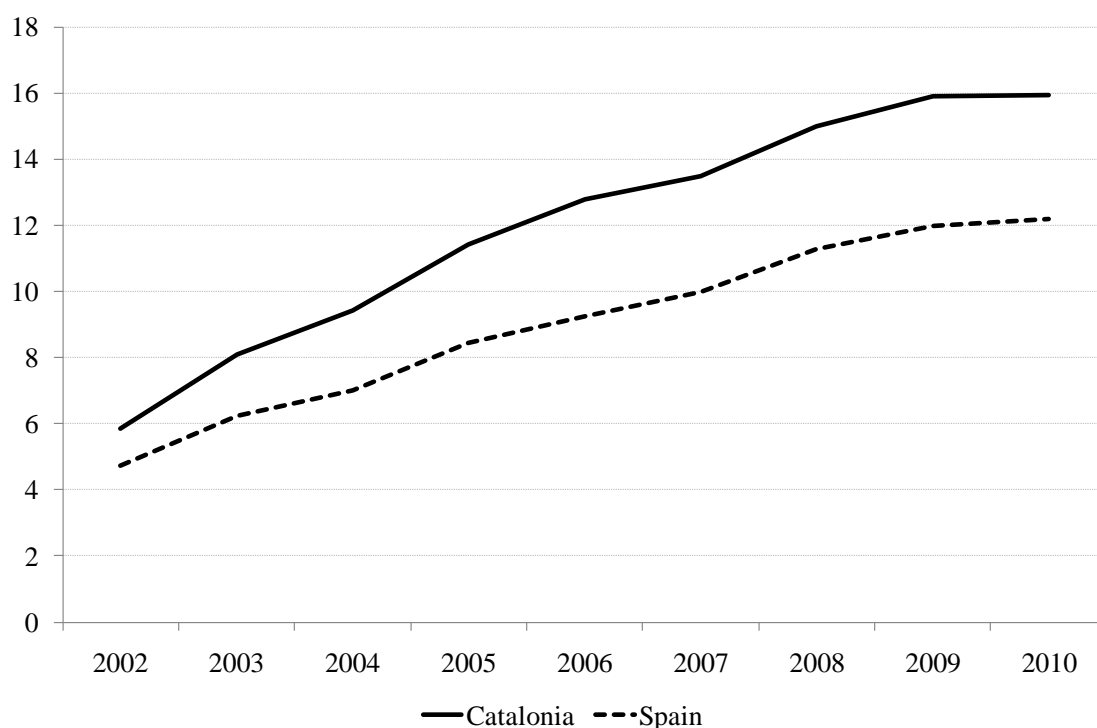
Second, most of the research dealing with contact theories has been carried out with data collected during periods of economic growth. For example, Escandell and Ceobanu (2008) studied contact theory in Spain between 1991 and 2000 and immigration as a large phenomenon started around 2002. The outburst of the economic crisis in 2008, which is especially harsh in Southern Europe, may have had an impact on this –or any- attitudinal dimension.

Since 2000 Catalonia has been a large immigrant ‘recipe’⁴. During the last decade it has experienced a tremendous inflow of international immigrants. In 2002 roughly 6% of the Catalan population had been born abroad. Six years later, in 2008, this figure more than doubled and it reached 16%. Catalonia has been the Spanish region where more migrants have settled and one of the largest receivers of immigrants

⁴ As a matter of fact, immigration was not a new phenomenon in the early 2000. For the past hundred years, the arrival of migrants from around Spain has been a constant occurrence, especially in the 1960 and 1970, when it is estimated that more than 3 million citizens arrived in Catalonia. The information and the approach used here focuses on the most recent wave of migration, one marked by the majority of the immigrants being foreign nationals and by the rapid pace at which it occurred (Franco-Guillén 2011).

in Europe. In general, not only Catalonia but Spain as a whole has been transformed from a state with a statistically negligible immigrant population to one of the top ten (gross) receivers of international migrants in the world⁵. Figure 1 shows the evolution of immigration in both Catalonia in Spain since 2002. Figure I shows the steady increase in immigration since the early 2000, as well as the stabilization of new arrivals from 2008 onwards, when the economic crisis changed the trend.

Figure 1: Evolution of immigration in Catalonia and Spain (2002-2010)



Sources: Catalonia, Idescat; Spain, INE. Both lines represent the percentage of foreign-born population over the total population in Catalonia and Spain.

As a result, the immigrant stock in Catalonia as a percentage over the total population is now above the average immigration rate in Europe. The difference is that it took Europe around forty-five years to arrive to a 10 per cent immigration level whereas it took between ten and fifteen years for Catalonia.

Nevertheless, there are other factors that make the study of Catalan attitudes toward immigration an interesting case (Zapata-Barrero 2009). Catalonia has specific policies to integrate non-Spanish migrants, which are mainly based on linguistic

⁵ Source: United Nations, Department of Economic and Social Affairs, Population Division (2009). Trends in International Migrant Stock: The 2008 Revision (United Nations database, POP/DB/MIG/Stock/Rev.2008).

considerations (Franco-Guillén 2011). Catalonia demonstrates both distinct demographic realities in addition to different historical models of inclusion. National identity has been proved to be an important factor that explains individuals' behaviour in different political issues, such as individuals' attitudes towards immigration (Sides and Citrin 2007).

Research Design and data analysis

To test our hypotheses we use data from the *Centre d'Estudis d'Opinió* (CEO) and, particularly, a survey carried out in 2010 that was focused on the opinion of Catalans towards different aspects related to immigration⁶. This survey enables us to identify enough municipalities to carry out an analysis that includes both individual and contextual variables. By doing so, we are able to test how the contextual factors shape the effect of individual-level variables on the attitudes towards immigration.

To create the dependent variable we have summed up three items tapping three different dimensions regarding individuals' opinions on immigration issues. More concretely, the survey includes three questions about whether they think immigrants "steal our jobs", about protesting against building a new mosque and about students wearing *niqab* at school⁷. The index ranges from 0 (null levels of foreigner exclusionism) to 13 (high levels of foreigner exclusionism).

As for the main independent variables, the most relevant terms are the three dimensions of contact. In the survey people were asked whether they had experienced any "contact" with an immigrant. If the answer was affirmative, respondents were asked to detail what type of relationships this contact was based upon. Three options were given: Friendship (*close contact*), Family contact or Workplace contact. Accordingly, the empirical analysis includes three dummy variables specifying whether the respondent reported to have any of these three types of contact. Numbers show that 30.5% of the respondents declared to have workplace contact with immigrants, 17.32% contact within the family and 43.28% affirmed that they have immigrant friends.

The model also includes a bunch of variables that can have an effect on the attitude towards immigrants. The first one is the perception of the number of migrants living in each respondent's municipality. The perceived size of minority populations has been

⁶ CEO is a public institution of the Catalan administration which carries out regular surveys on different topics of interest. Survey n. 638, *percepció dels Catalans i catalanes sobre la immigració, 2010*. Freely available at www.ceo.gencat.cat

⁷ See more details in the Appendix.

proved to be an important factor driving negative attitudes towards immigration (Semyonov, Raijman, and Gorodzeisky 2006). The question included in the survey was the following: ‘Out of every 100 people living in your town/city, how many do you think were born outside the country?’ The second question that we are able to include is the so-called Subjective National Identification. The link between national identity and negative attitudes towards migrants depends to a large extent of the construction of nationality that prevails in a given context (Pehrson, Vignoles, and Brown 2009). In the Catalan case, there is a lack of evidences relating national identification and anti-immigrant attitudes, although we know from previous research that supporters of the xenophobic PxC feel more Spanish than the average (Hernández-Carr 2011)⁸. This variable ranges from 1, “I feel only Spanish” to 5 “I feel only Catalan”. Third, we include two dummy variables tapping the individual’s socioeconomic status: occupational status (1, unemployed; 0, employed) and income (1, individual earn less than 1000 euros; 0, earn more than 1000 euros). Finally, models control for individuals’ left-right position, sex, age and education.

In line with our expectations, we also include two contextual variables. The first one is the average of the unemployment rate registered in each municipality in 2010, when the survey was carried out⁹. The second contextual factor is the percentage of immigrant population in each municipality¹⁰.

Table 1 gives descriptive statistics for all the variables included in the models shown below.

⁸ In fact, it has recently been suggested that the two main nationalist parties’ (CiU and ERC) positions towards immigration can be determining their nationalist discourses (Franco-Guillén 2013). In this sense, individual identifying themselves as Catalan rather than Spanish might co-opt those parties’ stances towards immigration, which are clearly positive.

⁹ Unemployment rate in each municipality has been calculated using a common estimation undertaken by the provincial authorities, which is based on the occupational figures at the province level and the figures derived from the Local Population Census. More information can be found at the Local Economic Development Observatory Group (<http://www.diba.cat/web/promoeco/xodel/default>).

¹⁰ Data from the Local Population Census (www.idescat.cat).

Table 1: Summary statistics of variables

Variable	N	Mean / Frequency	Min	Max
Close contact	1599	43.3% Yes 56.72% No		
Workplace contact	1600	30.5% Yes 69.5% No		
Family contact	1599	17.32% Yes 82.68% No		
Perceived immigration (stdz)	1556	34.73	0	99
Subjective Identification	National 1559	3.39		
Left-right placement	self- 1122	3.39		
Gender	1600	45.5% Women 54.5% Men		
Age	1600	44.37	26	61
Education	1598	15.58% No studies or primary studies 84.42% Rest		
Unemployment (%)	35	12.58	3.65	22.14
Immigration size in each municipality (%)	35	18.29	3.67	41.47

Since individual and contextual variables are taken into account, the predictions of the hypotheses are tested with a multilevel model that includes cross-level interactions between contact and contextual characteristics that vary across municipalities. In that way the slopes of contact are allowed to vary depending on the contextual characteristics of the municipality (Bryk and Raudenbush 2002). Multilevel modelling is well suited in order to avoid underestimating the standard errors, as well as overcoming the problems derived from ecological and individual fallacies (Lijphart 1980; Seligson 2002).

Our model can be defined as expressed in Equation 1. In this model, the *overall* relationship between y and x is represented by a straight line with intercept β_0 and slope

β_1 . The intercept for a given group j is $\beta_0 + u_j$, where u_j is a group effect or residual. Thus, the intercept of the group regression lines is allowed to vary randomly across groups. Theoretically, it would have been better to include a random term for contact because the effect of this explanatory variable is assumed to vary across groups. However, the low number of cases, both at the individual and the contextual level ($N=47$) precludes us to do so. Requirements for the size of datasets are often large in order to detect significant interactions; therefore, we would need a larger dataset to estimate a random coefficients model. However, conventional interaction models allow the slope of a chosen variable to vary depending on the presence of contextual variables in order to test the conditional impact of this variable on the dependent variable, which is enough to assess if the conditional relationships predicted by the theory exist (Kam and Franzese Jr. 2007).

$$Y_{ij} = \beta_0 + \beta_1 X_{ij} + u_j + \varepsilon_{ij}$$

Table 2 reports the results of a random intercept fixed slopes hierarchical model with individual characteristics, contextual factors and cross-level interactions. In terms of model fit, the AIC and BIC indexes indicate that the second model fits the data better. On the other hand, as compared to the null model¹¹, the second model specification –as well as the models with cross-level interactions- substantially accounts for the contextual variation of attitudes towards immigration between municipalities. The Intraclass Correlation Coefficient (ICC) indicates that a part of the variance of the intercept can be attributed to the second level (0.5% approximately). ICC shows, however, that most of the variance to be explained is between-individuals and not between-municipalities.

¹¹ The variance of the intercepts would decrease from 0.82 in a null model (if the model is run with no predictors in it) to 0.54 in the last model.

Table 2: Hierarchical linear models predicting negative attitudes towards immigration

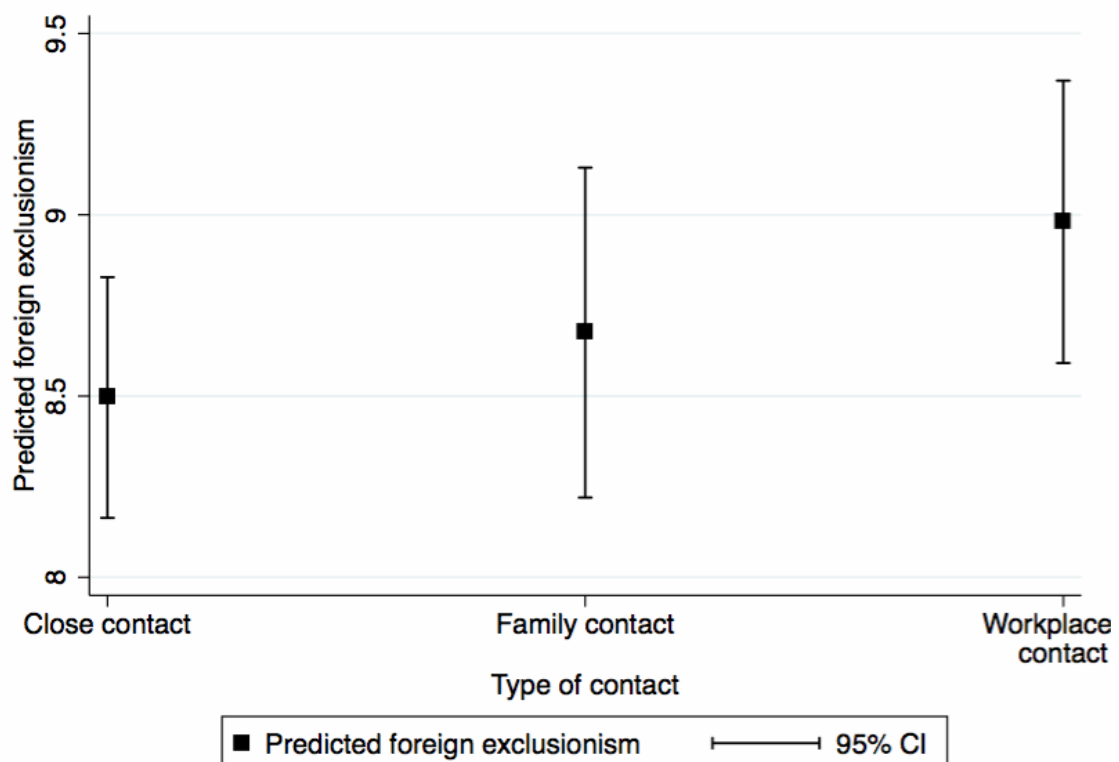
	Model 1 (Without controls)	Model 2 (With controls)	Model 3 (With interactions)	Model 4 (With interactions)	Model 5 (With interactions)
Close contact	-1.21*** (0.14)	-1.26*** (0.20)	-1.25*** (0.20)	-0.27** (0.75)	-1.11** (0.47)
Workplace contact	-0.43*** (0.14)	-0.37 (0.22)	-0.41 (0.25)	1.65** (0.79)	-0.27 (0.48)
Family contact	-0.59*** (0.18)	-0.69** (0.24)	-0.69*** (0.24)	-0.81 (0.97)	-1.23*** (0.57)
Perceived immigration (stdz)		0.25*** (0.09)	0.25*** (0.09)	0.24*** (0.09)	0.24*** (0.09)
Occupational status (1. unemployed)		-0.35 (0.22)	-0.36 (0.24)	-0.35 (0.22)	-0.34 (0.22)
Income (1. Less than 1000 euros)		0.36 (0.23)	0.34 (0.25)	0.38* (0.22)	0.36 (0.23)
Subjective National Identification		-0.15* (0.08)	-0.15* (0.08)	-0.14* (0.08)	-0.14* (0.08)
Left-right self-placement		0.36*** (0.06)	0.36*** (0.06)	0.37*** (0.06)	0.37*** (0.06)
Gender		-0.0.6 (0.24)	-0.14 (0.24)	-0.14 (0.24)	-0.06 (0.24)
Age		-0.01 (0.01)	-0.01 (0.01)	-0.02 (0.24)	-0.01 (0.01)
Education		0.27 (0.27)	0.28 (0.28)	0.27 (0.28)	0.27 (0.28)
Unemployment (%)		-0.16** (0.06)	-0.16** (0.06)	0.04 (0.07)	-0.15** (0.06)
Immigration size in each municipality (%)		0.02 (0.01)	0.02 (0.01)	0.02 (0.01)	0.02 (0.02)
Income*Workplace contact			0.19 (0.64)		
Unemployed*workplace contact			0.15 (0.64)		
Unemployment*close contact				-0.12 (0.09)	
Unemployment*family contact				0.02 (0.11)	
Unemployment*workplace contact				-0.24*** (0.09)	
Immigration size*close contact					-0.01 (0.02)
Immigration size*family contact					0.03 (0.03)
Immigration size*workplace contact					-0.01 (0.02)
Intercept	10.03*** (0.14)	10.5*** (0.82)	10.5*** (0.83)	9.61*** (0.87)	10.47*** (0.84)
N (individual)	1239	1024	1024	1024	1024
N (municipalities)	47	47	47	47	47
Akaike's info. criterion (AIC)	5573.822	2913.857	2917.702	2909.718	2918.784
Bayesian info. criterion (BIC)	5604.554	2985.562	2998.371	2994.868	3003.934
Intraclass Correlation Coefficient	0.18385	0.04187	0.04190	0.0361	0.03992

***p < 0.001, **p<0.05, p<.1

The first column reports the unconditional effects of contact without controls or interactions. All of them are significant and negative. Model 2 reports the full model, including the individual and the aggregate level variables. Close contact is still significant and negative. Therefore, having immigrant friends reduces prejudices against immigrants. Family contact is also significant and negative. However, as opposed to the previous model, workplace contact ceases to be significant. Taking model 2 coefficients, we plot the predicted foreigner exclusionism for the three types of contact (Figure 2). Confidence intervals between family contact and close contact overlap, so we cannot conclude that the effect of close contact is greater, although the coefficient was bigger.

Therefore, H1a is partially accepted: friendship and family contact impact positively on the attitudes towards immigration, but the effect of the first one is not greater. Moreover, H1b is rejected: workplace contact with immigrants has no effect on attitudes towards immigration.

Figure 2: Predicted foreigner exclusionism by type of contact



The model also reports that the perceived size of the immigrant community fosters foreigner exclusionism. A one-point increase in the perceived presence of migrants in

the place where the respondent's live, foreigner exclusionism goes up by 0.25 points. Moreover, being right-wing and showing a greater Spanish national identity lead to higher levels of foreigner exclusionism. Being unemployed, earning less than 1,000 euro, gender, age and education have no effect.

As for the second-level variables, model 2 reports a surprisingly negative effect of unemployment: where unemployment is greater, levels of foreigner exclusionism are lower. That is, in an environment where unemployment is high, attitudes toward immigration tend to be more positive. Finally, no effects are reported regarding the impact of immigration size of each municipality.

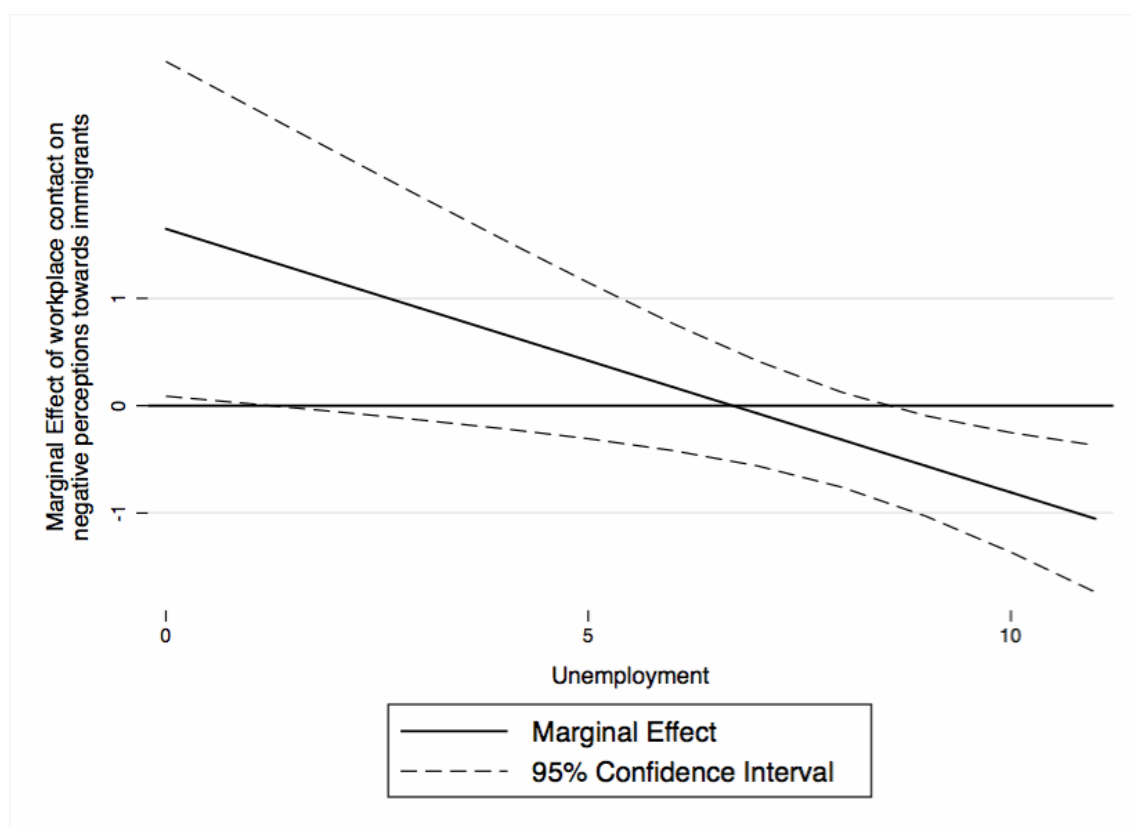
H1b stated that negative attitudes towards immigration increased when workplace contact takes place, especially among lower status citizens. In this sense, Model 3 includes an interaction between being unemployed and low-income citizens and workplace contact. Both interactions fail to reach statistical significance.

Regarding the effect of context, we hypothesised that in bad economic environments; the positive effects of contact are reduced or disappear (H2). To test this hypothesis we included cross-level interactions between the type of contact and unemployment rates in each municipality¹². Model 4 reports the results for these three interactions. Only the interaction between workplace contact and unemployment rate is significant and negative.

To correctly interpret this interaction, we plot the marginal effect of this interaction, together with the 95% confidence intervals. Figure 3 plots the effect of workplace contact on the negative attitudes towards immigration when unemployment rates increase. When the unemployment is low, the effect workplace contact in reducing negative attitudes towards immigration is low. As unemployment increases, the effect of workplace increases. That is, unemployment positively affects the capacity of workplace contact to diminish negative stereotypes towards foreigners. As mentioned before, this is rather a surprising result, as one would expect that in bad economic contexts negative attitudes towards immigration would be more common.

¹² Cross-level interactions report the same results without controls and across model specifications.

Figure 3: Marginal effect of workplace contact by unemployment rate

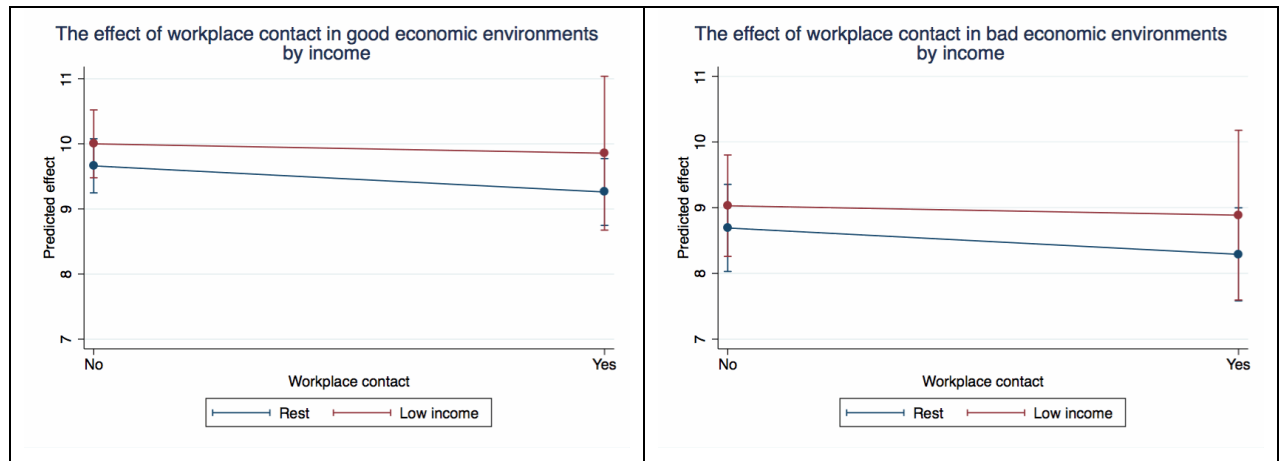


H2a hypothesised that the effect shown in the previous figure should be more intense among lower status citizens. In this sense we have calculated the predicted foreigner exclusionism by income type (those that earn more than 1000 euro against those that earn less than 1000 euro per month)¹³. As can be seen in Figure 4, these differences do not exist. In both cases, confidence intervals overlap.

Figure 4: Predicted effect of workplace contact by economic environment

a) Relatively good economic environment	b) Relatively bad economic environment
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¹³ A relatively good or bad economic environment means a city or town with unemployment levels in the top or bottom quartile, respectively.



Finally, H3 was tested by three cross-level interactions between the type of contact and immigrant group-size. As mentioned in the theoretical part, the “opportunity of contact” can be seen as a positive factor (meeting other cultures and reducing negative stereotypes) or negative (triggering underlying negative attitudes). Model 5 shows that none of the interactions is significant.

3. Conclusion

In this article we have put into test contradictory hypotheses regarding the effect of contact on reducing/increasing negative attitudes towards immigration. In line with the literature, we argue that context matters because it can change the conditionings by which contact operates. In particular, we tested the effect of two contextual factors that *a priori* can affect the positive relationship between having contact with immigrants and attitudes towards immigration: immigrant group size and the economic environment.

Results show that having immigrant friends and immigrant family members reduces negative attitudes towards immigration. Moreover, workplace contact fails to reach statistical significance: results show no evidence that workplace contact increases or decreases negative attitudes. Its effects therefore seem to be neutral. Moreover, we have found no significant differences between the types of contact.

H2b wanted to test whether the impact of workplace contact was conditioned on the socioeconomic status of individuals. Interactions included in the model also failed to reach statistical significance.

In another step, we checked the mediating impact of the economic crisis and the number of foreigners. Results show that the economy plays a mediating role, but in the opposite direction: where unemployment is higher, workplace contact with immigrant

reduces negative attitudes towards immigration in a more significant way. Nevertheless, workplace contact does not have a different impact according to individuals' income and the economic context.

Finally, our results show that the existence of a larger or smaller immigrant-group size does not modify the effect of contact. Particularly interesting is the effect of the economy on workplace contact. We have shown that bad economic contexts are *good* for the workplace contact to reduce negative attitudes towards immigrants. It can be true that this can be an artificial result: almost all the Catalan municipalities have very high levels of unemployment rates and therefore differences can be attributed to other aspects related to the pre-crisis situation. However, it might also suggest that bad economic environments lead work colleagues to form some sort of solidarity bonds between them. Future research undoubtedly needs to tackle this finding, especially because the general idea is that economic crisis lead to deterioration on the relationship between natives and foreigners, especially among lower status citizens. In this article, however, we have put into question this idea.

In conclusion, our main goal in this article, that is, context matters when studying the relationship between contact and immigrants' attitudes, is partially achieved. Future studies of contact theory will need to take into account whether this finding is subjected to the Catalan reality or whether an economic crisis changes the paradigm under which contact theory operates. Bigger datasets with more contextual scenarios will be necessary in order to disentangle how contact interacts with context, especially if it is a consequence of the latter or it precedes context. For this purpose, longitudinal surveys or even experiments may help researchers to shed light on the relationship between contact and attitudes towards immigration on different contextual scenarios.

A better understanding of these issues not only provides a richer picture on the relationship between immigrants and natives, but it is also relevant for public policies, since it may have an impact on the (re)design of immigration policies, especially in times of economic uncertainty.

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Appendix

Questions to build the DV index:

P32: Do you agree or disagree with the following statement? Immigrants steal our jobs. 1 (agree completely); 5 (disagree completely)

P33d: Do you find acceptable or unacceptable that...? People protest against the building of a new mosque. 1 (very acceptable); 4 (not at all acceptable)

P33b: Students wearing *niqabs* at school. 1 (very acceptable); 4 (not at all acceptable)

*** We thank Ricard Zapata-Barrero and the anonymous reviewer for their invaluable contributions. An earlier version of this article was presented at the Political Behaviour Seminar, 24 May 2012, Universitat Pompeu Fabra. Both authors contributed equally to this work and are listed in inverse alphabetical order.*