

Changing In-Group Boundaries: The Effect of Immigration on Race Relations in the US

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Abstract

How do boundaries of in-groups and out-groups in a society evolve? Does the appearance of a new out-group foster or hinder the incorporation of previously excluded groups? We present a conceptual framework where individuals classify others into in- or out-groups depending on their perceived distance. Such perceived distance is context dependent, and falls with the arrival of a socially more distant group. We test the predictions of the model, and study how Mexican immigration to the US between 1970 and 2010 affected native whites' attitudes towards African Americans. We combine nationally representative survey data with a difference-in-differences design, and predict changes in the Mexican share across states relying on the historical distribution of ethnic enclaves. Consistent with the model, we find that Mexican immigrants reduce whites' prejudice against blacks, and shift racial policy preferences in a more liberal direction. As predicted by the model, these effects: *i*) are larger for whites who perceive a higher distance between blacks and Hispanics; *ii*) spill over onto other immigrant groups, as nativity (vs race) becomes a more salient feature of group identification; and *iii*) are not found when looking at immigration of relatively closer groups, such as Canadians and Europeans. Our findings have broader implications for inter-group relations in racially and ethnically diverse societies.

Keywords: Immigration, race, in-group–out-group relations.

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Distinctions into in- and out-groups are a universal feature of human social structures. In multiethnic and multiracial societies, in- and out-groups are often organized in a hierarchical fashion, with majority groups at the top displaying varying degrees of prejudice towards lower ranked minority groups. While the pervasive nature and stability of such hierarchies has been extensively studied (Hagendoorn, 1995; Hochschild, 1996; Gould, 2003), we know relatively less about how boundaries between in-groups and out-groups are determined. This question is of first order importance, given the role of group categories in sustaining cooperation and successful collective action (Goette et al., 2006; Chen and Li, 2009; Hjort, 2014), but also in driving parochialism, discrimination, and violence (Bernhard et al., 2006; Choi and Bowles, 2007; Hargreaves Heap and Zizzo, 2009; Horowitz, 1985; Sambanis and Shayo, 2013). Can group boundaries change, so that minority out-groups make their way up the social hierarchy and become accepted by the majority in-group? If so, under what conditions?

We tackle these questions by focusing on a specific factor that can affect intergroup relations and the boundaries between social groups: the appearance of new minorities through the process of immigration. With the rise of population movements across borders since the second half of the 20th century, the effects of immigration have received much attention, yet very few studies examine how immigrants affect relations between groups already present in a society. Extant work suggests that the presence and characteristics of one minority can change the way in which majority members view other minorities, but the direction of this effect remains indeterminate (Hopkins, 2010; Fouka et al., 2019). On the one hand, it is theoretically possible that new groups divert natives' prejudice from existing excluded minorities. On the other, attitudes can exhibit cultural sociotropism, with all culturally distant groups being lumped together in the minds of natives (Kinder and Kam, 2010).

We propose a framework that accomodates both these theoretical possibilities, and predicts under which conditions attitudes towards existing minorities become more positive or negative in response to the arrival of new groups. Building on self-categorization theory in social psychology (Turner et al., 1987, 1994), we hypothesize that individuals categorize others as

in- or out-group members based on how different they are from themselves. People have many attributes (e.g. socioeconomic status, race, gender), and can be similar in some dimensions but not in others. We introduce the concept of *affective distance* as a key determinant of which attributes will emerge as relevant for social categorization. Affective distance is a summary term for an individual’s feelings towards members of different groups. Like social status, it captures a group’s perceived quality or value (Tajfel and Turner, 1986a).

Our main prediction is that when a group of high *relative* (compared to existing out-groups) affective distance from the majority appears, the attributes along which this new group differs the most from the majority become the most relevant ones for social classification. When the majority’s affective distance is highest from groups that differ on the basis of race, race emerges as the key attribute that determines social divisions. The appearance of an out-group of higher affective distance from natives that differs on another attribute, such as national origin, can then diminish the role of race and turn national origin into a more important determinant of group boundaries.

We provide evidence consistent with this theoretical framework in the context of the United States, by examining how immigration affects race relations. Following the lifting of the quota system in 1965, the demographic profile of the United States became increasingly diversified with the arrival of new immigrants particularly from Latin America and Asia (Frey, 2018). We investigate the impact of immigration from the major sending country during this time period, Mexico, on whites’ attitudes toward African Americans.

We assemble data on immigration flows to the US over the period 1970-2010 and combine it with survey data on attitudes toward various minority groups from the American National Election Study (ANES). To help establish causality, we combine two empirical strategies. We start from a difference-in-differences framework that leverages changes in immigration across states and over time, holding constant states’ time-invariant characteristics and accounting for time-variant factors that affect all states within the same Census division in a similar way.

To account for the possibility of time-variant state-specific factors endogenously driving both immigrants’ location decisions and racial attitudes, we follow Monras (2019) and predict Mexican immigration exploiting the distribution of ethnic enclaves across states in 1960. This strategy, that closely resembles the “shift-share” design adopted in the immigration literature (Card, 2001), builds on the empirical regularity that immigrants tend to locate in areas with

an extant immigrant network.

The identifying assumption is that states with higher shares of Mexican immigrants in 1960 are not on differential trajectories in terms of social, political or economic conditions that could independently affect racial attitudes. We provide multiple pieces of evidence consistent with this assumption. Our results are robust to accounting for the time-varying effect of 1960 state characteristics, and are not driven by the linear time-varying effect of 1960 Mexican shares. A randomization inference exercise that assigns national inflows of different immigrant nationalities to initial shares of Mexican immigrants suggests that our results are unlikely to be driven by the persistent effects of 1960 Mexican shares.

Relying on the 1960 distribution of immigrants across states offers an additional advantage for the purposes of econometric identification, since such distribution is taken as given before the policy change associated with the 1965 Immigration and Nationality Act. The change in the immigration regime occurring between the year in which we measure the initial settlements and the years considered in our analysis creates a “trend break” in immigration flows. This, in turn, lowers the degree of serial correlation in immigration that might conflate the short and long run effects of immigration when using shift-share instruments (Jaeger et al., 2018).

Using this empirical design, we find that Mexican immigration reduces the amount of anti-black prejudice expressed by whites. Our results are substantive in magnitude. According to our estimates, one percentage point increase in the share of Mexican immigrants (equivalent to one third of a standard deviation in our sample) leads to a 30% reduction in prejudice towards blacks during the period under study. Attitudinal changes among whites have implications for racial policy preferences, which become significantly more liberal in states that receive higher shares of Mexican immigrants. These changes are specific to government interventions that promote racial equality, and are not driven by a general increase in liberal ideology. In fact, we find that, overall, white respondents become significantly more – and not less – conservative in response to Mexican immigration.

Interpreted through the lenses of our theoretical framework, Mexican immigration improves the attitudes of white natives towards blacks, because Mexicans have a higher affective distance from whites. As a result, increases in the share of Mexicans shift the basis of social categorization from race to national origin (or immigrant status). Consistent with this hypothesis, using the feelings thermometer in ANES as a proxy of affective distance, we show

that whites have cooler feelings towards Hispanics as compared to blacks, for every single survey year between 1980 and 2010. Furthermore, an increase in the share of Mexican immigrants decreases warmth and increases prejudice towards Hispanics in the ANES data, suggesting that higher numbers of Mexican immigrants further increase affective distance between this group and native whites.

Our framework delivers three additional testable implications. First, the reduction in the salience of race in response to immigrant inflows, and the associated reduction in anti-black prejudice, is increasing in the baseline difference in affective distance between new immigrants and extant minorities. Intuitively, new out-groups are more likely to improve majority views of extant out-groups the more distant they are from the majority (compared to extant out-groups). In support of this prediction, we find that Mexican immigration has a more positive impact on whites' attitudes towards blacks when Hispanics are viewed more coolly than blacks in the baseline. Effects are most pronounced among respondents who identify as Democrats and those living outside the South. For those subsamples, baseline (i.e. pre-immigration) differences in thermometer rankings between Mexicans and blacks are larger, implying that respondents initially favored blacks over Hispanics *more* compared to other subsamples.

Second, self-categorization theory predicts that the inflow of relatively more distant groups increases the salience of attributes along which new minorities display maximal difference from the majority. In the case at hand, the salience of immigrant status increases at the expense of the salience of race. Consistent with this prediction, white ANES respondents in states experiencing more Mexican immigration become more likely to mention immigration policies as the country's most important problem, and less likely to be concerned about racial and public order problems.

A final implication of the theory is that groups of low affective distance from white natives (compared to existing minorities) do not improve, and may even worsen, whites' attitudes. We exploit immigration from Europe and Canada to show that only inflows of Mexicans – but not those of other whites – drive reduction in white prejudice.

Our study makes four main contributions. First, while most of the literature on racial politics in the U.S. focuses on black-white relations (Bobo, 1983; Glaser, 1994; Kinder and Mendelberg, 1995; Valentino and Sears, 2005a; Acharya et al., 2018; Mazumder, 2018), with a smaller set of studies examining inter-minority relations (Oliver and Wong, 2003; Gay, 2006),

little attention has been paid to the role that other minorities may play in affecting white attitudes towards African Americans. To our knowledge, our paper is the first to provide evidence that the very presence of immigrant minorities may ameliorate white prejudice toward African Americans, and identify conditions under which this is likely to happen. Given the persistent role of racial prejudice against African Americans in American politics (Sears and Henry, 2003; Acharya et al., 2018), our findings suggest that the presence of a new minority group transfers prejudice away from one group (African Americans) and onto another (immigrants).

Second, our paper contributes to the literature examining inter-group relations in multi-ethnic and multi-racial societies. Much of the existing work tends to focus on the boundaries of white identity in historical context (Ignatiev, 1995; Roediger, 1999; Hochschild and Powell, 2008; Saperstein and Penner, 2012; Fouka et al., 2019). Instead, this paper builds on and joins research on more contemporary time periods to show that the influx of new groups can shift attitudes of the in-group toward extant out-groups, which is a precondition for the fluidity of ethnic and racial hierarchy in the United States (Bobo and Hutchings, 1996a; Lyle, 2014; Hochschild et al., 2012; Davenport, 2016; Capers and Smith, 2016; Casarez Lemi, 2018).

Third, our study speaks to the politics of immigration in advanced industrialized countries. To date, much of this research focuses on the ways in which host nations' citizens tend to discriminate against immigrants (Hainmueller and Hangartner, 2013; Hainmueller and Hopkins, 2014a; Adida et al., 2014; Abrajano and Hajnal, 2017; Dancygier et al., 2015; Adida et al., 2016). Within the American context, existing research tends to focus on backlash against immigrants overall in response to either actual or perceived immigration (Sniderman et al., 2004a; Hopkins, 2010; Newman, 2012). Similarly, a growing literature in economics studies the effects of immigration on support for far-right parties and on anti-immigrant sentiment (Halla et al., 2017; Dustmann et al., 2018; Tabellini, 2019). Instead, we examine conditions under which immigration of one group shifts native-born individuals' attitudes toward the existing minority groups in that country. In work most closely related to our own, Hopkins (2010) finds that changes in the Hispanic population of a locality induce negative attitudes toward Hispanics with the politicization of immigrants as a result of the events of 9/11 further increasing this backlash. Our study generalizes the question, and shows that spillovers of attitudes towards other groups can be positive or negative, depending on how distant new

arrivals are from the majority, compared to existing minorities.

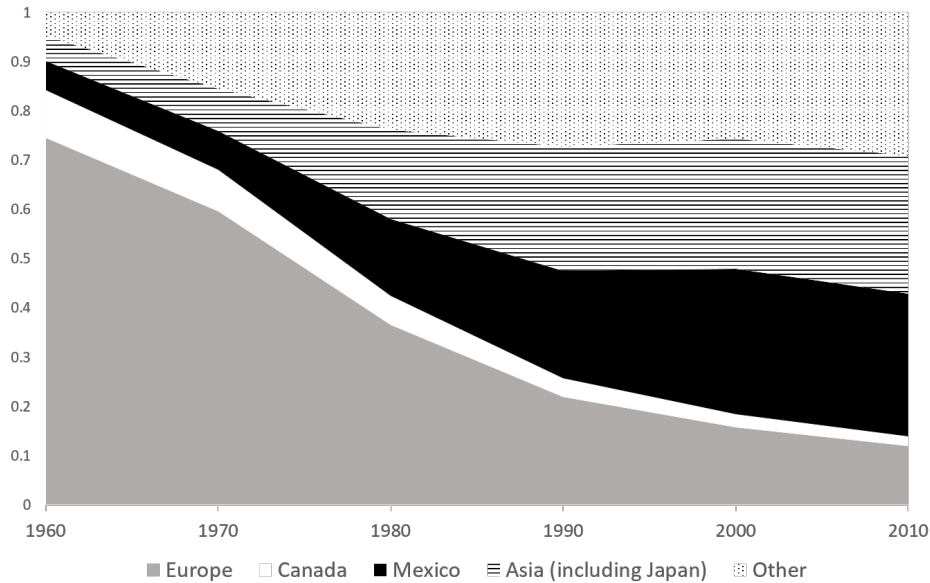
Finally, our paper contributes to the large literature on the relationship between ethnic and racial diversity and social cohesion (Alesina et al., 1999; Putnam, 2007; Habyarimana et al., 2007; Hopkins, 2009; Dahlberg et al., 2012; Enos, 2017). While the majority of studies in this area tend to show a pernicious impact of diversity on many social domains, we instead show that rising diversity can have positive effects on subgroups of the society (and ones that are relatively worse off under conditions of lower diversity). In this respect, our work complements recent work in political science and economics that shows the social benefits of diversity (Boisjoly et al., 2006; Samuel Bazzi, 2019; Charnysh, 2019).

Background

Historically, immigration to the United States originated primarily from Europe. With the exception of restrictions to Asian immigration, the 19th and early 20th century were a time of “open borders”, that saw millions of Europeans – initially from Northern and Western Europe, and later from Southern and Eastern Europe and Russia – arrive to the country (Abramitzky and Boustan, 2017). Such inflows were massively limited by the Immigration Acts in the 1920s, which favored immigration from Western and Northern Europe (Goldin, 1994). In 1965, with the passage of the Immigration and Nationality Act, the US Government effectively lifted the restrictive quota system based on national origins (Tichenor, 2002). Following the lifting of the quotas, immigration started to rise at an increasing rate, with the share of European immigrants falling over time. These trends are depicted in Figure 1 that plots the share of foreign born living in the US between 1960 and 2010. During this period, the share of the immigrant population represented by Mexico increased consistently, from a mere 5% if 1960 to as much as 29% in 2010.

The increasing diversity brought about by rising numbers of non-European immigrants has sparked a fierce debate around the economic and social impact of immigration in the United States (Card, 1990; Borjas, 2003; Hainmueller and Hopkins, 2014b). While the economic ramifications of immigration seem to be decidedly mixed (Clemens and Hunt, 2019; Ottaviano and Peri, 2012), research on its political impacts points to a common theme: immigration (actual or perceived) generates a strong backlash from native-born whites. In general, there

Figure 1. Share of total immigration to the US by major sending region over time

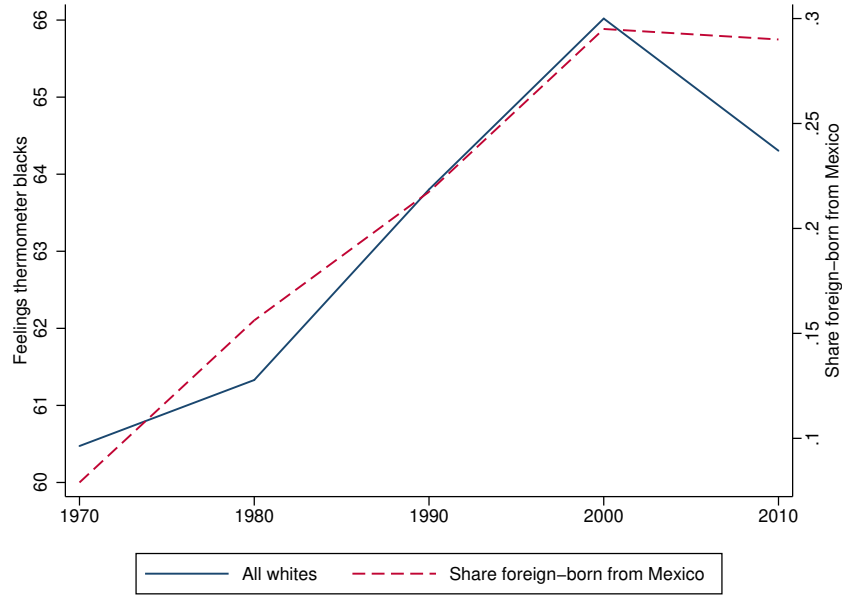


Source: Authors' calculations based on data from the Migration Policy Institute.

seems to be weak support for the idea that the economic threat resultant from immigration motivates political preferences over immigration (Hainmueller and Hopkins, 2014a,b). Instead, opposition to immigration seems to stem from either sociotropic considerations (Hainmueller and Hiscox, 2010), media environments (Hopkins, 2010), or the existing geographic context (Newman, 2012; Enos, 2014). Though this backlash has been prominent throughout US history (Fouka, 2019a,b; Higham, 2002; Tabellini, 2019), the phenomenon is by no means unique to this country. Studies across Western Europe (Sniderman et al., 2004b; Aaroe et al., 2017; Becker and Fetzer, 2017; Halla et al., 2017; Hangartner et al., 2018; Dustmann et al., 2019) and the developing world (Gaikwad and Nellis, 2017; Zhou, 2018) show evidence of backlash against immigrants in terms of attitudes and the ballot-box.

At the same time, during the post-1965 period, and alongside rising immigrant inflows, racial attitudes of whites have consistently improved. Figure 2 shows that anti-black prejudice, as measured by the feelings thermometer in the ANES, has been falling since 1970 – the era following the Civil and Voting Rights Acts of 1964 and 1965 (Kuziemko and Washington, 2018). During this very same period, the share of Mexican immigrants in the country has increased steadily. Attitudes and immigrant inflows track each other closely, and both experience a dip post-2000. This association may be purely incidental, or driven by a number of simultaneous factors. However, in what follows we document that the two phenomena are

Figure 2. Immigration and attitudes towards blacks



Notes: The dashed line plots average values of the black feelings thermometer among whites in ANES between 1970 and 2010. Higher values indicate warmer feelings. The solid line plots the average share of Mexican-born US residents during the same period from the US census.

causally related, and that – though not the only factor – Mexican immigration contributed to the change in whites’ racial attitudes. Before doing so, in the next section we introduce a conceptual framework that links Mexican immigration to changes in whites’ views towards African Americans.

Conceptual framework

How does the inflow of new groups influence the majority’s attitudes towards extant minorities? To our knowledge, no study in political science or economics directly addresses this question. Existing work has shown that attitudes towards different minorities tend to be positively correlated and that factors affecting attitudes towards one minority group have the same, albeit muted, spillover effect on other groups. We first provide a brief summary of related studies. We then propose a more general conceptual framework that draws from self-categorization theory in social psychology and allows for attitudes towards one out-group to positively or negatively affect views of other out-groups, depending on the relative perceived distance between groups. We use this framework to draw several implications that we then test in the data.

Existing literature

Few studies directly examine how the majority's views of one minority group affect attitudes towards other minorities. Carney and Enos (2018) show that scales designed to measure anti-black prejudice tend to also measure general prejudice toward all out-groups. Hopkins (2010) and McConnell and Rasul (2018) find that heightened anti-Muslim prejudice after 9/11 negatively affected attitudes and behaviors towards Hispanics in the US. These studies would indicate that attitudes towards minorities are positively correlated and tend to respond in a similar way to situational factors.

More generally, theories explaining out-group prejudice on the basis of conflict over material resources (Key, 1949; Blalock, 1967; Branton and Jones, 2005; Hopkins, 2009; Rugh and Trounstein, 2011) or over social status (Bobo and Hutchings, 1996b; Gould, 2003; Wilkins and Kaiser, 2014; Craig and Richeson, 2014) and identity (Blumer, 1958; Enos, 2017) tend to focus on attitudes towards the specific out-group threatening the majority. To the extent that predictions from those theories generalize to other minorities, one might expect that realistic or symbolic conflict increases competition and animosity between the majority and all extant out-groups. Yet such predictions are not clearly articulated in these literatures.

In contrast with the studies mentioned in the previous paragraph, variations of theories rooted in intergroup contact suggest the potential for positive spillovers of attitudes towards immigrants on attitudes towards other out-groups (Allport, 1954; Pettigrew, 1998). Specifically, the literature on "secondary transfer effects" extends predictions of contact theory to multiple groups (Pettigrew, 2009; Tausch et al., 2010). This set of theories argues that positive contact with one group can spillover to other out-groups through a psychological process of attitude generalization. Studies across a number of different contexts seem to find support for this theory (Weigert, 1976; Pettigrew, 1997; Van Laar et al., 2005; Pettigrew, 2009; Tausch et al., 2010).

One element that all above theories have in common is that they do not allow for negative correlations in attitudes towards different groups. However, majority members often exhibit substitution in prejudice towards different minorities. For instance, Hainmueller and Hangartner (2013) find that discrimination by the Swiss towards Southern European immigrants drops over time, just as discrimination towards immigrants from Yugoslavia and Turkey increases. Work by Fouka et al. (2019) uncovers a causal connection between attitudes towards old and

new immigrants. These authors show that the influx of African Americans into Northern US cities during the Great Migration improved integration outcomes of European immigrants residing in these areas by casting them as white in the eyes of native-born Anglo-Saxons. In that case, a new out-group helped existing outsiders.

In what follows, we provide a general framework that can explain both positive and negative correlations in attitudes towards different out-groups. We argue that such a framework helps us reconcile contradictory findings in the aforementioned literatures.

Self-categorization theory and attitudes towards out-groups

We rely on self-categorization theory (Turner et al., 1987, 1994), which studies how individuals classify themselves and others into groups. Prejudice is higher towards members of the out-group, as is evidenced by a large literature in the social sciences (Duckitt, 1994; Bernhard et al., 2006). To understand how new groups affect prejudice of the majority towards extant minorities, we examine the way in which majority members classify others into in- and out-group.

Social categorization takes place on the basis of shared attributes. The more attributes are shared by two individuals, the more likely it is that they categorize each other as members of the same group. Since people have multiple attributes, and share similarities in some, but not in others, the relevant question is which attributes emerge as important for social categorization. We hypothesize that attributes crucial in defining social cleavages emerge endogenously depending on underlying distances between groups. The following situation presents our framework in a nutshell. Consider the arrival of a group that is distinguished from the in-group by an attribute other than the one dividing the in-group from the extant out-group. If the new group is of higher perceived distance to the in-group, then the attribute on the basis of which the new group differs from the in-group will become the relevant one for social categorizations into in- and out-group.

This conclusion derives from two simple assumptions. First, we assume that classification is context-dependent. The same person can be classified as a member of the in-group or the out-group, depending on whom they are compared to. We specifically assume that classification follows the rule of maximization of the *meta-contrast ratio*, defined as the ratio of *across group differences* over *within group differences*. This assumption is a central tenet in

self-categorization theory, and is verified as an empirical regularity in numerous experimental studies (Tajfel and Wilkes, 1963; Turner et al., 1987). More recently, Gennaioli and Tabellini (2018) document that this mechanism is likely to be responsible for the rise of identity politics in both Europe and the US. Intuitively, this assumption implies that humans are more likely to think of a collection of stimuli as a single grouping if differences between those stimuli are smaller than differences between the grouping that they form and other groupings. An Italian is more likely to feel closer to a German in the US, than in Europe. When compared to other Americans, a German appears more similar to the Italian and “European” arises as a salient category for in-group-out-group distinctions. When compared to other Europeans – e.g. Southern Europeans who may be culturally more similar to Italians – Germans appear more distant and nationality becomes the attribute relevant for classification.

Our second assumption is that individuals’ choice of the relevant difference between groups is based on a summary measure of distance, which we term *affective distance*. Affect is a heuristic of decision-making (Zajonc, 1980) based on an emotional response. Affective distance, or how an individual feels towards members of a group, can be driven by many underlying determinants, such as a group’s perceived competence or quality, or the degree to which it is perceived to be threatening or in competition with the in-group (Tajfel and Turner, 1986b).¹ In our empirical context, this measure neatly maps onto feelings of warmth towards different groups captured by the feelings thermometer question in ANES.

With K out-groups and J binary attributes, and denoting affective distance of group k from the in-group by δ_k , the meta-contrast ratio for an attribute j is given by

$$R_j = \frac{\frac{\sum_{k \in K} \delta^k I_j^k}{\sum_{k \in K} I_j^k}}{\frac{\sum_{k \in K} \delta^k (1 - I_j^k)}{\sum_{k \in K} (1 - I_j^k)}}$$

where I_k^j is an indicator equal to 1 if group k differs from the in-group along the j^{th}

¹A related concept is social status. This framework has many similarities to Shayo (2009). In that model there are multiple possible categories used for social classification, the salience of different groups and their attributes are exogenously given, and social status develops endogenously. Here we consider one relevant categorization. We start from an exogenously given affective distance and endogenize the salience of different attributes. We restrict attention to individual decision-making, while Shayo (2009) provides a general equilibrium model that is interested in different predictions.

attribute. Maximization of the meta-contrast ratio then implies that the relevant attribute for social categorization is the one for which R_j is largest.

We illustrate this general principle with a stylized example from our specific empirical context. Suppose that each individual is fully characterized by two attributes: skin color and nativity. Assume that these are binary, so that people can be either native-born or foreign-born and either black or non-black. With two binary attributes, there are four possible groups in society: native-born blacks (NB), native-born non-blacks (NW), foreign-born blacks (FB) and foreign-born non-blacks (FW). How will an individual decide whether someone is a member of their in-group? Categorizing another is easy when people share both attributes (e.g. native-born non-blacks consider other native-born non-blacks as members of their in-group), but what happens when only one attribute is shared? Whether an individual will be categorized as in-group or out-group member depends on which attribute matters more for categorization.

Assume we are interested in how native-born whites classify native-born non-whites. Is nativity or skin color the relevant attribute for in-group classification? We can write the meta-contrast ratio for nativity as

$$R_{\text{nativity}} = \frac{\frac{\delta_{FW} + \delta_{FB}}{2}}{\delta_{NB}}$$

and for skin color as

$$R_{\text{skin color}} = \frac{\frac{\delta_{NB} + \delta_{FB}}{2}}{\delta_{FW}}$$

The principle of meta-contrast ratio maximization implies that skin color will be the relevant attribute for categorization whenever $\delta_{FW} < \delta_{NB}$. An increase in the share of foreign-born non-blacks can turn nativity into the relevant social cleavage, if the influx of that group increases δ_{FW} .

Generalizing from this simple example, the appearance of a new out-group that differs from the in-group along a given dimension will make that dimension salient and turn it into a basis of social divisions under two conditions. First, the new group must be sufficiently

differentiated from the existing out-group. In the example above, if the incoming group was identical to existing minorities in the skin color dimension, then no re-categorization would take place. Second, affective distance between the new group and the in-group must be larger than the distance between the in-group and existing out-groups. We argue, and provide evidence, that these conditions describe well the effects of Mexican immigration on whites' attitudes towards blacks.

This simple framework has three additional testable implications. We state these in the context of the empirical context at hand.

(P1) *The effect of immigration is increasing in the baseline difference in affective distance between the new group and existing out-groups.*

What matters for classification is not the absolute distance of new arrivals from natives, but their distance *relative to* existing minorities.² Intuitively, natives evaluate different groups in comparison to other groups, and not in isolation. The more distant new groups are perceived to be compared to extant out-groups, the more they improve attitudes towards the latter.

(P2) *An increase in the relevance of nativity as an attribute for social categorization implies that prejudice towards other non-native groups increases in response to immigrant inflows.*

When the relevant dimension for in-group-out-group classifications changes, this has implications for all other groups differing from the in-group along this dimension. In our specific context, when the influx of Mexican immigrants leads the native majority to discriminate on the basis of immigrant status, instead of discriminating on the basis of race, this discrimination spills over to all other immigrant groups.

(P3) *Inflows of non-native groups with lower affective distance to whites compared to blacks do not have the same effect as Mexican inflows.*

A corollary of the theory is that groups of lower affective distance (compared to existing

²Throughout our work, we interchangeably use the word natives and the expression “majority group members”.

minorities) will accentuate, instead of de-emphasizing, the existing dimensions of difference between the majority and existing minorities. When immigrant groups are very similar to natives (e.g. white immigrants from other Western countries), their comparison with racial minorities may end up increasing prejudice against the latter. More broadly, if (relative) affective distance is ambiguous, incoming groups are not expected to have clear-cut effects on majority attitudes towards minorities.

We return to these predictions when presenting our empirical results, and provide evidence consistent with each of them.

Data and empirical strategy

Data

Data on Mexican and overall immigration as well as other state-level demographic characteristics are taken from the US Censuses (Ruggles et al., 2019) for the various decades between 1960 and 2010. When needed, we complement these data with those from Manson et al. (2019). To assess whether immigrant inflows from Mexico affect whites' attitudes toward African Americans, we rely on survey data from the American National Elections Study (ANES). The ANES is one of the largest and most comprehensive social surveys conducted in the United States over the time period we consider, and has been used across the social sciences to study the evolution of a host of different types of attitudes including race, gender, and partisanship (Campbell et al., 1960; Fernandez et al., 2004; Valentino and Sears, 2005b). We focus primarily on attitudes toward African Americans, but also examine attitudes towards Hispanics and Asian Americans as a means of investigating mechanisms behind our main results. Because data on immigrant flows is decadal, we map survey responses during a given decade to inflows in the beginning of the decade. For example, responses in the years 1972-1980 are mapped to immigrant inflows in 1970.

Our main measure of attitudes towards blacks is the black-white feeling thermometer. The scale of responses goes from 0 to 100, with higher values indicating warmer feelings. The feeling thermometer has the advantage of having been consistently asked over time and of being widely used in studies of racial attitudes in the social sciences, which allows us to benchmark our findings to existing work. Additionally to the thermometer we also use the following

key survey instruments that also appear in at least three out of the four decades under study: whether the respondent believes that blacks are hard-working, intelligent, violent, or trustworthy (all four items coded on a 1 to 7 scale), whether they feel close to blacks, whether they believe that blacks should be helped by the government, and whether they believe that black and white schools should be integrated. These survey items collectively capture most salient dimensions of anti-black prejudice. We recode all items so that higher values indicate lower prejudice and create an index out of all standardized items (including the feeling thermometers) to reduce noise and avoid multiple hypothesis testing (Ansolabehere et al., 2008). For our analysis of mechanisms, we also use feeling thermometers for Hispanics and Asian Americans. For these groups, as for blacks, we construct averages of thermometer rankings and other questions that have been consistently asked over time. These include feelings of closeness and ratings of the group in terms of work ethic, intelligence, violence and trustworthiness. Table A.1 in the Appendix presents summary statistics for all variables used in our analyses.

Empirical strategy

Our main empirical strategy is a difference-in-differences design. We compare changes in racial attitudes across states with changing fractions of Mexican immigrants, holding constant time-invariant state characteristics and accounting for time-varying unobservables common to all states within the same Census region. We estimate:

$$Y_{irst} = \beta_1 M_{rst} + \beta_2 S_{rst} + \gamma_{rs} + \mu_{rt} + \mathbf{X}_{irst} + \eta_{irst} \quad (1)$$

where M_{rst} is the fraction of the total population that is born in Mexico in census region r and state s in time t . Our key parameter of interest is β_1 which represents the impact of Mexican immigration on attitudes Y_{irst} for an individual i . The terms γ and μ represent state and decade by Census region fixed effects. Thus, all comparisons are *within* state and *within* decade. In particular, the inclusion of region by decade fixed effects implies that β_1 is estimated from changes in Mexican immigration within a state over time, as compared to other states within the same region in the same decade. To account for the fact that patterns of Mexican immigration within the US may be correlated with and capture the effect of

immigration more generally, we always control for S_{rst} , the share of (non-Mexican) immigrants in a state and decade. Finally, we control for a set of baseline individual-level characteristics (age, age squared, and gender) collected in the vector \mathbf{X}_{irst} . We cluster standard errors at the state level.

This approach differences out all time-invariant unobservable characteristics of states that could affect both immigrant location choices and racial prejudice. However, one might still worry that local time-varying factors are influencing both immigrants' settlements and the social integration of minorities. Immigrants' location decisions may be endogenous to opportunities for social integration of minorities or to natives' views towards other groups in the society. On the one hand, immigrants might be attracted precisely to areas where the social environment is growing more cohesive. On the other, existing minority groups and new immigrants might end up settling in places characterized by increasing levels of residential segregation and racial discrimination.

To overcome these and similar concerns, we predict the number of Mexican immigrants settling in a given area over time using a version of the shift-share instrument commonly adopted in the immigration literature (Card, 2001). Intuitively, the instrument assigns immigration flows from Mexico between 1970 and 2010 to destinations within the United States proportionally to the shares of Mexican immigrants who had settled there in 1960, prior to the change in immigration regime introduced in 1965. In the specific context of Mexican immigration, a very similar approach is used in Monras (2019).

Formally, the predicted number of Mexican immigrants in decade t is computed as

$$Z_{st} = \alpha_s^{Mex} O_t^{Mex} \tag{2}$$

where α_s^{Mex} is the share of Mexican immigrants living in state s in 1960 (relative to all Mexican immigrants in the US), and O_t^{Mex} is the number of Mexican immigrants entering the United States between year t and $t - 10$, for decades 1970 to 2010. Since we are interested in the effects of the fraction of immigrants, we scale Z_{st} by a state's population. To avoid dividing with an endogenous variable, we use predicted population based on a state's 1970 population and pre-1970 population growth rate.

We rely on the 1960 distribution of immigrant enclaves because it pre-dates the dramatic

change in the immigration regime that occurred in 1965. This is desirable for at least two reasons. First, the post-1965 immigration flows were largely triggered by a nation wide change in policy regime, reducing concerns that the specific factors attracting new and old migrants were correlated over time. Second, the 1965 Immigration and Naturalization Act (also known as the Hart-Celler Act) generated a substantial change in the composition of immigrants moving to the United States, in turn lowering the potential problem of serial correlation typical of shift-share instruments constructed for the post 1970 period (Jaeger et al., 2018).

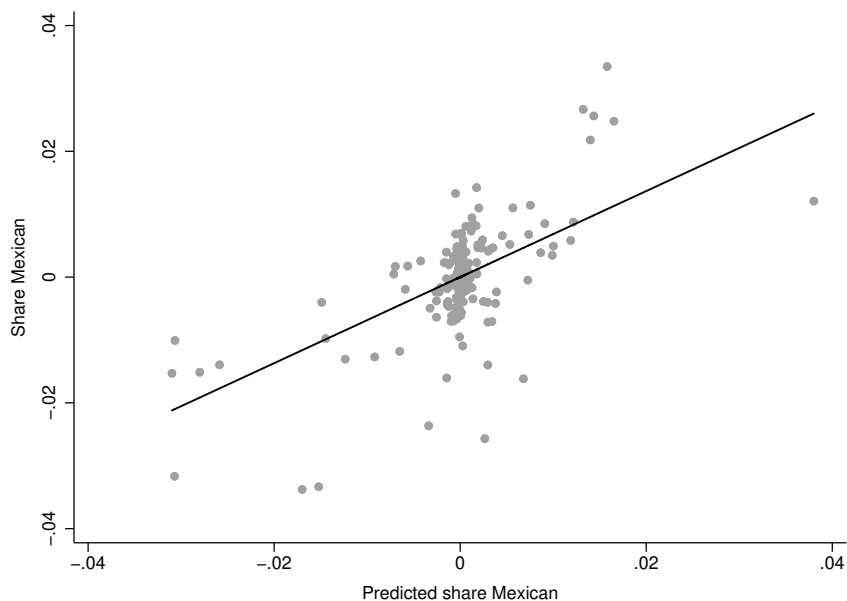
Figure 3 displays graphically the relationship between the fraction of immigrants from Mexico and the corresponding instrument at the state level, after partialling out state and decade by region fixed effects as well as the predicted share of immigrants from countries other than Mexico. In all empirical analyses we control for the instrumented share of non-Mexican immigrants, to ensure that our instrument does not capture any general increase in immigration, but the effect of Mexican immigration specifically. Throughout, we report AP F-statistics on the predicted share of Mexicans. The AP F-statistic is the relevant F-statistic in the presence of multiple instruments (Angrist and Pischke, 2009).

We report first stage results in Table A.2 in the Appendix. The first stage relationship is strong and insensitive to controlling for predicted immigration from countries other than Mexico or to the inclusion of interactions between year dummies and a number of 1960 variables that could conceivably have a time-varying effect on both immigration and racial attitudes (urbanization, the share of foreign-born, the share of blacks, unemployment rate, the share of high school graduates and distance from Mexico).

The key identifying assumption behind the instrument is that places that received more Mexican immigrants before 1960 are not on differential trajectories in terms of changes in whites' attitudes or in the social assimilation of minorities (Goldsmith-Pinkham et al., 2018). We provide three pieces of evidence in support of this assumption, which we discuss more extensively when presenting our results. First, and following Goldsmith-Pinkham et al. (2018), we show that interacting year dummies with baseline state characteristics that one may suspect are also correlated with changes in whites' attitudes leaves our results unaffected.³ Sec-

³Table A.3 in the Appendix shows that share of blacks and college graduates in 1960, as well as distance

Figure 3. First stage



Notes: The figure shows the relationship between the change in actual and predicted fraction of immigrants of Mexican origin for the years 1970 to 2010. Each point represents the coefficient from a regression of actual on predicted fraction of Mexican immigrants, year by region and state fixed effects, and the predicted fraction of non-Mexican immigrants. Regressions are weighted by the number of observations in the ANES sample.

ond, we show that a linear trend constructed on the basis of 1960 shares of Mexicans does not have any effect on our outcomes. This implies that our results are not driven by (linearly) time-varying unobservable factors correlated with initial Mexican shares. Finally, we verify that the 1960 shares (and their potential state-level correlates) cannot independently account for our findings, by conducting a randomization inference exercise that assigns inflows from different nationalities to initial state-level shares of Mexicans. We show that this approach yields results less significant than our baseline estimates over 90% of the time.

Results

Immigration and racial attitudes

Table 1 presents our main results, reporting OLS and 2SLS estimates in columns 1-3 and 2-4 respectively. Focusing on 2SLS, an increase in the share of Mexican immigrants is associated

from Mexico, are significant predictors of the fraction of the population that is of Mexican origin.

with an increase in both the feelings thermometer (column 2) and the average of standardized whites' racial attitudes (column 4). The magnitude is substantive. According to our estimates, one percentage point increase in the Mexican share raises the black thermometer by 1.5% and the average standardized measure by more than 30%, relative to their baseline means. Considering that, between 1970 and 2010 the fraction of Mexicans increased, on average, by 2.1 percentage points, our results indicate that Mexican immigration had the potential to dramatically shift whites' views towards African Americans.

Differently from 2SLS estimates, OLS coefficients are not statistically significant and, in the case of thermometer, negative. This discrepancy is consistent with Mexican immigrants moving to states where whites' racial views were becoming more conservative. One possible explanation for this pattern is that, due to congestion costs, immigrants moved to places that were characterized by higher racial residential segregation and where whites' attitudes were less liberal.

Table 1. Baseline effects on attitudes (ANES)

Dependent variable	Feeling thermometer blacks		Average	
	OLS (1)	2SLS (2)	OLS (3)	2SLS (4)
Share Mexican	-15.751 (28.663)	84.230* (43.006)	0.364 (0.561)	4.518*** (1.636)
Mean dep. variable	63.067	63.067	-0.147	-0.147
Observations	17,188	17,188	20,675	20,675
R-squared	0.034	0.033	0.037	0.036
AP F-stat Share Mexican		69.25		80.05

Notes: Years 1970-2010. The sample is restricted to white respondents. Average is the mean of the following (standardized) items: Feeling thermometer, R feels close to blacks, blacks hardworking, blacks intelligent, blacks violent, blacks trustworthy, blacks should be helped by the government, black and white schools should be integrated. Higher values indicate warmer feelings (thermometer) or less prejudice (average). All columns include controls for age, aged square, gender, state and year by region fixed effects, and (instrumented) share of (non-Mexican) immigrants. Standard errors clustered at the state level.

We conduct several checks to verify that these effects represent causal estimates. Table A.5 in the Appendix shows that the estimates become larger in magnitude when controlling for a number of 1960 state characteristics interacted with year fixed effects. These are meant to account for the fact that states that received more Mexican immigrants in 1960 might have been on differential trends in terms of their economies, population composition, or social and political conditions, that could have also affected racial attitudes. Yet the time-varying effect of rural status, the share of blacks, foreign born and high school graduates, unemployment rate and distance from Mexico does not substantively affect our results.

Given that state-level shares of Mexican immigrants in 1960 are not random (Table A.3), the concern remains that, even after controlling for the time-varying effect of observables, results may be driven by time-variant unobservable factors correlated with the initial spatial distribution of Mexican immigrants. We provide evidence against this concern in two ways. First, we show that a linear trend based on the 1960 fraction of Mexican immigrants has no explanatory power for racial attitudes. To perform this placebo test, we interact the state-level fraction of Mexicans in 1960 with the average inflow of Mexican immigrants over the period 1970-2010 and create a stock version of the instrument by recursively summing up predicted inflows constructed in this way. If the baseline distribution of Mexican immigrants was correlated with time-varying unobservables affecting racial attitudes, we would expect this instrument to positively and significantly predict our outcomes of interest. Results are shown in Table A.4. Columns 1–2 and 3–4 display reduced form and 2SLS coefficients for our actual and placebo instrument, respectively. Placebo Mexican inflows have an insignificant effect on both the feeling thermometer (Columns 3–4) and average prejudice (Columns 7–8).

Second, we take a more systematic approach to rule out a persistent effect of the 1960 state-level fraction of Mexican immigrants by conducting a randomization inference exercise (Young, 2018). We reconstruct predicted immigrant inflows at the state level by randomly assigning national-level immigrant inflows from different nationalities to the 1960 shares of Mexican immigrants within states and decades (without replacement). We randomly draw 1,000 sets of placebo assignments of inflows to shares and re-estimate our baseline equation. Figure A.1 plots the distribution of t-statistics resulting from this exercise for the feeling thermometer (left) and average prejudice (right). Vertical lines are drawn at the value of the t-statistic for our actual treatment effect. We report empirical p-values as the share of t-statistics that are larger than the actual one. Results indicate that random assignments of inflows to 1960 shares are unlikely to produce the effects we estimate.

Social categorization and the role of distance

Why does Mexican immigration improve whites' attitudes and behaviors towards blacks? This result appears counterintuitive upon first inspection. If immigration triggers negative responses of natives towards incoming immigrant groups, as is evidenced by a growing body of literature (Hainmueller and Hopkins, 2014a; Becker and Fetzer, 2017; Hangartner et al., 2018;

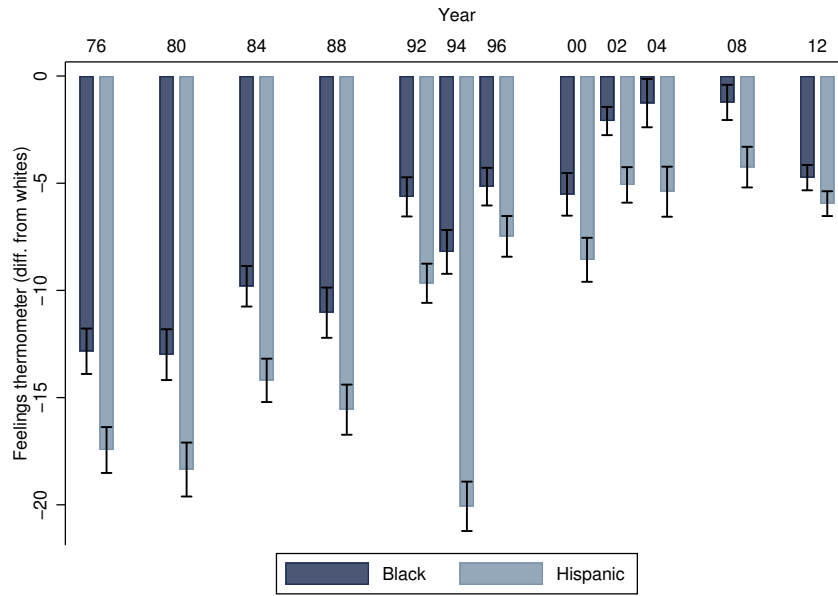
Dustmann et al., 2019), one could reasonably expect such negative attitudes to spill over to all other minorities. Empirical findings on the negative effects of 9/11 on Hispanics (Hopkins, 2010; McConnell and Rasul, 2018) would also indicate that anti-immigrant prejudice should extend to other minority groups.

Our proposed explanation suggests instead that the increase in the share of an immigrant group can affect attitudes towards other minority groups either positively or negatively. The direction of the effect depends on that group's relative perceived distance from the majority in-group. If individuals classify others into in-group and out-group based on the simple principle of meta-contrast ratio maximization, then the appearance of a distant new out-group will increase the salience of the dimension on which the new group differs the most from the in-group. In the case of Mexican immigrants, focus is shifted away from race and towards immigrant status as a dimension relevant for social classification. This in turn reduces prejudice towards blacks.

The fundamental premise in this argument is that Mexican immigrants have a higher affective distance from native whites than do blacks. This is a testable assumption, which is supported by existing evidence (Davis, 2007; McConnell and Rasul, 2018) and by our own analysis of the ANES data. Figure 4 plots average values of the black and Hispanic thermometers among white respondents (compared to average values of the white thermometer as benchmark) for every survey year in the ANES. Whites consistently express warmer feelings towards blacks, as compared to Hispanics, and differences between the two groups are always statistically significant. While the feelings thermometer is only an imperfect proxy of affect, these results support the view that Hispanics have a higher affective distance from whites than do blacks.

2SLS results reported in Table 2 show that whites' affective distance from Hispanics is further increased in response to Mexican immigration (columns 2 and 4), even though these effects are imprecisely estimated. Respondents in states that receive more Mexican immigrants register a drop in the value of the Hispanic thermometer and an increase in prejudice towards Hispanics. These patterns are consistent with findings in several studies in political science and economics that show that immigration often triggers natives' backlash (Becker

Figure 4. Feeling thermometer over time, blacks and Hispanics



Notes: Sample restricted to white respondents.

and Fetzer, 2017; Hangartner et al., 2018; Dustmann et al., 2019).⁴ Taken together, Figure 4 and Table 2 provide evidence that Mexican immigrants are a group more distant from whites than are native-born blacks, and that the increase in their numbers further increases this relative affective distance. A theory of social categorization would then predict that Mexican immigration increases the salience of immigrant status (and lowers the salience of skin color) as a the relevant dimension of social divisions. Reduced prejudice towards blacks follows directly from that mechanism.

When presenting our framework of social categorization based on the rule of meta-contrast ratio maximization, we derived three testable implications of the theory. We return to these predictions here and provide empirical evidence for each using the ANES data.

⁴In contrast with Table 1, OLS estimates are now more positive than 2SLS ones. One possible reason is that changes in racial attitudes among whites were negatively correlated with changes in attitudes towards Mexican immigrants over time.

Table 2. Effects on attitudes towards Hispanics

Dependent variable	Feeling thermometer Hispanics		Average	
	OLS (1)	2SLS (2)	OLS (3)	2SLS (4)
Share Mexican	42.587 (59.578)	-318.664* (187.341)	1.056 (2.402)	-7.410 (4.847)
Mean dep. variable	61.288	61.288	-0.101	-0.101
Observations	11,399	11,399	11,858	11,858
R-squared	0.061	0.056	0.080	0.078
AP F-stat Share Mexican		47.98		88.59

Notes: Years 1980-2010. The sample is restricted to white respondents. Average is the mean of the following (standardized) items: Feeling thermometer, R feels close to Hispanics, Hispanics hardworking, Hispanics intelligent, Hispanics violent, Hispanics trustworthy. Higher values indicate warmer feelings (thermometer) or less prejudice (average). All columns include controls for age, aged square, gender, state and year by region fixed effects, and (instrumented) share of (non-Mexican) immigrants. Standard errors clustered at the state level.

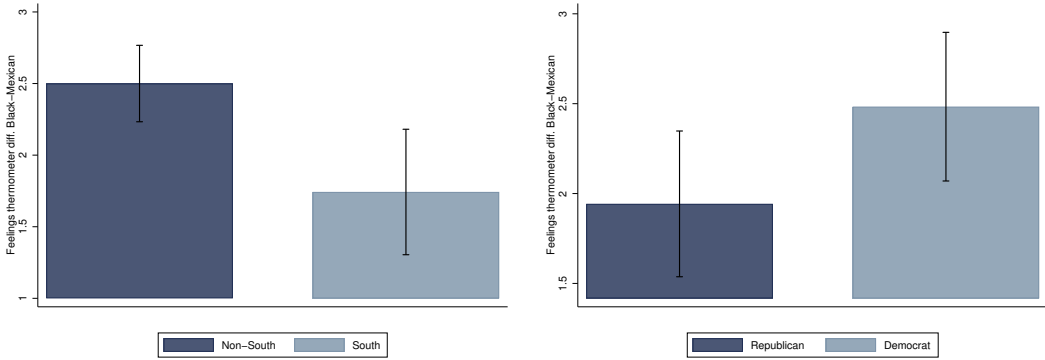
Prediction P1: *The effect of immigration is increasing in the baseline difference in affective distance between the new group and existing out-groups.*

P1 states that what matters for the effect of immigration on attitudes towards other minorities is how distant incoming groups are from natives *relative to* existing out-groups. An immigrant group that is more distant than existing minorities will improve majority attitudes towards them, and this effect will be larger the higher the new out-group’s (relative) affective distance from the majority. We test this prediction empirically by exploring heterogeneity patterns within the ANES sample. Respondents’ relative attitudes towards blacks and Hispanics differ depending on their geographic location and their partisan affiliation. Figure 5 plots average differences between the black and Hispanic thermometers by US region and partisanship. Interestingly, these differences are lower for respondents residing in the South and for Republicans. These groups tend to view blacks and Hispanics as more similar than do non-southerners and Democrats, who tend to feel relatively more warmly towards blacks.

Table 3 presents estimates of heterogeneous effects of Mexican immigration by region and partisanship. Consistent with our framework, the effect is concentrated among non-southern respondents and among Democrats. These are the groups that view Hispanics as more distant than black minorities. Consequently, it is for these respondents that increases in the Hispanic population increase the salience of immigrant status and reduce prejudice towards blacks the most.

We investigate heterogeneity by baseline difference in affective distance between blacks and

Figure 5. Difference in feelings between blacks and Hispanics, by geographic region and party affiliation



Notes: The figures plot the average difference between black and Hispanic feelings thermometer, by region and partisanship. Black lines are confidence intervals. Sample restricted to white respondents.

Hispanics more systematically in Table 4. We construct state-level averages of the difference in thermometer values between blacks and Hispanics in 1980 – the first survey decade for which attitudes on Hispanics began to be systematically collected. Larger values indicate that (white) respondents have warmer feelings towards blacks than they do towards Hispanics. We then interact the effect of the share of Mexicans with this variable. The results indicate that all of the improvement in whites’ feelings thermometer towards blacks comes from states whose residents viewed Mexicans more coolly than blacks in 1980 (column 2). Although the point estimate on the interaction term is not statistically significant when focusing on average (column 4), we view these results as additional evidence in support of P1.

Prediction P2: *An increase in the relevance of nativity as an attribute for social categorization implies that prejudice towards other non-native groups increases in response to Mexican inflows.*

If Mexican inflows increase the salience of nativity as the relevant dimension for in-group-out-group distinctions, then other groups differing in terms of that dimension are more likely to be categorized as out-group members and experience an increase in prejudice. We provide evidence for such a dynamic by exploiting ANES responses to the question “What do you think are the most important problems facing the country?”. Respondents could choose three issues out of a list of problems, with the choice set varying over time. In the original survey data, these are open-ended questions, but the ANES reclassified the answers of respondents

Table 3. Heterogeneity by region and party affiliation

Dependent variable	Feeling thermometer blacks			Average		
	(1)	(2)	(3)	(4)	(5)	(6)
Share Mexican	6.329 (72.974)	-9.428 (39.861)	14.349 (38.682)	1.565 (1.767)	0.665 (0.960)	2.626** (1.032)
Share Mexican \times South	-5.708 (60.322)			-0.128 (1.406)		
Share Mexican \times Democrat		37.061*** (9.109)			2.659*** (0.654)	
Share Mexican \times Republican			-21.375*** (5.099)			-2.312*** (0.159)
Mean dep. variable	63.067	63.067	63.067	-0.147	-0.147	-0.147
Observations	17,188	17,188	17,188	20,675	20,675	20,675
R-squared	0.030	0.032	0.031	0.032	0.037	0.036
AP F-stat Share Mexican	103.23	246.55	110.93	134.73	337.46	158.71

Notes: Years 1970-2010. The sample is restricted to white respondents. Average is the mean of the following (standardized) items: Feeling thermometer, R feels close to blacks, blacks hardworking, blacks intelligent, blacks violent, blacks trustworthy, blacks should be helped by the government, black and white schools should be integrated. Higher values indicate warmer feelings (thermometer) or less prejudice (average). All columns include controls for age, aged square, gender, state and year by region fixed effects, and (instrumented) share of (non-Mexican) immigrants. Standard errors clustered at the state level.

into broader categories. Following Bordalo et al. (2019), we relied on such categories to define to outcomes that we investigate in Table 5.

Columns 1–2 of Table 5 present OLS and 2SLS estimates, and show that Mexican immigration significantly increases the share of (white) respondents who identify immigration policies as the most important issue facing the country at the time of the survey. Conversely, the share of respondents mentioning race and public order problems decreases in response to Mexican inflows (columns 3–4). These results are consistent with Mexican inflows increasing the salience of immigration, while simultaneously lowering that of race in the minds of white Americans. Table A.6 in the Appendix provides additional evidence consistent with prediction P2. Specifically, it shows that Mexican immigration lowers thermometer values and increases summary prejudice of white respondents towards Asian-Americans.⁵

These findings, interpreted through the lens of our conceptual framework, help to reconcile

⁵One would potentially expect stronger effects if the ANES thermometer questions referred to immigrants explicitly. For Asian Americans specifically, one could argue that they differ from native whites on the basis of race, as well as of immigrant status. In that case one dimension of difference (immigrant status) becomes accentuated, while another (race) diminishes in importance. However, the black-white binary is a more salient division within the context of US society, and thus the division expected to be most affected when another cleavage increases in importance. It is unclear where Asian-Americans are situated with respect to that skin color division and if they are affected by changes in its salience.

Table 4. Effects by baseline difference in black-Hispanic thermometer

Dependent variable	Feeling thermometer blacks		Average	
	OLS (1)	2SLS (2)	OLS (3)	2SLS (4)
Share Mexican	-87.240** (34.290)	-104.196 (92.583)	-2.343** (1.052)	3.517 (4.613)
Share Mexican \times 1980	12.442*** (3.893)	20.567*** (6.522)	0.473*** (0.168)	0.185 (0.316)
Diff. black-Hispanic thermometer				
Mean dep. variable	63.067	63.067	-0.147	-0.147
Observations	16,640	16,640	20,077	20,077
R-squared	0.033	0.033	0.037	0.036
AP F-stat Share Mexican		124.11		156.13
AP F-stat interaction		221.08		236.01

Notes: Years 1980-2010. The sample is restricted to white respondents. Average is the mean of the following (standardized) items: Feeling thermometer, R feels close to blacks, blacks hardworking, blacks intelligent, blacks violent, blacks trustworthy, blacks should be helped by the government, black and white schools should be integrated. Higher values indicate warmer feelings (thermometer) or less prejudice (average). All columns include controls for age, aged square, gender, state and year by region fixed effects, (instrumented) share of (non-Mexican) immigrants and its interaction with the 1980 difference between black and Hispanic feeling thermometer. Standard errors clustered at the state level.

Table 5. Most important problem in the country

Dependent variable	Immigration policies		Racial and public order problems	
	OLS (1)	2SLS (2)	OLS (3)	2SLS (4)
Share Mexican	0.248** (0.123)	0.180** (0.085)	-1.165 (0.695)	-1.367 (0.835)
Mean dep. variable	0.005	0.005	0.097	0.097
Observations	11,693	11,693	11,693	11,693
R-squared	0.010	0.010	0.061	0.061
AP F-stat Share Mexican		86.15		86.15

Notes: Years 1970-2010. The sample is restricted to white respondents. *Immigration policies* and *Racial and public order problems* refer to the categories of problems representing the first choice of ANES respondents for the most important problem facing the country. All columns include controls for age, aged square, gender, state and year by region fixed effects, and (instrumented) share of (non-Mexican) immigrants. Standard errors clustered at the state level.

conflicting results in the literature. On the one hand, Hopkins (2010) and McConnell and Rasul (2018) find that 9/11, and the associated Islamophobic reaction among Americans, worsened attitudes towards Hispanics. On the other, Fouka et al. (2019) find that 1915-1930 black in-migration to the US North, and the associated increase in racism among northern whites, improved the relative standing of (white European) immigrants. Our framework can explain these seemingly contradictory results. By raising the salience of dimensions related to immigration and foreign-born threat, 9/11 had negative spillovers on all groups differing from natives on such dimensions, including Hispanics.⁶ Instead, by raising the salience of skin

⁶Interestingly, and consistent with our findings, McConnell and Rasul (2018) find no negative spillover of

color, black in-migration to the US North reduced the importance of ethnicity as a dimension relevant for social categorization, thus helping white immigrants.

Prediction P3: *Inflows of non-native groups with lower affective distance to whites than blacks do not have the same effect as Mexican inflows.*

Finally, a corollary of our theory is that one should not observe reduction in prejudice in response to inflows of immigrant groups that are not clearly more distant (in terms of affect) from whites than are blacks. To test this, we compare the effects of Mexican immigration to those of immigration from Europe and Canada. Immigrants from these regions are predominantly white and highly skilled, both characteristics that presumably lower their affective distance from white Americans.⁷ While we do not have an explicit measure of affective distance of those groups *relative* to blacks, it is reasonable to assume that this measure is lower than the respective measure for Hispanics.

We present 2SLS results for the feelings thermometer and the average attitudes towards blacks in columns 1 to 3 and 4 to 6 of Table 6, respectively. Columns 1 and 4 only control for white immigration, while columns 2 and 5 also include the share of Mexicans. When focusing on the feelings thermometer, results indicate that white immigration has a negative effect on racial views of white Americans, even though the point estimate is imprecisely estimated and never statistically significant at conventional levels. Turning to average attitudes, the coefficient on white immigration is positive, but never statistically significant. Overall, we interpret these findings as consistent with white immigration having ambiguous and unclear effects on native whites' racial attitudes. In contrast with results for white immigration, as shown above, Mexican immigration significantly increases warmth and lowers prejudice.⁸

Findings in Table 6 are helpful to establish more general conditions for the direction of the effect of immigration on attitudes towards minorities. They suggest that generic immigration may have no effect on prejudice. What matters is the relative affective distance of incoming

9/11 on federal judges' behavior towards blacks.

⁷Recent findings in Mayda et al. (2018) show that political opposition to immigration in the US is driven disproportionately by low skilled immigrants.

⁸Results are robust to controlling for the (predicted) fraction of non-white and non-Mexican immigrants (columns 3 and 6).

groups. Groups of high affective distance (compared to existing out-groups) are the ones most likely to improve majority attitudes towards extant minorities.

Table 6. Effects of European and Canadian immigration on attitudes towards blacks

Dependent variable	Feeling thermometer blacks			Average		
	(1)	(2)	(3)	(4)	(5)	(6)
Share white immigrants	-89.236 (93.870)	-75.043 (101.408)	-139.375 (178.189)	3.686 (4.046)	4.393 (3.770)	3.106 (7.070)
Share Mexican		64.681* (36.507)	74.130** (36.770)		3.490** (1.302)	3.660*** (1.341)
Mean dep. variable	63.067	63.067	63.067	-0.147	-0.147	-0.147
Observations	17,182	17,182	17,182	20,669	20,669	20,669
R-squared	0.034	0.033	0.033	0.037	0.036	0.036
AP F-stat Share white	34.24	18.24	32.32	38.85	20.54	29.29
AP F-stat Share Mexican		44.16	65.35		53.47	76.29

Notes: 2SLS coefficients reported. Years 1970-2010. The sample is restricted to white respondents. Average is the mean of the following (standardized) items: Feeling thermometer, R feels close to blacks, blacks hardworking, blacks intelligent, blacks violent, blacks trustworthy, blacks should be helped by the government, black and white schools should be integrated. Higher values indicate warmer feelings (thermometer) or less prejudice (average). All columns include controls for age, aged square, gender, state and year by region fixed effects. Columns 5-6 control for the predicted share of non-white and non-Mexican immigrants. Standard errors clustered at the state level.

Racial attitudes and policy preferences

To what extent do changes in racial attitudes brought about by immigration affect whites' policy preferences? Ex-ante, it is not obvious that social changes such as the ones we document should translate into higher demand for racial equality. Policy preferences on the issue of race are shaped by more than just attitudes towards minorities. For instance, they are likely to be driven also by views on the role of government, which may be harder to change and orthogonal to racial attitudes.

The ANES includes a number of questions that capture preferences for government intervention to achieve racial equality. We focus on four such questions that are consistently asked in at least three out of four decades in our sample. Respondents are asked whether they believe that the government should intervene to help minorities (agreement level on a 1-7 scale), whether black and white schools should be integrated, whether the government should see to it that blacks get fair treatment protection in jobs (agreement level on a 1-5 scale) and whether they are for or against preferential hiring for blacks (agreement level on a 1-5 scale). We recode all items so that higher values indicate more racially liberal policy preferences.

Table 7. Effects on policy preferences

Dependent variable	Should gov. help blacks	School integration	Gov. guarantee FEP	Pref. hiring for blacks	Racial policy average
	(1)	(2)	(3)	(4)	(5)
Share Mexican	10.472* (5.226)	-0.289 (1.151)	14.520*** (4.613)	28.155 (18.411)	6.259*** (1.388)
Mean dep. variable	3.185	0.409	2.803	1.519	-0.077
Observations	14,502	5,825	8,868	9,378	18,085
R-squared	0.058	0.089	0.033	0.013	0.038
AP F-Stat	51.98	62.86	71.34	14.17	93.84

Notes: Years 1970-2010. The sample is restricted to white respondents. All variables are coded so that higher values indicate higher support of respondents for the policy mentioned. Racial policy average is the average of standardized items in columns 1-4. All columns include controls for age, aged square, gender, state and year by region fixed effects, and (instrumented) share of (non-Mexican) immigrants. Standard errors clustered at the state level.

Table 7 reports 2SLS coefficients from our main specification for each of these outcomes (Columns 1-4) as well as for an average of all four (standardized) items. Mexican inflows lead to increased support for intervention in favor of racial equality for three out of four policy measures. The average of all measures is highly significant and indicates that Mexican immigration induces more liberal views among white respondents.

These changes in racial policy preferences are not part of a broader package of more liberal views spurred by immigration. Table A.7 in the Appendix examines the effect of Mexican immigration on broader ideology and policy preferences. The outcome in columns 1-2 is the respondent's self-placement on a 1-7 liberal-conservative scale, with higher values indicating higher conservatism. In columns 3-4 the dependent variable is the respondent's preference for provision of government services in exchange for government spending coded in a 1-7 scale, with higher values denoting lower preference for the role of government. Along both measures Mexican immigration induces less liberal attitudes, with effects on conservative ideology being significantly positive. Taken together, results from Tables 7 and A.7 imply that Mexican immigration makes white respondents willing to demand or accept a bigger role for government specifically in racial matters. Changes in attitudes appear to translate into changes in racial policy preferences, that may even go against respondents' general ideology or views of government's role.

Conclusion

Due to large and growing migration flows, over the past four to five decades, the US and most European countries have become increasingly diverse societies, where multiple racial, ethnic, and social groups interact with each other. How do these trends contribute to shaping the boundaries of social in-groups and out-groups? To answer this question, we introduce a conceptual framework where group boundaries are endogenous, and depend on the relative distance that members of the majority group perceive between themselves and outgroups, or minorities. Building on seminal insights from social psychology (Turner et al., 1987, 1994), we argue that group classification follows the meta-contrast principle: group boundaries are formed along the dimension that minimizes in-group differences relative to out-group differences. We define the concept of “affective distance” as a summary term for an individual’s feelings towards the members of different groups, that, similar to social status, captures a group’s perceived quality.

In our model, affective distance is context dependent: the appearance of a new group can change the (perceived) distance between the ingroup and all other outgroups. The direction of such change, however, is ambiguous, and depends on where the new group stands relative to existing ones. The main prediction of the model is that, when a new group has a high distance relative to other outgroups, the attributes along which this new group differs the most from the majority become the relevant ones for social classification. The example of race and nativity – two salient group identifiers in US society – illustrates this insight. When the majority’s affective distance is highest from groups that differ on the basis of race, the latter emerges as the key attribute that determines social divisions. The appearance of an out-group of higher affective distance from natives that differs on another attribute, such as national origin and language, can diminish the role of race, and increase the salience of national origin as determinant of group boundaries.

In the second part of the paper, we bring the model to the data, and study how changes in the inflow of Mexican immigrants between 1970 and 2010 influenced native whites’ attitudes towards African Americans. We measure whites’ racial attitudes using nationally representative survey data from the ANES. To overcome potential endogeneity issues, we predict Mexican immigration across states by interacting the 1960 share of Mexicans living in each

US state with the national number of new immigrants for each decade from 1970 onwards. Using this instrument, and simultaneously controlling for (instrumented) immigration from all other countries, we find that Mexican immigration improves racial views among whites.

We then provide evidence consistent with three additional predictions of our model. First, our estimated effects are significantly larger for individuals for whom the relative affective distance between blacks and Hispanics is higher. Next, we document that Mexican immigration increases the salience of immigration policy and reduces that of nativity and race-related issues. Consistent with the idea that immigration makes race less salient and nativity more relevant for group classification, we find that Mexican immigration has a negative spillover onto views of white respondents towards Asians. Finally, in line with the third prediction of the model, we show that immigration from countries with low affective distance (relative to blacks), such as white Europeans and Canadians, has unstable and insignificant effects on native whites' attitudes towards blacks.

We believe that our results open the door to three sets of intriguing questions. First, do changes in whites' attitudes translate into better socio-economic opportunities for blacks? For instance, it might become easier for blacks to overcome labor market discrimination and get access to better paid occupations, where employment prospects are more stable. Similarly, as racial views grow warmer, inequality in the housing market and racial residential segregation may fall, leading to an increase in social cohesion that transcends racial boundaries.

Second, recognizing a less hostile environment and anticipating higher opportunities, blacks' sense of self-efficacy may increase. This may lead to increased political participation and representation, further contributing to promote social inclusion. Moreover, higher returns to skills and expectations of better opportunities might induce African Americans to invest more in schooling, possibly leading white employers to positively update their priors of this minority's skill levels. These dynamics might trigger a virtuous cycle whereby lower discrimination induces higher educational investments that in turn confirm the (more positive) views of whites, leading to a further reduction in discrimination.

Finally, in our paper we have focused on relations between minorities and members of the majority group. A remaining open question is how members of different minority groups — in this specific case, Latinos and African Americans — interact with each other. On the one hand, labor market and status competition can lead to higher conflict between minorities. On

the other, out-groups may form coalitions to increase their social and political influence. We speculate that the relations between different out-groups and those between the in-group and such out-groups are interdependent. For instance, if a new out-group reduces the affective distance between the in-group and the existing out-groups, members of the latter will be less likely to accept new outsiders.

We hope to address these and related issues in future research.

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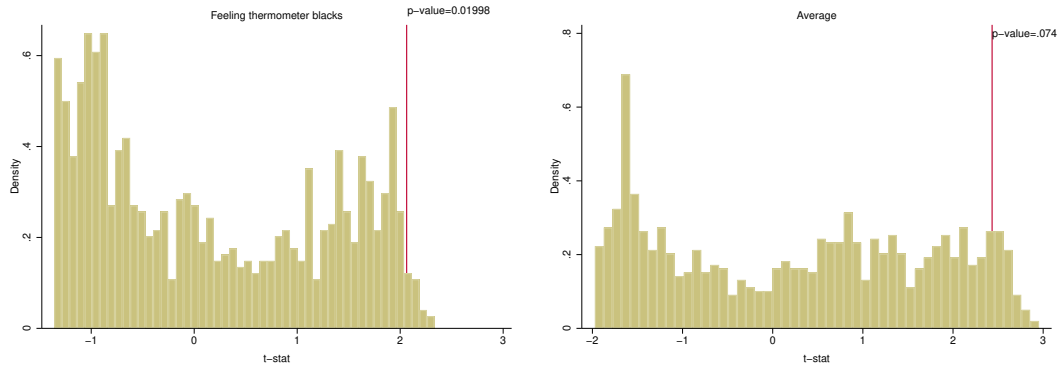
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A Appendix – Additional Figures and Tables

Figure A.1. Randomization inference



Notes: The figure plots, for each of the main outcomes, the distribution of t-statistics resulting from 1,000 iterations of estimating equation 1 after computing the predicted shares using randomly assigned inflows of immigrants from different nationalities within state and decade. P-values are computed as the share of t-statistics whose value is more extreme than the value estimated using actual assignment of decade-specific Mexican inflows.

Table A.1. Summary statistics

Variable	Mean	Std. Dev.	Min	Max	Obs.
<hr/> ANES <hr/>					
Feeling thermometer blacks	63.066	19.872	0	97	17277
Feel close to blacks	0.112	0.315	0	1	7548
Blacks intelligent	4.264	1.224	1	7	8141
Blacks hard-working	3.920	1.288	1	7	8171
Blacks violent	3.445	1.217	1	7	1791
Blacks trustworthy	4.065	1.174	1	7	1186
Average (blacks)	-0.147	0.718	-3.199	2.025	20780
Should gov. help blacks	3.185	1.707	1	7	14580
School integration	0.409	0.492	0	1	5841
Gov. guarantee FEP	2.803	1.990	1	5	8921
Pref. hiring for blacks	1.519	1.344	1	5	9443
Racial policy average	-0.077	0.808	-1.351	2.590	18182
Feeling thermometer Hispanics	61.286	20.327	0	97	11463
Feel close to Hispanics	0.130	0.336	0	1	4128
Hispanics intelligent	4.338	1.186	1	7	8049
Hispanics hard-working	4.671	1.353	1	7	8083
Hispanics violent	3.779	1.129	1	7	1718
Hispanics trustworthy	4.162	1.162	1	7	1169
Average (Hispanics)	-0.101	0.764	-3.012	2.385	11928
Feeling thermometer Asian-Americans	63.258	19.070	0	97	8978
Feel close to Asian-Americans	0.455	0.498	0	1	2919
Asian-Americans intelligent	5.100	1.287	1	7	8024
Asian-Americans hard-working	5.159	1.324	1	7	8025
Asian-Americans violent	4.393	1.156	1	7	1692
Asian-Americans trustworthy	4.516	1.144	1	7	1158
Average (Asian-Americans)	-0.041	0.730	-3.199	1.623	9324
Conservative	4.299	1.394	1	7 15995	
Increase gov. spending	4.060	1.627	1	7	12765
Female	0.542	0.498	0	1	21683
Age	47.093	17.716	17	99	21564
Share Mexican	0.021	0.032	0	0.116	21683
Share non-Mexican	0.063	0.052	0.004	0.203	21683

Notes: Years 1970–2010. ANES sample restricted to white respondents.

Table A.2. First stage

Dep. Variable	Share Mexican		
	(1)	(2)	(3)
Predicted share Mexican	0.800*** (0.076)	0.488*** (0.105)	0.748*** (0.061)
Observations	21,570	21,570	21,570
R-squared	0.980	0.993	0.981
Baseline controls × Year FE		Yes	
Predicted share other immigrants			Yes

Notes: The sample consists of white ANES respondents. Years 1970-2010. All regressions control for state and census year by region fixed effects. Baseline controls include distance from Mexico and the following variables measured in 1960: share black, share foreign-born, share rural, share high school graduates and unemployment rate. Standard errors in parentheses, clustered at the state level. Significance levels: *** p < 0.01, ** p < 0.05, * p < 0.1.

Table A.3. Predictors of 1960 share of Mexican immigrants

Dep. Variable	Share Mexican
Share black 1960	-0.044** (0.021)
Share foreign-born 1960	0.029 (0.023)
Share rural 1960	0.252 (1.514)
Share high school graduates 1960	-0.079 (0.072)
Share college graduates 1960	0.605** (0.281)
Unemployment rate 1960	0.161 (0.147)
Distance from Mexico	-0.001** (0.000)
Observations	51
R-squared	0.404

Notes: Data on share foreign-born and share rural are from NHGIS. Data on the share of high school and college graduates and the unemployment rate are from the 5% IPUMS sample. Distance from Mexico measured in hundred kilometers. Robust standard errors in parentheses.

Table A.4. Accounting for the time-varying effect of 1960 Mexican shares

Dep. variable	Feelings thermometer blacks						Average		
	Predicted share Mexican		Placebo		Predicted share Mexican		Placebo		2SLS (8)
	Reduced form (1)	2SLS (2)	Reduced form (3)	2SLS (4)	Reduced form (5)	2SLS (6)	Reduced form (7)		
Predicted share Mexican	51.836** (23.103)				2.566** (0.988)				
Share Mexican		69.88** (33.876)		10.145 (37.785)		3.188** (1.310)			0.096 (0.682)
Placebo predicted share Mexican			-5.331 (19.808)					-0.052 (0.365)	
Observations	17,188	17,188	17,188	17,188	20,675	20,675	20,675	20,675	20,675
R-squared	0.034	0.033	0.034	0.033	0.037	0.036	0.037	0.037	0.037
AP F-stat share Mexican		87.70		74.80		106.5			78.96

Notes: Years 1970-2010. The sample is restricted to white respondents. *Placebo predicted share Mexican* is constructed by assigning the average Mexican inflow over the period 1970-2010 to 1960 state-level shares of Mexicans. Average is the mean of the following (standardized) items: Feeling thermometer, R feels close to blacks, blacks hardworking, blacks intelligent, blacks trustworthy, blacks should be helped by the government, black and white schools should be integrated. Higher values indicate warmer feelings (thermometer) or less prejudice (average). All columns include controls for age, aged square, gender, state and year by region fixed effects. Standard errors clustered at the state level.

Table A.5. Robustness to the inclusion of baseline controls

Dep. variable	Feelings thermometer blacks		Average	
	Baseline (1)	State controls×Year FE (2)	Baseline (3)	State controls×Year FE (4)
Share Mexican	84.230* (43.005)	159.129 (101.563)	4.518*** (1.636)	9.503*** (3.422)
Observations	17,188	17,188	20,675	20,675
R-squared	0.033	0.036	0.036	0.039
AP F-stat Share Mexican	69.29	11.22	80.06	12.51

Notes: Years 1970-2010. The sample is restricted to white ANES respondents. Average is the mean of the following (standardized) items: Feeling thermometer, R feels close to blacks, blacks hardworking, blacks intelligent, blacks violent, blacks trustworthy, blacks should be helped by the government, black and white schools should be integrated. Higher values indicate warmer feelings (thermometer) or less prejudice (average). All columns include controls for age, aged square, gender, state and year by region fixed effects. Columns (2) and (4) further include interactions of the following state-level variables with census year fixed effects: share blacks in 1960, share immigrants in 1960, share rural in 1960, share high school graduates in 1960, unemployment rate in 1960, distance from Mexico. Standard errors clustered at the state level.

Table A.6. Effects on attitudes towards Asian Americans

Dependent variable	Feeling thermometer Asian-American		Average	
	OLS (1)	2SLS (2)	OLS (3)	2SLS (4)
Share Mexican	27.281 (86.152)	-191.127 (234.714)	1.126 (2.860)	-16.962* (9.709)
Mean dep. variable	63.263	63.263	-0.041	-0.041
Observations	8,917	8,917	9,257	9,257
R-squared	0.034	0.032	0.030	0.025
AP F-stat Share Mexican		16.60		17.49

Notes: Years 1990-2010. The sample is restricted to white respondents. Average is the mean of the following (standardized) items: Feeling thermometer, R feels close to Asians, Asians hardworking, Asians intelligent, Asians violent, Asians trustworthy. Higher values indicate warmer feelings (thermometer) or less prejudice (average). All columns include controls for age, aged square, gender, state and year by region fixed effects, and (instrumented) share of (non-Mexican) immigrants. Standard errors clustered at the state level.

Table A.7. Effects on ideology

Dependent variable	Conservative		Increase gov. spending	
	OLS (1)	2SLS (2)	OLS (3)	2SLS (4)
Share Mexican	-2.531 (2.045)	7.729** (3.840)	-5.239 (3.159)	7.380 (9.549)
Observations	15,916	15,916	12,700	12,700
R-squared	0.045	0.043	0.053	0.052
AP F-stat Share Mexican		75.10		39.85

Notes: Years 1970-2010. The sample is restricted to white respondents. All columns include controls for age, aged square, gender, state and year by region fixed effects, and (instrumented) share of (non-Mexican) immigrants. Standard errors clustered at the state level.