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Public Finance and Immigration Preferences: A Lost Connection

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Do material interests shape a person's views on immigration? If so, how? In a widely cited study, Gordon Hanson, Kenneth Scheve, and Matthew J. Slaughter contend that the public finance environment of each U.S. state affects the way an individual's skill level influences her or his support for immigration. Jens Hainmueller and Michael J. Hiscox disagree with the public finance argument and have maintained that nonmaterial factors better explain immigration preferences. This article revisits the debate about material interests with a range of new data and finds little support for the public finance hypothesis. The study also offers some explanations for these less-supportive results, provides directions for future work, and reflects on how empirical research on nonmaterialist explanations can be enhanced methodologically and conceptually.
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What shapes an individual's views concerning economic integration? A growing body of scholarly literature indicates disagreement over the question. While many economists and political economy scholars emphasize the role of material interests, others stress culture or psychological factors, such as anxiety and styles of cognition.

Recent work by Gordon Hanson, Kenneth Scheve, and Matthew J. Slaughter suggests that the local public finance environment affects how certain individual characteristics determine preferences on immigration policy.[1] The authors expand on a line of reasoning common in many earlier studies; like previous scholars they posit *individual-level variables*, such as one's skill endowment or cultural attitudes, as important influences on policy preferences.[2] Hanson, Scheve, and Slaughter, in addition, look at contextual factors—that is, they

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1. Gordon Hanson, Kenneth Scheve, and Matthew J. Slaughter, "Public Finance and Individual Preferences over Globalization Strategies," *Economics and Politics* 19 (March 2007): 1–33.

2. Ibid.

conceptualize public opinion as being embedded in local economic contexts.[3] In their opinion, the effect of skill endowment on an individual's immigration preferences depends on the extent to which a state's fiscal policy is progressive and on the size of the immigrant community within the state. They hypothesize that highly skilled individuals who live in states that face high public finance costs due to immigration will be less supportive of immigration than highly skilled individuals who live in states without such high public finance costs. Unlike highly skilled individuals who reside in states with small welfare programs or small immigrant inflows, highly skilled individuals in states with large public finance regimes and large immigrant inflows will oppose immigration because they disproportionately bear the costs of publicly financed programs.[4] This paper seeks to test these claims with data because redistributive policy is a key piece of modern political debate.

To support their hypothesis, Hanson, Scheve, and Slaughter examined data from the 1992 and 2000 American National Election Study (ANES). The data showed that individuals who owned large amounts of capital and who resided in states with generous welfare systems and high amounts of immigration were less likely to support immigration than were the owners of significant amounts of capital who lived in states with less immigration or income redistribution.[5] Consistent with their theoretical predictions, they do not find this interactive effect when they look at trade policy because trade has little fiscal policy impact. The strong relationship between public finance environment and immigration attitudes leads to a conclusion that the fiscal consequences of immigration play a large role in dividing America. Given the rapidly shifting economic and demographic climate of the United States, the continued importance of immigration policy in larger political debates, and the increasingly globalized economy, their findings warrant sustained scrutiny.

Jens Hainmueller and Michael J. Hiscox recently have challenged the public finance thesis.[6] Using a survey experiment that randomly primed respondents to consider high- or low-skilled immigrants, they have shown that the public finance

3. For a review of the field, see Alin M. Ceobanu and Xavier Escandell, "Comparative Analyses of Public Attitudes Toward Immigrants and Immigration Using Multinational Survey Data: A Review of Theories and Research," *Annual Review of Sociology* 36 (August 2010): 309–28.

4. They also hypothesize that increases in public services due to immigration may cause heightened opposition from low-skilled individuals who benefit from transfers. Because they do not test this "crowding" logic, this article focuses exclusively on the fiscal impact of immigration for highly skilled individuals.

5. Facchini and Mayda also present some evidence consistent with the findings of Hanson, Scheve, and Slaugbhter. Giovanni Facchini and Anna M. Mayda, "Individual Attitudes Toward Immigrants: Welfare-State Determinants Across Countries," CECESIFO Working Paper no. 1768.

6. Jens Hainmueller and Michael J. Hiscox, "Attitudes Toward Highly Skilled and Low-Skilled Immigration: Evidence from a Survey Experiment," *American Political Science Review* 104 (February 2010): 61–84.

variable does not moderate opposition to low-skilled immigrants. The researchers found that highly skilled individuals who reside in states with high-fiscal burdens from immigration are not more opposed to low-skilled immigrants than are the highly skilled individuals who live in states without such fiscal burdens. Instead, highly skilled individuals are more opposed to low-skilled immigrants in general. Hainmueller and Hiscox concluded that cultural theories better explain the results, but they neither endorsed a specific cultural theory nor provided experimental evidence for it.

This clash of scholarly opinions merits attention given the rapidly changing economy and demography of the United States, the continued importance of immigration policy in larger political debates, and the consequences of economic globalization. Scholars argue that it is necessary to understand in more depth the nature of public opinion on the topic of immigration because of its importance for voting,[7] because of elite concerns about the consequences of immigration for public finances, and because of impending debates among leaders over different types of immigration policy.[8]

So, why the diverging sets of claims? There are many possible explanations. One is that the connection between immigration and welfare was discussed far more explicitly during the late 1990s than it is now, while other features of immigration politics, such as border security, are more salient.[9] This has two possible consequences; first, when Hainmueller and Hiscox asked in 2008 about generic attitudes towards immigrants, they were in fact aggregating lots of different sub-issues that could mask the fiscal-based pattern found by Hanson, Scheve, and Slaughter. Second, it is also possible that the advocates of the public finance hypothesis uncovered a pattern that is more temporally bounded than their theory suggests and, therefore, is less compelling today given the lower saliency of the connection between immigration and welfare in public discourse. Yet another explanation for Hainmueller and Hiscox's results is that they reported an experimental anomaly. Experimental results should be replicated because the failure to replicate and publish the results of replications undermines faith in the external validity of an experiment.[10]

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7. James G. Gimpel and James R. Edwards, Jr., *The Congressional Politics of Immigration Reform* (Boston: Allyn and Bacon, 1999).

8. Helen V. Milner and Dustin Tingley, "Economic and Political Influence on Different Dimensions of United States Immigration Policy," Working paper.

9. Milner and Tingley have shown that during 1992 there was a higher amount of legislative activity on this issue compared with later eras when legislators focused more on issues of border security. This suggests that earlier survey questions about pro- versus anti-immigrant attitudes were appropriate and plausibly tapped concerns about public finance effects. Today, the influence of public finance considerations might be expressed in other sub-domains of immigration policy. See Milner and Tingley, "Economic and Political Influences."

10. Rose McDermott, "Experimental Methods in Political Science," *Annual Review of Political Science* 5 (June 2002): 31–61.

Given the political importance of the original public finance argument and its sharp contrast with Hainmueller and Hiscox's experimental results, this article explores the materialist versus culturalist debate with a new survey experiment. Its design is similar (though not identical) to the design used by Hainmuller and Hiscox.[11] The present study uses questions from the Cooperative Congressional Election Study (CCES), which is a collaborative survey instrument administered by a professional polling firm, Polimetrix/YouGov, and which has been used in several other pieces of Political Science research.[12] The survey is administered over the internet and employs a two-stage design that produces a nationally representative sample without extensive reliance on sample weights. The CCES includes a common content section, which respondents fill out before completing surveys that are particular to each research team. In two years (2006 and 2010), the CCES had asked questions about immigration in the common content section.

While the article's focus is on understanding attitudes toward globalization with a focus on immigration and redistribution, it also engages with several broader themes. First, the findings are of contemporary importance as political scientists across sub-fields seek to understand the complicated politics of immigration. Second, like Hanson, Scheve, and Slaughter, I explore the way environmental variables (here the local public finance environment) influence individual attitudes. Third, while the core of the article is empirical, it also raises several empirical and theoretical issues about how to study the role of material and nonmaterial explanations in Political Science.

Locating New Data for an Important Debate

One potential problem with the two earlier studies involved small sample sizes, especially given that the hypotheses were about individual-level preferences conditioned by the fiscal environments of the states in which they resided. For example, in key regressions in the original study by Hanson, Scheve, and Slaughter, six states (AK, DE, HI, MT, RI, and VT) had no observations; a number of states had fewer than twenty observations (DC, ID, KY, ME, MS, NE, NV, NM, ND, OK, SC, and SD); and several states had only three or four observations. This was due both to the sampling scheme of the ANES data that the researchers were using and to the small sample size of the survey itself. Hainmueller and Hiscox relied on an even smaller sample. Given their desire to compare particular types of people across particular types of states, across experimental conditions, larger

11. The current project was largely conducted concurrently with Hainmueller and Hiscox, "Attitudes."

12. For additional information, please see http://projects.iq.harvard.edu/cces/book/sample-design

sample tests would be a desirable compliment to the previous work. This study, in contrast, relies on the 2006 and 2010 CCES surveys, in which some questions are answered by more than 50,000 respondents.

A crucial advantage of the CCES is that it enables very large sample sizes for questions in the common content section. Previous studies looked at respondents who were demographically similar but resided in states with different public finance profiles. The larger samples of the CCES surveys increase the sample size by a factor of 10–30.

Furthermore, the CCES surveys asked questions that dealt with contemporaneous policy issues rather than the broader questions used in the earlier studies. The 2006 CCES survey asked two questions on immigration, and the 2010 CCES survey asked five questions on immigration. The first question on immigration in the 2006 CCES survey (ImmEnforce) asked respondents:

> Congress has been debating different policies concerning immigration reform. The Senate proposal has a path to citizenship for illegal immigrants. The House proposal, on the other hand, contains stricter enforcement and deportations of undocumented aliens. Which of these two items of reform do you think is more important: Stricter enforcement of current restrictions or Opening a path to citizenship for current illegals?

The other immigration question (ImmAmnsty) was phrased thusly:

> Another issue is illegal immigration. One plan considered by the Senate would offer illegal immigrants who already live in the U.S. more opportunities to become legal citizens. Some politicians argue that people who have worked hard in jobs that the economy depends on should be offered the chance to live here legally. Other politicians argue that the plan is an amnesty that rewards people who have broken the law.

Respondents were then asked whether they were "For" (offering illegal immigrants an opportunity to become citizens) or "Against."

In 2010, the CCES Common Content survey section asked an additional set of questions on immigration. Respondents were asked to indicate "What do you think Congress and the President government should do about immigration?" Their options were (1) grant legal status to all illegal immigrants who have held jobs and paid taxes for at least three years, and not been convicted of any felony crimes; (2) increase the number of border patrols on the U.S.–Mexican border; (3) allow police to question anyone they think may be in the country illegally; (4) fine U.S. businesses that hire illegal immigrants; and (5) increase the number of guest workers who were allowed to come legally to the United States.

Respondents could indicate whether they supported each policy option. Policy Options 1–3 were offered to 55,400 respondents, while Options 4 and 5 were offered to only 2,379 respondents.[13]

All of these questions differ from the ANES question used by Hanson, Scheve, and Slaughter. Some of the CCES questions directly address the issue of illegal immigration and discuss specific legislation. The ANES question—"Do you think the number of immigrants from foreign countries who are permitted to come to the United States to live should be increased a little, increased a lot, decreased a little, decreased a lot, or left the same as it is now?"—did not raise issues of legality or allude to a specific policy.

The change in phrasing is important because in the mid-1990s welfare reform in the United States was in large part connected to the use of welfare by immigrants. One hears echoes of this concern in the most recent debates over immigration reform. The Center for Immigration Studies has argued that illegal immigrants continue to put sizable strains on public finance programs.[14] Nonetheless, the saliency of welfare considerations in debates over immigration appears to have declined. Legislation on immigration that explicitly dealt with public benefit systems was common in the 1990s but not in the 2000s.[15] Instead, the issue of border security became much more important.

Does the variation over time in legislative emphasis extend to media coverage to which individuals are likely to be exposed? Figure 1 suggests so. Using the number of *New York Times* articles containing the word "immigration" per year as the denominator, Figure 1 plots over time the percentage of articles on immigration that contain the word "welfare" and the percentage that contain the word "security." The percentage that used "welfare" began to increase around 1994, peaked around 1996, and declined thereafter. After 2000, only around 5 percent of the articles that used the word "immigration" also contained the word "welfare." In terms of articles that used the term "security," the percentage spiked in 2001 and has remained relatively constant thereafter at 30 percent, or nearly six times the frequency of articles that used "welfare."[16]

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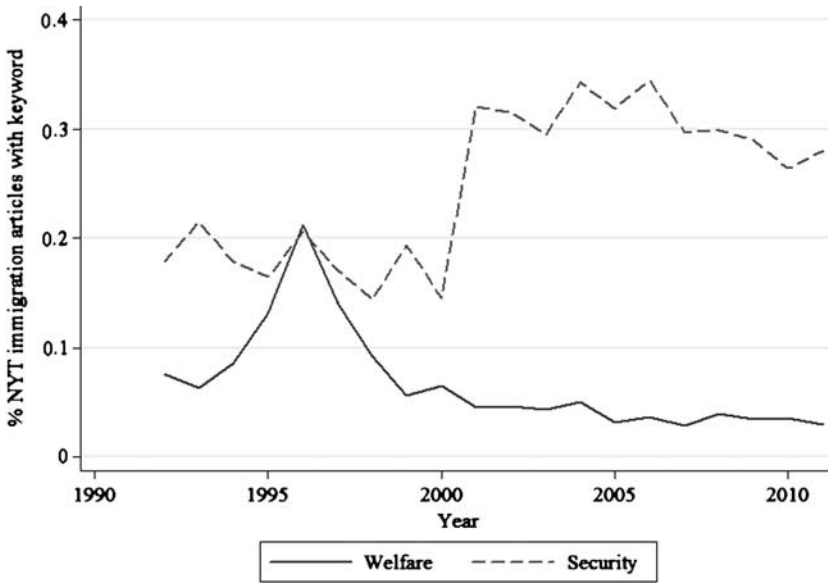
13. The smaller sample size was due to the CCES team reducing the length of the survey (correspondence with Sam Luks, YouGov/Poli.metrix Project Manager).

14. Steven Camarota, "Senate Amnesty Could Strain Welfare System," *Center For Immigration Studies* (online), (June 2007), http://www.cis.org/articles/2007/welfarerelease.html; accessed 11 September 2012.

15. Milner and Tingley, "Economic and Political Influences."

16. Following recent efforts to use non-survey-based indicators of public interest by Stephens-Davidowitz, I also conducted several supplemental analyses of search word data via Google's AdWords, Insights, and Correlate services. Searches linking immigration and welfare (using a variety of search terms) are relatively rare, while searches related to border control and enforcement are much more common. This holds even if we restrict the analysis to the states with high-fiscal exposure to immigration discussed below. Google's data began in 2004, so we cannot extend the analysis back to the era first considered by Hanson, Scheve, and Slaughter. See Seth Stephens-Davidowitz, "The Effects of Racial

Figure 1
New York Times Immigration Coverage and Welfare versus Security Linkages



Notes: Percentages of All New York Times Articles Containing the Word "Immigration" and also the Words "Welfare" and "Security."

Several CCES questions examine whether public finance remains a salient issue for respondents after the topic of immigration is framed in terms of legality. Several of the tests that will be presented below probe this possibility. At a minimum, the differences in question wording allow us to ask whether public finance effects extend to preferences involving questions of legality and, therefore, to assess the robustness of Hanson, Scheve, and Slaughter's empirical findings. The 2010 CCES survey further extends to other dimensions beyond just legality.[17]

To be as comprehensive as possible, I also collected a set of ANES surveys conducted after Hanson, Scheve, and Slaughter's surveys. One included a

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Animus on A Black Presidential Candidate: Using Google Search Data to Find What Surveys Miss" (November 2011), Working paper.

17. These questions are, furthermore, appropriate because Hanson, Scheve, and Slaughter did not select the ANES survey for its particular phrasing of the question. Thus, a range of question formats is admissible to the current debate. The CCES project is a cooperative one. So, only questions on the salient dimensions of immigration were asked, rather than questions that might address topics of importance to academic debates.

question identical to a question that they used, and a question that taps public finance considerations more directly. In 2002, the ANES asked respondents whether they supported increasing federal funding for border control to prevent illegal immigration. Those who supported an increase in funding I coded as anti-immigrant. The 2004 ANES asked the standard immigration-flow question that Hanson, Scheve, and Slaughter used. Finally, the 2008 off-wave ANES (Wave 22) asked whether respondents thought that Latino immigrants were likely to use welfare services (Thinking of immigrants from Latin American countries, which of the following characteristics apply immigrants from Latin America? Often end up on welfare.). I coded those who viewed immigrants from Latin America as likely to "end up on welfare" as a "1," and those that did not state this a "0."[18] Thus, the 2004 data lets us replicate a question used earlier, and the other two questions in the 2002 and 2004 ANES surveys allow us see if public finance considerations correlate with attitudes toward border control and perceptions of welfare use.

According to the public finance hypothesis, we should find that highly skilled individuals are more opposed to immigration when they live in states with great fiscal exposure to immigration. Conversely, opposition to immigration among highly skilled individuals should be lower in states with smaller public finance systems and lower immigration levels.[19]

Preparing the Data for Analysis

Following the protocol used by Hanson, Scheve, and Slaughter, I coded the anti-immigration position for each question as "1" and the pro-immigration position as "0."[20] I replicated their entire set of central explanatory variables and all but two of their additional control variables. Following others in the literature, Hanson, Scheve, and Slaughter used educational attainment, which is coded categorically (College4yr, SomeCollege, HSGrad, NoHSEdu), as their main measure of capital endowment. While the CCES survey differentiated respondents with a post-college degree from those with only a four-year degree, I combined these categories to match Hanson, Scheve, and Slaughter's practice.

Hanson, Scheve, and Slaughter argued that variation in state fiscal environments and immigrant population creates different incentives for individuals who own different amounts of capital. I averaged each state's welfare expenditures for

18. The latter question is the only survey question I could find that explicitly taps the connection between welfare and immigration. However, it is not perfect for testing the fiscal-policy hypothesis because it does not tap the extent to which individuals think they pay for welfare use.

19. In addition, the fiscal hypothesis predicts that the public-finance considerations will not be salient for trade policy preferences, because trade has little clear impact on redistributional (post-tax) considerations. I test this hypothesis in the online appendix. The results are largely unchanged. See http://scholar.harvard.edu/dtingley/files/publicfinance-onlineappendix.pdf

20. Hainmueller and Hiscox use very different model specifications.

2003 and 2004 (the most recent years for which such data are available).[21] I also collected data on the number of foreign-born persons from the Census's Congressional District data and aggregated up to the state level from the district data.

As did Hanson, Scheve, and Slaughter, I interacted the educational terms with a dichotomous variable[22] equal to "1" if the respondent's state-level measures of welfare spending per native was greater than the national median and if the percentage of the working population that was foreign-born was greater than the national mean (immigration exposure).[23] In labeling interactions with educational categories, I used the label "F1" for the Hanson, Scheve, and Slaughter's "Fiscal 1" measure. I also interacted the education variables with a second component (immigration exposure) and labeled these interactions with an "Imm1."[24] For the trade question, I interacted the educational-attainment terms with a dummy variable equal to "1" if the state-level measure of welfare spending per native was greater than the national median (labeled with "F3" for Hanson, Scheve, and Slaughter's "Fiscal 3 measure") or where a similar level of welfare spending is measured as a percentage of state GDP (labeled as F4). I also used the same set of control variables (Age, Age Squared, Gender, Hispanic, and State Unemployment as a percentage of the workforce) that Hanson, Scheve, and Slaughter originally used. Hence, I was able to match their model specifications quite closely.

Respondents were weighted by the CCES survey weights, and standard errors were clustered at the state level. Following the practice of Hanson, Scheve, and Slaughter, when specifying independent variables, I estimated models with and without state-fixed effects. Because the sample only covers one year, I did not

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21. Data downloaded in July of 2008 from: http://www2.census.gov/pub/outgoing/govs/special60/Govt_Finances.zip. While Hanson, Scheve, and Slaughter say that they use state-level welfare data, in fact they use total welfare funding, which includes federal monies. Federal welfare spending and state welfare spending are highly correlated. Hence, their decision is likely not a problem for their paper. I, however, use strictly state-level spending because this most closely matches their theoretical story. Using total welfare spending does not change the results reported in this paper.

22. The authors argued: "An advantage of using dichotomous measures of fiscal exposure to immigration is that it allows for nonlinearities in how immigration's fiscal costs affect individual preferences about immigration policy. In principle, we can allow for a high degree of non-linearity simply by including a sufficient number of categorical variables to describe the level of fiscal exposure. In practice, we find that the dichotomous measures we use appear to be sufficient to summarize the relationship between fiscal exposure and policy opinions." See Hanson, Scheve, and Slaughter, "Public Finance," 14.

23. States satisfying both of these conditions were CA, CT, FL, HI, MA, NJ, NM, NY, RI. Hanson, Scheve, and Slaughter's Fiscal measure included CA CT DC IL MD MA NJ NM NY OR WA. In additional robustness checks, I used their original set of high-fiscal exposure states as well as high-immigration states. The results using these codings produced even less supportive results and are available from the author.

24. I have not recreated the fiscal exposure to measure from HSS, but note that their preferred measure was the Fiscal 1 measure. See Hanson, Scheve, and Slaughter, "Public Finance," 14.

Table 1
Summary of Existing Data/Results and Data/Results Presented in this Paper

Data	Question Type	Sample size	Support Fiscal Hypothesis
Existing evidence			
Hanson *et al.* (2007)	Immigration Flow	2,300	Yes
ANES 1992/2000			
Hainmueller and Hiscox (2010)	Immigration Flow	643–1,589	No
CSS 2007/2008	Manipulation of immigrant skill		
Evidence in the current paper			
ANES 2002	Border Control Spending	950	No
ANES 2004	Immigration Flow	744	No
Polimetrix 2008	Immigration Flow/Support	1,079–2,151	No
	Manipulation of skill/ethnicity		
CCES 2006	Enforcement/Amnesty	14,485–33,015	No
ANES 2008	Latinos on welfare	2,039	No
CCES 2010	Amnesty/border control/policing	55,400	No
	Fine businesses, guest workers	2,379	No

See Appendix for full sources.

include a year variable, and was unable to capture how changes in state immigration exposure over time may or may not be affecting preferences.[25]

In the other models that Hanson, Scheve, and Slaughter presented as robustness checks, they added ideology, an interval measure of party identification (0 = Strong Democrat, 6 = Strong Republican), and the respondent's employment status (whether she or he was currently employed, and whether she or he worked for the federal government). The CCES did not ask questions on cultural sensitivity. Hence, I could not include these controls, which Hanson, Scheve, and Slaughter labeled "Isolationism" and "Tolerance." But, as with the temporal dimension mentioned above, these variables played a minor role in their analysis and did not change their central results.

Results

Table 1 summarizes the article's findings about support for the public finance hypothesis. The first two rows refer to previously published results, and the

25. Hanson, Scheve, and Slaughter argued that their analysis had an important temporal dimension, but the online appendix uses their original data and shows that they get very little identification in this manner. Further, the ANES surveys are not panel surveys, so we do not know how state-level changes over time impacted particular individuals. See Hanson, Scheve, and Slaughter, "Public Finance."

Table 2
Percentage of Respondents Taking Anti-Immigration View on Each Survey Question

Variable	Percentage of Anti-Immigrant		
	Population (%)	**College/ ExpHigh (%)**	**College/ ExpLow (%)**
1992 ANES, Decrease flow	51	45	37
2000 ANES, Decrease flow	50	39	35
2002 ANES, Spend more on border security	72	68	63
2004 ANES, Decrease flow	54	47	43
2006 CCES, Immigration enforcement	70	54	60
2006 CCES, Oppose immigration amnesty	60	40	47
2008 ANES, Latino welfare use	30	34	27
2008 Polimetrix, Low skill imm. bad for country	60	44	55
2008 Polimetrix, High skill imm. bad for country	43	29	33
2008 Polimetrix, Decrease flow from Mexico	63	47	52
2008 Polimetrix, Decrease flow from Europe	40	29	24
2008 Polimetrix, Decrease flow from China	54	38	40
2008 Polimetrix, Decrease flow from India	53	34	40
2010 CCES, Oppose immigrant amnesty	61	52	56
2010 CCES, Increase border patrols	60	53	58
2010 CCES, Police question immigration status	45	34	40
2010 CCES, Fine businesses	70	60	72
2010 CCES, Oppose guest workers	76	48	62

Notes: Responses broken out by the entire sample (Population), college-educated responses from high-fiscal exposure states (ExpHigh) and low-fiscal exposure states (ExpLow). See Appendix for full sources.

remaining rows summarize the findings reported here. Using a variety of survey questions, larger sample sizes, and also a survey experiment, this article reports little support for the public finance hypothesis. Table 2 provides descriptive statistics for dichotomous versions of each question. Support for policies that relate to border control issues, guest workers, and businesses have the highest amount of sentiment that is functionally anti-immigrant. However, many of the questions evenly divide respondents and all questions have a substantial amount of variation.

I will now discuss the individual survey questions. For each immigration question in the CCES 2006 survey, I estimated four models using clustered standard errors and present results in Table 3. Model 1 included only the key explanatory variables. Hanson, Scheve, and Slaughter had found a positive and significant interaction between College4yr and the F1 designation. For the ImmEnforce question, Model 1 (the base model with no state-fixed effects or additional controls) showed only the SomeCollege F1 variable to be significant.

Table 3

CCES 2006: Individual Level Correlates of Immigration Opposition

	Support More Enforcement				Oppose Amnesty			
College4 yr	−0.79**	−0.79**	−0.77**	−0.78**	−0.67**	−0.66**	−0.51**	−0.52**
	[0.15]	[0.16]	[0.23]	[0.23]	[0.07]	[0.07]	[0.10]	[0.10]
SomeCollege	−0.53**	−0.53**	−0.49*	−0.49*	−0.38**	−0.38**	−0.29**	−0.29**
	[0.16]	[0.16]	[0.23]	[0.24]	[0.06]	[0.06]	[0.09]	[0.09]
HSGrad	−0.26	−0.24	−0.19	−0.18	−0.14+	−0.13+	−0.10	−0.10
	[0.17]	[0.17]	[0.23]	[0.23]	[0.07]	[0.07]	[0.10]	[0.10]
College4 yr F1	0.03	0.16**	0.07	−0.24	−0.01	0.10	−0.01	−0.11**
	[0.09]	[0.05]	[0.07]	[0.23]	[0.07]	[0.14]	[0.05]	[0.04]
SomeCollege F1	−0.11+	−0.01	−0.05	−0.38	−0.05	0.04	0.02	−0.09**
	[0.06]	[0.04]	[0.05]	[0.23]	[0.04]	[0.12]	[0.03]	[0.03]
HSGrad F1	0.09	0.18**	0.10	−0.23	0.06	0.15	0.07*	−0.04
	[0.09]	[0.04]	[0.10]	[0.24]	[0.04]	[0.12]	[0.03]	[0.03]
NoHSEdu F1	0.22*	0.33*	0.34+		−0.09		−0.03	−0.15
	[0.10]	[0.13]	[0.21]		[0.10]		[0.13]	[0.14]
College4 yr Imm1	−0.15*	−0.19**	−0.10	0.64**	−0.14**	−0.11**	−0.12**	0.07*
	[0.07]	[0.05]	[0.06]	[0.23]	[0.05]	[0.04]	[0.04]	[0.03]
SomeCollege Imm1	−0.05	−0.08	−0.01	0.73**	−0.11**	−0.08*	−0.09**	0.09*
	[0.05]	[0.06]	[0.05]	[0.24]	[0.04]	[0.04]	[0.03]	[0.04]
HSGrad Imm1	−0.20*	−0.24**	−0.24**	0.48*	−0.17**	−0.14**	−0.13**	0.05+
	[0.08]	[0.05]	[0.07]	[0.24]	[0.04]	[0.03]	[0.04]	[0.03]
NoHSEdu Imm1	−0.48**	−0.51**	−0.32	0.41	−0.32**	−0.28**	−0.17	0.02
	[0.16]	[0.17]	[0.29]	[0.26]	[0.08]	[0.09]	[0.11]	[0.11]
Hispanic	−0.63**	−0.66**	−0.60**	−0.61**	−0.58**	−0.60**	−0.61**	−0.62**
	[0.04]	[0.03]	[0.05]	[0.04]	[0.04]	[0.04]	[0.05]	[0.05]

AgeSquared	−0.00**	−0.00**	−0.00**	−0.00**	−0.00**	−0.00**	−0.00**	−0.00**
	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]
Age	0.06**	0.06**	0.04**	0.04**	0.05**	0.05**	0.03**	0.03**
	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]
Gender	0.13**	0.13**	−0.01	−0.01	0.09**	0.09**	−0.04+	−0.04*
	[0.02]	[0.03]	[0.03]	[0.03]	[0.02]	[0.02]	[0.02]	[0.02]
UnemployPct	−2.29*	−2.24*	−0.74	−0.47	−1.58+	−1.75+	−0.38	−0.40
	[1.07]	[1.14]	[0.65]	[0.61]	[0.96]	[1.02]	[0.61]	[0.66]
PartyID			0.10**	0.10**			0.09**	0.09**
			[0.01]	[0.01]			[0.01]	[0.01]
Ideology			0.02**	0.02**			0.02**	0.01**
			[0.00]	[0.00]			[0.00]	[0.00]
UnionMember			0.08*	0.10**			0.13**	0.14**
			[0.03]	[0.03]			[0.02]	[0.02]
GovtWorker			0.14+	0.11			0.09+	0.09*
			[0.07]	[0.07]			[0.05]	[0.05]
Unemployed			0.11	0.12+			0.11*	0.10*
			[0.07]	[0.07]			[0.04]	[0.04]
Constant	−0.31	−0.23	−1.27**	−1.30**	−0.48**	−0.44**	−1.31**	−1.43**
	[0.20]	[0.21]	[0.23]	[0.23]	[0.11]	[0.14]	[0.12]	[0.14]
Observations	15,419	15,419	14,485	14,485	33,015	33,015	29,986	29,986
	No FE		FE		No FE		FE	

Notes: Opposition to immigration as a function of individual demographics and state fiscal environment using CCES 2006 survey. Standard errors in brackets, $+p<0.10$; $*p<0.05$; $**p<0.01$.

Furthermore, contrary to theoretical predictions, the sign on the coefficient was negative. When state-fixed effects are included (Model 2), the coefficient on College4yr F1 is significant and positive, which is consistent with Hanson, Scheve, and Slaughter's hypothesis. However, their reasoning would not lead one to predict that the coefficients for respondents with only a high school degree or no high school degree and who live in states with high-fiscal exposure to immigration would also be positive and significant and roughly the same strength as the College4yr F1 coefficient. This runs contrary to expectations because, presumably, lower-skilled individuals do not shoulder a disproportionate burden of the fiscal costs of increased public services. Instead, this set of coefficients appears to be evidence of a "crowding" effect whereby increased demand for social services from immigrants crowds out lower-skilled citizens. Furthermore, in Models 3 and 4, which add the numerous controls to Models 1 and 2, the coefficients become statistically insignificant. The coefficients even change sign in the final model, which adds additional controls.[26]

To get a sense of the substantive impact of these estimates, I replicated Hanson, Scheve, and Slaughter's Table 3 using the CCES data and calculating the change in predicted probability of opposing immigration (ImmEnforce = 1) when individuals in each educational category went from living in a state with low-fiscal exposure to immigration to high-fiscal exposure (using the fixed effects models[27]). I present these changes in predicted probability and accompanying standard errors in Table 4. The magnitude of change in the model without additional controls is nearly identical for college-educated and high school graduates, and is even larger for those without a high school degree. When additional controls are added, the changes in predicted probability are insignificant. These results are quite different from those reported by Hanson, Scheve, and Slaughter where, for example, in the model without additional controls the change for a college-educated person moving from a state with low-fiscal exposure to high-fiscal exposure was nearly 19 percent and highly significant.

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26. The NoHSEdu F1 variable drops out in the final model (with the additional controls and state-fixed effects) because there were some states with very few respondents with *no* high school degree.

27. Hanson, Scheve, and Slaughter did not say how they, when making calculations of these quantities, dealt with their fixed effects or other variables. Presumably, other variables were held at their means. I held all fixed effects at their sample means and used the prvalue software provided by Long and Freese. I also tried to implement the procedure outlined in Ai and Norton for calculating marginal effects with interaction terms. However, because Hanson, Scheve, and Slaughter argued that they should not include the constituent Fiscal variables (personal conversation), such calculations cannot be done with their method. As a robustness check, I estimated models in this paper including the constituent Fiscal terms and found no qualitative differences. Chunrong Ai, Edward C. Norton, "Interaction Terms in Logit and Probit Models," *Economics Letters* 80 (January 2003): 123–29. See J. Scott Long and Jeremy Freese, *Regression Models For Categorical Dependent Variables Using Stata (*College Station, TX: State Press, 2005).

Table 4
Changes in Opposition to Immigration

Variable	**ImmEnforce**	
	Base model	**With Controls**
College4 yr F1	0.05 (0.016)	−0.079 (0.078)
SomeCollege F1	−0.002 (0.012)	−0.125 (0.082)
HSGrad F1	0.058 (0.011)	−0.075 (0.085)
NoHSEdu F1	0.097 (0.034)	

Notes: Change in predicted probability of opposing immigration (increasing enforcement) moving individuals in each educational category from living in a state with low-fiscal exposure to immigration to high-fiscal exposure using the fixed-effects models.

Table 5
Changes in Opposition to Immigration Amnesty

Variable	**ImmAmnesty**	
	Base model	**With Controls**
College4 yr F1	0.038 (0.053)	−0.04 (0.014)
SomeCollege F1	0.017 (0.044)	−0.033 (0.01)
HSGrad F1	0.056 (0.043)	−0.014 (0.012)
NoHSEdu F1	−0.058 (0.057)	

Notes: Change in predicted probability of opposing immigration amnesty moving individuals in each educational category from living in a state with low-fiscal exposure to immigration to high-fiscal exposure using the fixed effects models.

The results obtained with the ImmAmnesty question also offer little support for Hanson, Scheve, and Slaughter's argument.[28] As with ImmEnforce, respondents with higher levels of education are more likely to favor immigration. The fiscal exposure terms, however, are generally insignificant. The only significant variables were the HSGrad F1 (positive) in Model 3 (with additional controls

28. One difficulty with this survey question is that the interaction term NoHSEdu F1 drops because of multi-collinearity in the state-fixed effects models and because several states had only one respondent with no high school degree (e.g., Hawaii). For the ImmEnforce question, the estimation procedure automatically dropped one of the state-fixed effects; but with ImmAmnesty, the interaction terms are selected to drop. This is immaterial with regard to the coefficients of interest and may reflect the particular configuration of who answered the former but not the later question.

and without state-fixed effects) and the SomeCollege F1 and College4yr F1 (both negative) in Model 4 (with state-fixed effects and additional controls). The negative sign on the latter two coefficients is not consistent with the HSS argument. According to Model 4, a college-educated person who moves from a state without high-fiscal exposure to a state with high-fiscal exposure is less likely to oppose amnesty. Table 5 shows the changes in predicted probabilities with accompanying standard errors, which of course also paint a similar picture. Overall, there is little support from the CCES survey for the argument that public finance considerations shape individuals' preferences about immigration.

Table 6 presents the results from the 2010 CCES using only the models without state-fixed effects and the full set of control variables. Alternative specifications produce similar results. Given the larger number of survey questions, I have presented only one model per question. Once again we see little support for the public finance hypothesis.

In all of the regressions, the estimated coefficients on the interaction term between college education and Fiscal1 state are insignificant, as are the other interactions for other education levels. In contrast, we obtain the expected signs on other variables, like political ideology, with more conservative individuals more likely to support anti-immigration policies. In 2010, the most salient issues around immigration apparently were unrelated to fiscal considerations and questions about public finance.

The CCES surveys allow us to test whether Hanson, Scheve, and Slaughter's empirical results can be extended to opinions over immigration policy issues that are salient in the more recent era. Many of today's issues involve questions about illegality and enforcement, as well as how individuals want immigration policy to be shaped and enforced. These topics are more specific than those used by earlier research teams. The fact that there is little support for the public finance hypothesis across all of these questions suggests that it is unlikely that we would find much support using a more general question about immigration. While we cannot be sure how much these specific questions tap similar dispositions to those captured by the more general ANES questions, they provide an important robustness test.[29]

As a final robustness check using nonexperimental data, I analyzed ANES data from 2002, 2004, and 2008. The results are reported in Table 7. For each year, a model is estimated with and without state-fixed effects. Across each of the questions, we do not observe the hypothesized interaction between high skill and

29. The differences in results does not stem from underlying changes in demographics as both surveys are nationally representative, and changes in overall education levels are captured by variables in the models themselves. The results are also robust using the state classification system adopted by Hanson, Scheve, and Slaughter.

Table 6

CCES 2010: Individual Level Correlates of Immigration Opposition

	GrantLegal	BorderPatrol	PoliceQuestion	FineBusiness	GuestWork
College4yr	−0.43**	−0.20*	−0.53**	0.05	−0.41
	[0.07]	[0.10]	[0.12]	[0.30]	[0.33]
SomeCollege	−0.28**	−0.04	−0.31**	0.26	−0.18
	[0.08]	[0.10]	[0.11]	[0.26]	[0.36]
HSGrad	−0.13+	−0.07	−0.21*	0.07	0.25
	[0.07]	[0.10]	[0.10]	[0.33]	[0.33]
College4yr F1	−0.03	−0.06	−0.06	−0.29*	−0.14
	[0.05]	[0.05]	[0.05]	[0.14]	[0.19]
SomeCollege F1	0.01	−0.04	−0.03	−0.35	−0.18
	[0.06]	[0.04]	[0.05]	[0.22]	[0.21]
HSGrad F1	0.04	0.04+	−0.06	0.13	0.17
	[0.05]	[0.02]	[0.05]	[0.11]	[0.31]
NoHSEdu F1	0.01	0.02	−0.05	0.55	−0.56
	[0.12]	[0.09]	[0.10]	[0.73]	[0.76]
College4yr Imm1	0.02	0.02	−0.01	0.10	−0.21
	[0.04]	[0.04]	[0.04]	[0.18]	[0.20]
SomeCollege Imm1	−0.00	0.02	−0.03	0.28	0.04
	[0.05]	[0.05]	[0.05]	[0.17]	[0.18]
HSGrad Imm1	−0.09*	−0.02	0.01	−0.14	−0.38**
	[0.04]	[0.03]	[0.04]	[0.15]	[0.13]
NoHSEdu Imm1	−0.17	−0.13	−0.21	−0.55	0.21
	[0.12]	[0.11]	[0.14]	[0.72]	[0.70]
Hispanic	−0.58**	−0.58**	−0.60**	−0.88**	−0.13
	[0.06]	[0.03]	[0.04]	[0.15]	[0.27]
AgeSquared	−0.00**	−0.00+	−0.00**	−0.00	−0.00
	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]
Age	0.03**	0.01**	0.03**	0.03	0.01
	[0.00]	[0.00]	[0.00]	[0.02]	[0.02]
Gender	0.08**	0.11**	0.07**	0.27*	−0.28**
	[0.02]	[0.02]	[0.02]	[0.12]	[0.07]
UnemployPct	−0.02	−0.41	−0.39	−2.50	0.71
	[0.38]	[0.44]	[0.46]	[1.94]	[1.97]
PartyID	0.11**	0.09**	0.13**	0.06*	0.01
	[0.01]	[0.00]	[0.01]	[0.03]	[0.03]
Ideology	0.32**	0.24**	0.36**	0.17*	0.18**
	[0.01]	[0.01]	[0.01]	[0.07]	[0.05]
UnionMember	0.06**	−0.05**	0.02	0.05	0.03
	[0.02]	[0.02]	[0.02]	[0.11]	[0.10]
Unemployed	0.07*	−0.05	0.04	0.08	0.30
	[0.04]	[0.05]	[0.04]	[0.26]	[0.19]

Table 6 (*continued*)

	GrantLegal	BorderPatrol	PoliceQuestion	FineBusiness	GuestWork
Constant	−1.32**	−0.65**	−1.77**	−1.19*	0.48
	[0.12]	[0.14]	[0.15]	[0.58]	[0.60]
Observations	51,196	51,196	51,196	2,199	2,199

Notes: Opposition to immigration as a function of individual demographics and state fiscal environment. CCES 2010 survey. Standard errors in brackets, +$p<0.10$; *$p<0.05$; ** $p<0.01$.

Table 7
2002, 2004, 2008 ANES Surveys

	Yr02	Yr02FE	Yr04	Yr04FE	Yr08	Yr08FE
College4 yr	−4.98**	−5.28**	−6.12**	−5.77**	−0.03	−0.05
	[0.37]	[0.34]	[0.49]	[0.43]	[0.15]	[0.15]
SomeCollege	−4.75**	−5.06**	−5.73**	−5.34**	0.12	0.12
	[0.39]	[0.36]	[0.54]	[0.28]	[0.14]	[0.14]
HSGrad	−4.36**	−4.66**	−5.43**	−4.97**		
	[0.42]	[0.31]	[0.47]	[0.44]		
NoHSEdu	−4.82**	−5.34**	−5.62**	−5.10**	0.11	0.15
	[0.45]	[0.41]	[0.62]	[0.51]	[0.18]	[0.18]
College4 yr F1	0.24	−0.59*	0.14	−0.71	0.30	0.64
	[0.25]	[0.27]	[0.24]	[0.83]	[0.19]	[0.93]
SomeCollege F1	−0.03	−0.91**	−0.17	−0.89	0.04	0.41
	[0.28]	[0.30]	[0.24]	[0.78]	[0.19]	[0.97]
HSGrad F1	0.25	−0.57**	−0.26	−1.07	−0.30	0.08
	[0.24]	[0.14]	[0.32]	[0.94]	[0.21]	[0.91]
NoHSEdu F1	0.69	−0.24	0.80		−0.44	
	[0.47]	[0.50]	[0.71]		[0.81]	
College4 yr Imm1	0.00	0.26	−0.09	−0.62*	−0.04	0.52
	[0.21]	[0.26]	[0.18]	[0.31]	[0.18]	[0.93]
SomeCollege Imm1	0.08	0.46	−0.14	−0.75*	0.01	0.55
	[0.24]	[0.29]	[0.28]	[0.36]	[0.16]	[0.95]
HSGrad Imm1	−0.20	0.06	0.05	−0.66+	0.19	0.77
	[0.24]	[0.16]	[0.33]	[0.34]	[0.21]	[0.95]
NoHSEdu Imm1	−0.19	0.32	−0.61	−1.32+	−0.14	0.27
	[0.38]	[0.37]	[0.60]	[0.76]	[0.57]	[0.74]
Observations	960	950	744	731	2,039	2,034

Notes: 2002 models use border control spending variable, 2004 models use immigration-flow variable, 2008 model uses Latino welfare use variable. Models with and without state-fixed effects included. State-level unemployment used for models without fixed effects. Individual level controls include party, ideology, Hispanic, gender, unemployed, and age (not displayed, available from author). Standard errors in brackets, +$p<0.10$; *$p<0.05$; ** $p<0.01$.

high-fiscal exposure. Even with the 2004 question, which was identical to that used by Hanson, Scheve, and Slaughter, we do not observe the hypothesized patterns. Substantive-effects calculations, like those done above, produce the same inferences.

Let us turn to the smaller survey instrument that had several different questions about immigration but also permitted experimental manipulations to be imbedded in the survey. The survey was conducted in July 2008, by Polimetrix/YouGov.[30] Members of the research team asked respondents "Overall, do you think immigration of high/low skill individuals into the U.S. has had a positive or negative effect on the country?" and the skill level was randomly assigned to respondents (ImmGood). This manipulation is similar to that used by other public opinion scholars.[31] The five response options ranged from very positive to very negative. As Hainmueller and Hiscox have pointed out,[32] the public finance argument would predict that the backlash by more highly skilled natives would be strongest with respect to low-skilled immigrants, as this set of immigrants would include those most likely to appear on welfare rolls. This experimental manipulation offers a way to test that implication of the public finance argument. Non-skilled and skilled respondents, and respondents living in different public finance environments, might imagine different types of immigrants when asked for preferences about immigration in general. Such beliefs or other variables may make individuals of a given skill level incomparable across different state fiscal environments because of the role of unstated assumptions among the respondents.

A second question in the smaller survey asked respondents about their preferences over immigration flows from specific places of origin (ImmFlow): Mexico, China, India, and Europe. "Do you think the U.S. should allow more or fewer immigrants from the following places?" Responses ranged from allow a lot more (0) to stop (4). This question most closely reflects the ANES question format. In all, 2,678 individuals were surveyed, though sample sizes varied slightly, depending on experimental treatment and nonresponses (which are dropped as before). Survey weights were calculated by Polimetrix/YouGov to generate a nationally representative sample. If the public finance hypothesis is correct, then individuals with higher capital endowments who live in states with high-fiscal exposure to immigration should be more strongly opposed to low-skilled immigrants than are individuals with higher-capital endowments who live in states with low-fiscal exposure to immigration. This relationship, however, should

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30. I thank Judy Goldstein, Doug Rivers, and their team for access to these questions.

31. Hainmueller and Hiscox, "Attitudes." Paul M. Sniderman, Louk Hagendoorn, and Markus Prior, "Predisposing Factors and Situational Triggers: Exclusionary Reactions to Immigrant Minorities," *American Political Science Review* 98 (February 2004): 35–49.

32. Hainmueller and Hiscox, "Attitudes."

not be present with regard to immigrants with high-skill levels. This effect may also be more salient for immigrants from Mexico, who are often seen in the United States as benefiting disproportionately from welfare,[33] though there is some evidence that similar perceptions exist with regard to Chinese immigrants, too.[34] Results are presented in Tables 8, 9, and 10.

Figure 2 presents the average opposition level (with 95 percent CI's) to immigration, based on the randomly framed ImmGood question. The full sample appears in the top left; the sample of college-educated individuals from states with high exposure to immigration appears in the top right; and the sample of college-educated individuals from states with low-fiscal exposure to immigration appears in the bottom left. Consistent with the results reported by Hainmueller and Hiscox, we find that individuals oppose highly skilled immigrants much less than they oppose low-skilled immigrants. Furthermore, the average levels of opposition to low-skilled immigrants are actually higher for college-educated individuals in a state with low-fiscal exposure to immigration compared with college-educated individuals in states with high-fiscal exposure. These results are the opposite of what the public finance argument would lead one to expect.

I estimated ordered probit models for each survey question using the same state-level data and the same variable labels as above. For each survey question, I reported four models, each using survey weights. The first model calculates robust standard errors, but neither clusters by state nor includes state-fixed effects; the second model uses state-fixed effects but no state clustering; the third model uses standard errors clustered by state; and the final model uses state-fixed effects and clustered standard errors. Table 8 presents the results. In Models 1 and 3, which do not include state-fixed effects, the coefficient on College4yr F1 was negative and significant. Figure 3 presents results estimated using Model 3 with the CLARIFY program[35] to simulate change in the probability of being in each of the five categories of the immigration-level question when we change a

33. George J. Borjas, *Heaven's Door: Immigration Policy and the American Economy* (Princeton, NJ: Princeton University Press, 1999). George J. Borjas and Stephen J. Trejo, "Immigrant Participation in the Welfare System" (September 1991), NVER Working Paper no. 3423. Cybelle Fox, "The Changing Color of Welfare? How Whites' Attitudes toward Latinos Influence Support for Welfare," *American Journal of Sociology* 110 (November 2004): 580–625.

34. Surprisingly, there appears to be relatively little academic research on perceptions of welfare use across immigrant groups. A 1990 General Social Survey question asked: "I have some questions about different groups in our society. I'm going to show you a seven-point scale on which the characteristics of people in a group can be rated. Do people in these groups tend to be self supporting or do they tend to prefer to live off welfare? Where would you rate in general on this scale ('1' = self supporting, '7' = live off welfare)?" Approximately, 42 percent of respondents gave an answer of "5" or above for Hispanic Americans. By contrast, only 7 percent of respondents answered "5" or above for Asian–Americans. See Bill O. Hing, "Don't Give Me Your Tired, Your Poor: Conflicted Immigrant Stories and Welfare Reform," *Harvard Civil Rights-Civil Liberties Law Review* 33 (Winter 1998): 168.

35. Gary King, Michael Tomz, and Jason Wittenberg, "Making the Most of Statistical Analyses: Improving Interpretation and Presentation," *American Journal of Political Science* 44 (April 2000): 341–55.

Table 8
Immigration—Effect on the United States by Skill Treatment

	High Skill				Low Skill			
	1	**2**	**3**	**4**	**1**	**2**	**3**	**4**
College	−0.68**	−0.59*	−0.68**	−0.59+	−0.39	−0.48+	−0.39	−0.48+
	[0.25]	[0.27]	[0.26]	[0.31]	[0.28]	[0.27]	[0.26]	[0.28]
SomeCollege	−0.12	−0.00	−0.12	−0.00	−0.01	−0.10	−0.01	−0.10
	[0.25]	[0.27]	[0.26]	[0.31]	[0.28]	[0.27]	[0.24]	[0.25]
HSGrad	0.10	0.21	0.10	0.21	−0.07	−0.16	−0.07	−0.16
	[0.24]	[0.27]	[0.24]	[0.28]	[0.28]	[0.27]	[0.25]	[0.27]
AgeSquared	−0.00**	−0.00**	−0.00**	−0.00**	−0.00**	−0.00**	−0.00**	−0.00**
	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]
Age	0.04**	0.04**	0.04**	0.04**	0.04**	0.04**	0.04**	0.04**
	[0.01]	[0.01]	[0.01]	[0.01]	[0.01]	[0.01]	[0.01]	[0.01]
Gender	−0.27**	−0.29**	−0.27**	−0.29**	−0.03	−0.04	−0.03	−0.04
	[0.07]	[0.07]	[0.06]	[0.06]	[0.07]	[0.07]	[0.07]	[0.07]
PartyID	0.02	0.01	0.02	0.01	0.02	0.02	0.02	0.02
	[0.02]	[0.02]	[0.02]	[0.02]	[0.02]	[0.02]	[0.02]	[0.02]
Ideology	−0.04	−0.02	−0.04	−0.02	0.24**	0.24**	0.24**	0.24**
	[0.04]	[0.04]	[0.05]	[0.05]	[0.04]	[0.04]	[0.05]	[0.05]
Hispanic	−0.48**	−0.48**	−0.48**	−0.48**	−0.65**	−0.65**	−0.65**	−0.65**
	[0.13]	[0.13]	[0.16]	[0.17]	[0.13]	[0.13]	[0.14]	[0.15]
Unemployed	0.10	0.08	0.10	0.08	0.08	0.07	0.08	0.07
	[0.14]	[0.14]	[0.13]	[0.14]	[0.14]	[0.15]	[0.13]	[0.14]
College4 yr F1	−0.02	0.37	−0.02	0.37**	−0.26*	−0.16	−0.26*	−0.16
	[0.13]	[0.50]	[0.08]	[0.10]	[0.13]	[0.82]	[0.12]	[0.18]
SomeCollege F1	−0.15	0.23	−0.15	0.23*	−0.02	0.10	−0.02	0.10
	[0.12]	[0.49]	[0.11]	[0.11]	[0.13]	[0.81]	[0.14]	[0.15]
HSGrad F1	0.12	0.51	0.12	0.51**	−0.11	−0.03	−0.11+	−0.03
	[0.13]	[0.50]	[0.17]	[0.17]	[0.12]	[0.82]	[0.07]	[0.21]
NoHSEdu F1	−0.27	0.23	−0.27	0.23	−0.13	−0.13	−0.13	−0.13
	[0.32]	[0.59]	[0.29]	[0.34]	[0.33]	[0.88]	[0.28]	[0.34]
Observations	1,079	1,079	1,079	1,079	1,167	1,167	1,167	1,167

Notes: Effect of immigration on the United States by high- or low-skill frame using 2008 Polimetrix survey. Model 1 uses no clustering or state-fixed effects, Model 2 uses state-fixed effects only, Model 3 uses clustered standard errors by state, and Model 4 uses standard errors clustered by state and state-fixed effects. Cut point constants not displayed. Standard errors in brackets, $+p<0.10$; $*p<0.05$; $**p<0.01$.

college-educated respondent's residence from a state with a low level of fiscal exposure to immigration to a state with a high level of fiscal exposure. With regard to low-skilled immigrants, the probability that a college-educated person says immigration is good significantly increases if we change her or his residence

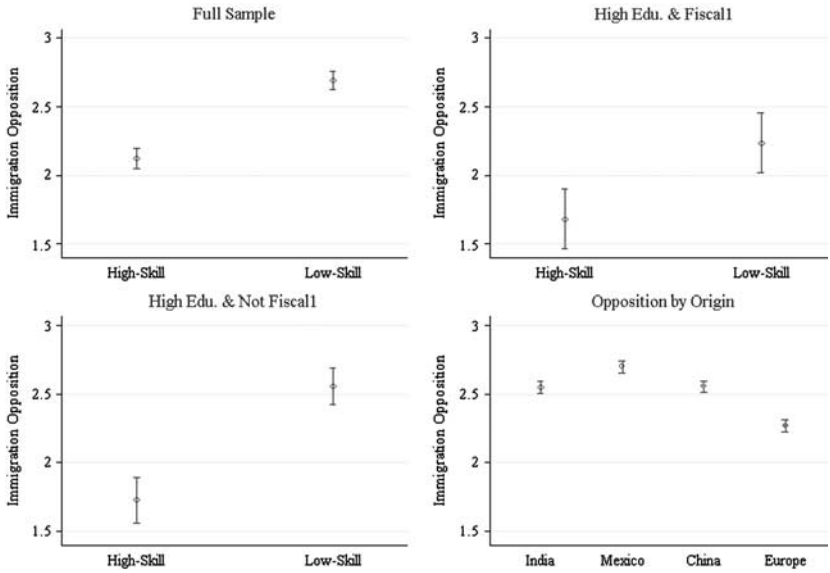
Table 9
Preferences for Immigration Flows from Mexico and Europe

	Mexico				Europe			
	1	**2**	**3**	**4**	**1**	**2**	**3**	**4**
College	−0.41*	−0.41*	−0.41+	−0.41+	−0.78**	−0.84**	−0.78**	−0.84**
	[0.20]	[0.19]	[0.22]	[0.23]	[0.20]	[0.20]	[0.20]	[0.21]
SomeCollege	−0.15	−0.14	−0.15	−0.14	−0.41*	−0.41*	−0.41*	−0.41*
	[0.20]	[0.19]	[0.21]	[0.21]	[0.20]	[0.19]	[0.20]	[0.20]
HSGrad	0.04	0.05	0.04	0.05	−0.18	−0.21	−0.18	−0.21
	[0.20]	[0.19]	[0.19]	[0.20]	[0.20]	[0.19]	[0.19]	[0.19]
College4 yr F1	−0.15+	0.04	−0.15	0.04	0.01	−0.11	0.01	−0.11
	[0.09]	[0.41]	[0.12]	[0.10]	[0.10]	[0.37]	[0.09]	[0.14]
SomeCollege F1	−0.05	0.15	−0.05	0.15*	−0.01	−0.20	−0.01	−0.20**
	[0.08]	[0.39]	[0.06]	[0.07]	[0.09]	[0.36]	[0.08]	[0.06]
HSGrad F1	−0.03	0.15	−0.03	0.15	−0.11	−0.27	−0.11	−0.27**
	[0.09]	[0.41]	[0.08]	[0.12]	[0.09]	[0.37]	[0.11]	[0.08]
NoHSEdu F1	0.06	0.23	0.06	0.23	−0.32	−0.54	−0.32	−0.54
	[0.30]	[0.46]	[0.34]	[0.30]	[0.30]	[0.47]	[0.38]	[0.40]
AgeSquared	−0.00**	−0.00**	−0.00**	−0.00**	−0.00**	−0.00**	−0.00**	−0.00**
	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]
Age	0.04**	0.04**	0.04**	0.04**	0.07**	0.07**	0.07**	0.07**
	[0.01]	[0.01]	[0.01]	[0.01]	[0.01]	[0.01]	[0.01]	[0.01]
Gender	−0.18**	−0.17**	−0.18**	−0.17**	−0.29**	−0.26**	−0.29**	−0.26**
	[0.05]	[0.05]	[0.05]	[0.05]	[0.05]	[0.05]	[0.07]	[0.06]
PartyID	0.07**	0.07**	0.07**	0.07**	0.03*	0.03*	0.03*	0.03*
	[0.01]	[0.01]	[0.01]	[0.02]	[0.01]	[0.01]	[0.01]	[0.01]
Ideology	0.10**	0.10**	0.10**	0.10**	0.08*	0.08*	0.08**	0.08**
	[0.03]	[0.03]	[0.03]	[0.03]	[0.03]	[0.03]	[0.02]	[0.03]
Hispanic	−0.57**	−0.53**	−0.57**	−0.53**	0.01	0.07	0.01	0.07
	[0.09]	[0.09]	[0.11]	[0.11]	[0.08]	[0.09]	[0.09]	[0.08]
Unemployed	0.02	−0.02	0.02	−0.02	0.09	0.07	0.09	0.07
	[0.10]	[0.10]	[0.13]	[0.13]	[0.10]	[0.10]	[0.12]	[0.12]
Observations	2,151	2,151	2,151	2,151	2,121	2,121	2,121	2,121

Notes: Preferences of immigration flows from Mexico and Europe using 2008 Polimetrix survey. All models use survey weights. Model 1 uses no clustering or state-fixed effects, Model 2 uses state-fixed effects only, Model 3 uses clustered standard errors by state, and Model 4 uses standard errors clustered by state and state-fixed effects. Cutpoint constants excluded for presentation. Standard errors in brackets, $+p<0.10$; $*p<0.05$; $**\ p<0.01$.

from a low-fiscal exposure state to a high-exposure one. Moreover, the probability of thinking that immigration is bad for the United States significantly decreases. These results are the opposite of what Hanson, Scheve, and Slaughter's argument would lead us to expect, and the magnitudes are modest compared with their

Figure 2
Immigration Preferences by Fiscal Category



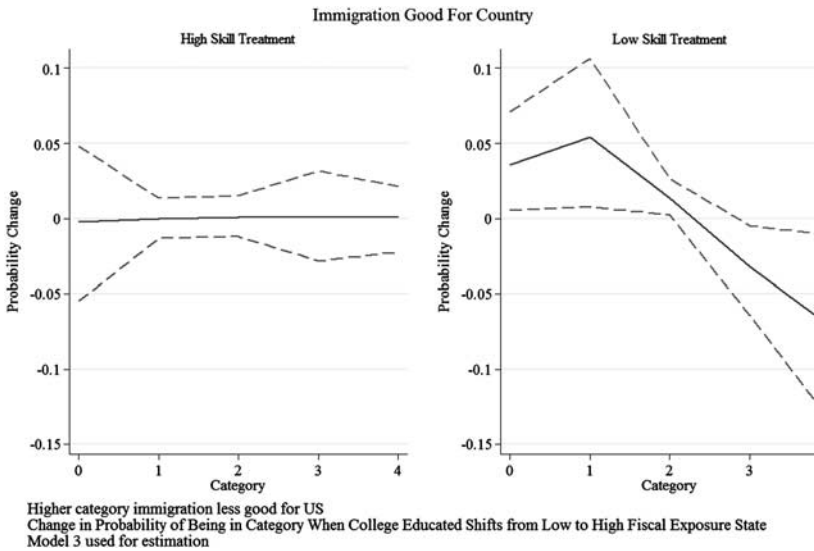
Notes: Preferences over immigration by skill of immigrant or country of origin (randomly assigned). Skill differences displayed for full sample (top left), college-educated and from state with high-fiscal exposure (top right), and college-educated and from state without high-fiscal exposure. Opposition to low-skilled immigrants higher among college-educated individuals from states with low-fiscal exposure, contra the fiscal policy hypothesis.

results. Multivariate analysis paints a similar picture, which we would expect given the randomization of the treatment.

When state-fixed effects are included and standard errors are clustered at the state level, the coefficient on College4yr F1 becomes positive and is close to being significant. Hanson, Scheve, and Slaughter, in contrast, found that the inclusion of state-fixed effects does not influence the sign of this coefficient, which moreover is statistically significant. The authors said that they preferred the model with state-fixed effects, but they never elaborated on why. Not surprisingly, with fifty state-fixed effects, an *F*-test rejects the null joint hypothesis of not including fixed effects. The 2008 survey experiment data, like the ANES data, included states with very few observations, which means the analyst should be cautious about employing fixed effects. Nevertheless, I did not find robust support for the public finance hypothesis where low-skilled immigrants

Figure 3

Preferences over Immigration Flows by Skill Level.



Notes: Respondents asked "Overall, do you think immigration of high/low skill into the U.S. has had a positive or negative effect on the country?" Skill assigned randomly across respondents. Estimates report simulated changes in probabilities for belonging to each of the five levels of the ordinal dependent variable.

(who would be the most likely to cause the types of fiscal pressures that interest Hanson, Scheve, and Slaughter) are concerned.

Next, we turn to responses to the by-country immigration-flow questions (ImmFlow). Average opposition to immigration from Mexico was the highest; average opposition to immigration from Europe was the lowest; and average opposition to immigration from India and China fell in between. Table 9 presents results for Europe and Mexico, and Table 10 for India and China, which allows us to see if the hypothesized public finance effects are present. We would expect the coefficient on College4yr F1 to be positive for the case of Mexico. We observe this in models without fixed effects, but the coefficient is negative in models with fixed effects. The coefficient is significant only in the fourth model, giving some support to the public finance hypothesis, but the results are clearly less robust. The coefficients on immigration flows from other developing countries, China and India, tend to be negative and occasionally significant.

Figure 4 presents simulations from each country's third model (without fixed effects). I estimated the change in probability of being in each of the five

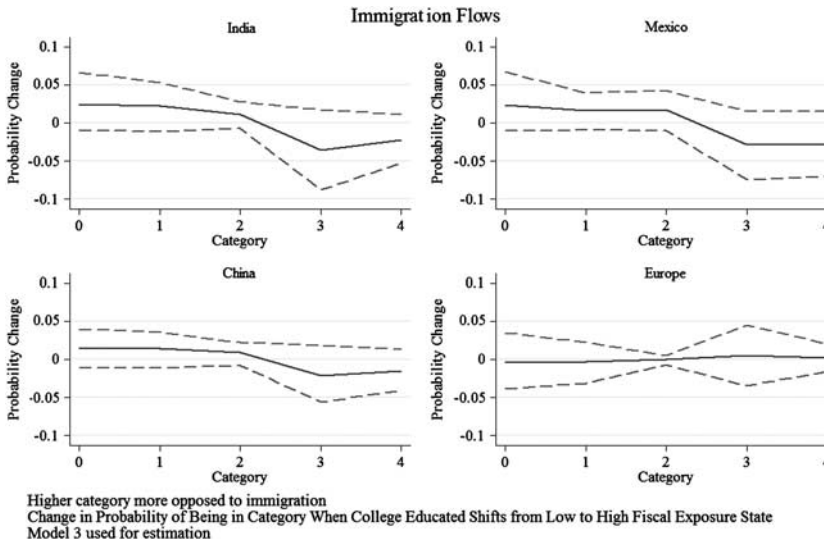
Table 10
Preferences for Immigration Flows from China and India

	China				India			
	1	**2**	**3**	**4**	**1**	**2**	**3**	**4**
College	−0.39*	−0.40*	−0.39+	−0.40+	−0.52**	−0.53**	−0.52**	−0.53**
	[0.19]	[0.19]	[0.21]	[0.21]	[0.19]	[0.19]	[0.20]	[0.19]
SomeCollege	−0.07	−0.06	−0.07	−0.06	−0.16	−0.15	−0.16	−0.15
	[0.19]	[0.18]	[0.18]	[0.18]	[0.19]	[0.19]	[0.19]	[0.18]
HSGrad	0.15	0.15	0.15	0.15	0.03	0.01	0.03	0.01
	[0.19]	[0.18]	[0.19]	[0.19]	[0.19]	[0.18]	[0.18]	[0.17]
College4 yr F1	−0.11	−0.30	−0.11	−0.30*	−0.17+	0.11	−0.17	0.11
	[0.09]	[0.27]	[0.09]	[0.13]	[0.09]	[0.41]	[0.12]	[0.13]
SomeCollege F1	−0.01	−0.21	−0.01	−0.21**	−0.08	0.19	−0.08	0.19**
	[0.09]	[0.25]	[0.08]	[0.07]	[0.09]	[0.40]	[0.06]	[0.07]
HSGrad F1	−0.17+	−0.37	−0.17+	−0.37**	−0.21*	0.07	−0.21**	0.07
	[0.09]	[0.28]	[0.09]	[0.10]	[0.09]	[0.41]	[0.08]	[0.09]
NoHSEdu F1	−0.01	−0.23	−0.01	−0.23	−0.20	0.05	−0.20	0.05
	[0.28]	[0.38]	[0.30]	[0.33]	[0.28]	[0.47]	[0.29]	[0.26]
AgeSquared	−0.00**	−0.00**	−0.00**	−0.00**	−0.00**	−0.00**	−0.00**	−0.00**
	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]
Age	0.06**	0.06**	0.06**	0.06**	0.07**	0.07**	0.07**	0.07**
	[0.01]	[0.01]	[0.01]	[0.01]	[0.01]	[0.01]	[0.01]	[0.01]
Gender	−0.22**	−0.21**	−0.22**	−0.21**	−0.25**	−0.23**	−0.25**	−0.23**
	[0.05]	[0.05]	[0.05]	[0.05]	[0.05]	[0.05]	[0.05]	[0.05]
PartyID	0.04*	0.04*	0.04*	0.04*	0.04**	0.04**	0.04*	0.04*
	[0.01]	[0.02]	[0.02]	[0.02]	[0.01]	[0.02]	[0.02]	[0.02]
Ideology	0.06+	0.05+	0.06+	0.05+	0.06+	0.05+	0.06+	0.05
	[0.03]	[0.03]	[0.03]	[0.03]	[0.03]	[0.03]	[0.03]	[0.03]
Hispanic	−0.13	−0.10	−0.13	−0.10	−0.13	−0.07	−0.13+	−0.07
	[0.09]	[0.10]	[0.10]	[0.09]	[0.09]	[0.09]	[0.08]	[0.07]
Unemployed	0.10	0.09	0.10	0.09	0.09	0.07	0.09	0.07
	[0.10]	[0.10]	[0.10]	[0.11]	[0.10]	[0.10]	[0.11]	[0.11]
Observations	2,120	2,120	2,120	2,120	2,127	2,127	2,127	2,127

Notes: Preferences of immigration flows from China and India using 2008 Polimetrix survey. All models use survey weights. Model 1 uses no clustering or state-fixed effects, Model 2 uses state-fixed effects only, Model 3 uses clustered standard errors by state, and Model 4 uses standard errors clustered by state and state-fixed effects. Cutpoint constants excluded for presentation. Standard errors in brackets, $+p<0.10$; $*p<0.05$; $**p<0.01$.

categories of the immigration-level questions (one for each sending country) for a college-educated respondent moving from a state with a low level of fiscal exposure to one with a high level. For each country, these changes have

Figure 4
Preferences over Immigration Flows by Country of Origin.



Notes: Respondents asked "Do you think the U.S. should allow more or fewer immigrants from the following places?" Estimates report simulated changes in probabilities for belonging to each of the five levels of the ordinal dependent variable.

95 percent confidence intervals that overlap with 0.[36] For each level of the dependent variable, the 95 percent confidence intervals overlap with 0, indicating little systematic change.[37]

Discussion: Revisiting the Debate over Material versus Cultural Factors

The results in this paper and those found in the work of Hainmueller and Hiscox suggest that, at least in the more recent political climate, cleavages on immigration preferences are unlikely to be driven by the forces emphasized in the public finance argument.

36. Simulations for the fixed-effect models were not possible due to the number of states with relatively few observations. Such models appear to cause invertibility problems in the variance–covariance matrix CLARIFY estimates using an ordered probit model.

37. The online appendix presents results broken out by whether or not respondents received the high-skill or low-skill question. The results are largely unchanged. See http://scholar.harvard.edu/dtingley/files/publicfinance-onlineappendix.pdf

Two important questions arise from this research. First, is this because of changes over time in the politics of immigration? This is possible. Helen Milner and Dustin Tingley, for example, have found that legislative voting on reform of immigrant access to public benefits, which occurred largely in the 1990s, is consistent with the public finance hypothesis.[38] But these results do not extend to other immigration issue areas, namely, debates about border security that have become more salient in the first decades of the twenty-first century. It is entirely possible that public opinion would become more consistent with the public finance argument where public finance considerations are to be politicized more explicitly once again. At minimum, the academic debate thus far has largely ignored the way that elites can influence how political debates are framed, which in turn can influence the way citizens view and evaluate an issue. The present study is not able to test such questions about temporality or elite framing, but future research should.

Second, if theories of material self-interest are unable to explain attitudes toward immigration, what does? Hainmueller and Hiscox have emphasized the role of (1) cultural factors (e.g., ethnocentrism) and (2) sociotropism.[39] There is ample reason to be suspicious of the strong position taken by advocates of these theories. As Fordham and Kleinberg have pointed out, regressing one set of "attitudes" on another establishes nothing about causality and its direction.[40] This is perhaps especially true with immigration preferences and concepts like ethnocentrism, because most definitions of ethnocentrism already involve attitudes toward groups like "immigrants." The left- and right-hand sides of our regressions can quickly become conflated. Similarly, confusion over proximate versus less proximate causes can lead scholars to think that variables like "ethnocentrism" explain immigration attitudes better than more distal variables that capture material self-interest. This might be the case statistically, but only because the more proximate variables are themselves driven by the more distal ones.

Such methodological concerns extend in different ways to other studies of immigration. For example, Ted Brader, Nicholas Valentino, and Elizabeth Suhay exposed subjects to media stories about immigrants and varied the stories' details about the immigrants' ethnicity and their use of welfare. The researchers then measured emotional responses (nonmaterialist factors to them) and cognitive

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38. Milner and Tingley, "Economic and Political Influences."

39. They also entertain the "crowding" hypothesis, but add that "In general, however, our findings indicate that economic self-interest, at least as currently theorized in the standard models, does not have a strong impact on the immigration policy preferences of surveyed individuals." See Hainmueller and Hiscox, "Attitudes," 79.

40. Benjamin O. Fordham and Katja B. Kleinberg, "How Can Economic Interests Influence Support for Free Trade?" *International Organization* (2012) 66: 311–28.

cost-benefit responses.[41] They argued that the emotional responses transmitted the expected effect, but the materially based responses did not. However, Kosuke Imai and Teppei Yamamoto have shown that these results are contingent on the assumption that cognitive appraisal has no effect on emotional responses, because a revised analysis shows that cognitive appraisals of material self-interest is very important.[42] This makes clear the importance of explicit causal theorizing when developing appropriate statistical tests.

To make compelling cultural (and related) accounts, researchers must develop clear experimental manipulations of hypothesized explanatory variables.[43] Materialist theories suggest variables that can be manipulated, and this paper manipulates some of them. Alternative theoretical positions need to develop comparable manipulations that can test a cultural theory's causal claims. In addition, more research is needed on what exactly drives the cultural attitudes that people adopt. Are people born with out-group preferences? When do preferences develop in children, and what influences this process? What role does media coverage play, and are elites able to manipulate the attitudes of nonelites by priming/framing? Understanding the factors that shape these attitudes will help us understand them more and avoid redescriptions of the political attitudes we wish to explain.

Conclusion

In their influential paper, Hanson, Scheve, and Slaughter combined a standard factor-based model of immigration preferences with an argument that preferences will depend on the local public finance environment and exposure to immigration flows. Work pursued concurrently by Hainmueller and Hiscox questioned Hanson, Scheve, and Slaughter's findings. Hainmueller and Hiscox argued that their tests yielded little support for the materialist account of immigration preference, and that nonmaterialist explanations like "ethnocentrism" are probably more useful and convincing.

This article revisited the debate, used a variety of new data (the largest to date), and offered a critique of the explanations held out as alternatives to the public finance hypothesis. I repeatedly found little support in the new data for the public finance hypothesis. I also present results from analyzing three separate

41. Ted Brader, Nicholas A. Valentino, Elizabeth Suhay, "What Triggers Public Opposition to Immigration? Anxiety, Group Cues, and Immigration Threat," *American Journal of Political Science* 52 (October 2008): 959–78.

42. Kosuke Imai and Teppei Yamamoto, "Identification and Sensitivity Analysis for Multiple Causal Mechanisms: Revisiting Evidence from Framing Experiments," *Political Analysis*, forthcoming.

43. The literature that Hainmueller and Hiscox cite does not do this. Hainmueller and Hiscox, "Attitudes," 79.

American National Election Survey studies. One asked a question identical to the one used by HSS, while another asked a question that directly linked welfare and immigrants. HSS's predictions fail to be supported in these surveys. A final set of results analyze a survey experiment that asked questions close to what HSS asked, as well as replicate the low-skill/high-skill randomization used by Hainmueller and Hiscox.

It is worth remembering that it is possible that HSS's theory is more applicable to the particular time period they analyze. As pointed out by Milner and Tingley,[44] the political agenda on immigration was heavily linked to welfare reform during the 1990s. Media reporting on the financial costs of immigration also appears to have spiked during that decade, as shown in Figure 1. During the 2000s, the link between immigration and welfare continues to be made,[45] but apparently not to the extent that it once was. Of course, strategic political actors (e.g., a Republican Presidential candidate[46]) could attempt to make the connections more explicit. Under such conditions, highly skilled citizens in states with high-fiscal exposure to immigrants might begin to oppose immigrants more than do similar individuals in other states with less exposure. Even if the public finance thesis is historically bounded, theoretical and empirical alternatives remain underdeveloped. A research program that does not run into problems of tautological variables and causal ambiguity is sorely needed.

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44. Milner and Tingley, "Economic and Political Influences."

45. Teresa Watanabe, "L.A. County welfare to children of illegal immigrants grows," *Los Angeles Times*, September 5, 2010. Steven Camarota, "Senate amnesty could strain welfare system: Newest data shows Latin American immigrants make heavy use of welfare," *Center for Immigration Studies* (June 2007).

46. Ron Paul, "Immigration and the Welfare State," (August 2005), http://www.lewrockwell.com/paul/paul269.html

Appendix: Sources for Tables 1 and 2. Hanson *et al.* (2007): Gordon Hanson, Kenneth Scheve, and Matthew J. Slaughter, **"**Public Finance and Individual Preferences over Globalization Strategies,**"** *Economics and Politics* 19 (March 2007): 1–33.

Hainmueller and Hiscox (2010): Jens Hainmueller and Michael J. Hiscox, **"**Attitudes Toward Highly Skilled and Low-Skilled Immigration: Evidence from a Survey Experiment,**"** *American Political Science Review* 104 (February 2010): 61–84.

ANES 2002: American National Election Study 2002.

ANES 2004: American National Election Study 2004.

Polimetrix 2008: Survey fielded summer of 2008 by Polimetrix/YouGov.

CCES 2006: Cooperative Congressional Election Study, 2006, http://projects.iq.harvard.edu/cces/

ANES 2008: American National Election Study 2008.

CCES 2010: Cooperative Congressional Election Study, 2010, http://projects.iq.harvard.edu/cces/