LABOR MARKET COMPETITION AND INDIVIDUAL PREFERENCES OVER IMMIGRATION POLICY

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Abstract—This paper uses three years of individual-level data to analyze the determinants of individual preferences over immigration policy in the United States. We have two main empirical results. First, less-skilled workers are significantly more likely to prefer limiting immigrant inflows into the United States. Our finding suggests that, over the time horizons that are relevant to individuals when evaluating immigration policy, individuals think that the U.S. economy absorbs immigrant inflows at least partly by changing wages. Second, we find no evidence that the relationship between skills and immigration opinions is stronger in high-immigration communities.

I. Introduction

INDIVIDUAL preferences over immigration policy are an essential input into any complete model of immigration policymaking. To understand both the policies implemented as well as the accompanying political conflict, we need to know who supports more- or less-restrictionist policies and why. Preferences surely depend on a host of considerations, including political ideology, ethnic and racial identity, and expectations about the economic impact of new immigrants. Among economic considerations, the anticipated effect of immigration on wages is likely to play a key role, as current factor income is a major determinant of individual economic welfare. Because current factor income depends primarily on individual skill levels, there may be a significant link from skills to wages to immigration-policy preferences.

Different economic models, however, make contrasting predictions about the nature of this link. In the Heckscher-Ohlin model of international trade, immigrants sometimes have no impact on native wages. Factor-proportions analysis, a framework often used by labor economists researching immigration, predicts that immigrants pressure the wages of similarly skilled natives nationwide. Area analysis, an alternative framework in the labor literature, predicts that immigrants pressure the wages of similarly skilled natives who reside in gateway communities where immigrants settle. In short, there is theoretical uncertainty about the wages-mediated link between skills and preferences in addition to the empirical uncertainty regarding whether individuals consider labor market competition when evaluating immigration policy.[1]

In this paper, we provide new evidence on the determinants of individual immigration-policy preferences and on what these preferences imply about how economies absorb immigrants. We use a direct measure of these preferences from the 1992, 1994, and 1996 National Election Studies (NES) surveys (Sapiro et al., 1998), which are extensive surveys of current political opinions based on an individual-level, stratified random sample of the U.S. population. Our direct measure is the responses of U.S. citizens to a question asking about the number of immigrants U.S. policy should permit. Building on the NES surveys, we construct an individual-level data set identifying both stated immigration-policy preferences and potential immigration exposure through several channels. We then evaluate how these preferences vary with individual characteristics that alternative theories predict might matter.

We have two main empirical results. First, less-skilled workers are significantly more likely to prefer limiting immigrant inflows into the United States. This result is robust to several different econometric specifications that account for determinants of policy preferences other than skills. Our finding suggests that, over the time horizons that are relevant to individuals when evaluating immigration policy, individuals think the U.S. economy absorbs immigrant inflows at least partly by changing wages. Further, they form policy opinions in accord with their interests as labor force participants. These preferences are consistent with a Heckscher-Ohlin trade model and with a factor-proportions analysis labor model. Second, we find no evidence that the relationship between skills and immigration opinions is stronger in high-immigration communities. These preferences are inconsistent with an area-analysis labor model.

Section II relates our work to the political-economy literature on immigration. Section III presents alternative economic models of immigration-policy preferences. Section IV discusses the data and our model specifications. Section V presents the empirical results, and section VI concludes.

II. The Political Economy of Immigration Policy

Previous research on the determinants of immigration policy in receiving countries has emphasized the variation in immigration politics across countries and over time (Joppke, 1998; Kessler, 1998; Perotti, 1998; Money, 1997;

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[1] The terms ***area analysis*** and ***factor-proportions analysis*** we borrow from Borjas et al. (1996).

Freeman, 1992, 1995). There is general agreement that systematic differences in policies across countries depend on varying political institutions, divergent national histories of settlement and colonialism, and the different effects of a changing international context. Moreover, it seems clear that even within countries the character of immigration politics changes over time. For example, a country's interest groups can dominate the policymaking process during some periods, while, in other periods, partisan electoral competition is central. In contrast to this observed variation across time and space, very little research has focused on the distribution of individual preferences over immigration policy. Who supports free movement? Who advocates further restrictions? We contend that only once these questions about preferences have been adequately answered can a convincing account of cross-country and over-time variation in policymaking be constructed.

Accounts of individual preferences can usefully be divided into economic and non-economic determinants. Non-economic factors include individual beliefs about civil rights and expectations regarding the cultural impact of immigrants. The civil-rights dimension of immigration-policy preferences has both a nondiscrimination aspect as well as a more straightforward "free movement of persons" element. Individual policy preferences are also likely to depend both on the degree to which individuals think immigrants change native culture and on the desirability of those changes.

Economic determinants are generally hypothesized to be a function of the aggregate costs and benefits of immigration, the fiscal impact on the public sector, and the impact of immigrants on native labor market returns. This last consideration is arguably the most critical economic factor influencing individual policy preferences, and it is often the most controversial factor as well. Consequently, it is the main issue addressed in this paper.[2]

In previous work, Goldin (1994) and Timmer and Williamson (1998) present historical evidence on the potential impact of labor market outcomes on immigration policy. Goldin finds that House Representatives in 1915 were more likely to vote in favor of a literacy test to restrict immigrant inflows the lower were wage increases from 1907 to 1915 in the Representatives' district cities. Goldin interprets this as indirect evidence that immigrants' pressure on native wages contributed to tighter immigration restrictions. Pooling five countries from 1860 to 1930, Timmer and Williamson find that more-restrictionist immigration policies were significantly correlated with lower unskilled wages relative to average per capita income. They interpret this correlation as evidence that countries with more-unequal income distributions tended to restrict immigration to maintain the relative income of the less skilled.[3]

In contrast to the policy focus of Goldin and Timmer and Williamson, Citrin et al. (1997) use individual-level survey data to study the immigration-policy preferences of a cross section of U.S. citizens. Controlling for a wide range of factors that potentially shape preferences, they conclude "that personal economic circumstances play little role in opinion formation" (p. 858). Specifically, they find that labor market competition does not influence preferences. Using information from a national poll, Espenshade and Hempstead (1996) find some mixed evidence that less-educated and lower-family-income individuals are more likely to support immigration restrictions. They interpret this evidence as suggesting that people care about immigration's labor market impacts on wages, employment, and work conditions.

All these studies provide valuable information on the economic determinants of immigration-policy preferences and political action. Our work builds upon them in three important ways.

First, our study uses a direct measure of individual immigration-policy preferences. Some studies cited above infer from observed political actions or policy outcomes something about immigration-policy preferences. These indirect-preference measures face the important limitation of being endogenous outcomes of the interaction between immigration-policy (and possibly other, for example, foreign-policy) preferences and domestic political institutions. Policy preferences and institutions together determine policy actions, so the mapping from preferences to actions is not unambiguous. Scheve and Slaughter (2001) discuss this point further.

Second, our study draws heavily on the trade and labor economics literature on immigration to test properly for the economic determinants of immigration preferences. We test three alternative models of how immigration affects the economic welfare of natives. In contrast, none of the related studies explicitly lays out any models of immigration. Instead, they all simply assume that immigration hurts natives via lower wages, unemployment, and other adverse outcomes. Many important issues have not been explored, such as whether immigration preferences are systematically different in gateway communities.

Third, our study uses measures of individual economic exposure to immigration that follow closely from economic theory. This issue applies most strongly to Citrin et al. (1997) and Espenshade and Hempstead (1996). Empirical labor economists commonly measure skills via educational attainment or occupation classification; our empirical work

[2] Borjas (1995) concludes that the main economic impact of U.S. immigration is on the distribution of income, not on its aggregate level. Borjas (1999) presents a comprehensive analysis of current U.S. immigration policy. See also Freidberg and Hunt (1995).

[3] Hanson and Spilimbergo (1999) analyze the impact of economic conditions in the United States and Mexico on a different aspect of immigration policy: border enforcement and apprehensions. They find that the Mexican (that is, not U.S.) purchasing power of U.S. nominal wages is strongly correlated with border apprehensions of illegal Mexican immigrants.

uses both these measures.[4] In contrast, Citrin et al. primarily interpret educational attainment as a demographic variable rather than an economic factor. Although previous studies have justified this choice on the relationship between education and tolerance, we demonstrate that education measures labor market skills once other considerations (such as gender and political ideology) are controlled for. Citrin et al. measure skills with income and with eight dichotomous occupation variables. Only four of the eight cover working individuals, and these—white collar, pink collar, low-threat blue collar, and high-threat blue collar—are not defined or justified with reference to economic theory or evidence. Espenshade and Hempstead use dichotomous variables for educational attainment and family (not individual) income, with all specifications using both types of variables. Overall, these earlier studies use questionable skill measures, and they do not report specifications with single measures only, nor do they test the joint significance of all skill measures together. These uncertainties regarding measurement and specification suggest the need for further analysis.

III. Economic Models of Immigration-Policy Preferences

To make the connection between individual economic interests and immigration-policy preferences, we focus on how immigration affects individual factor incomes. Different economic models make contrasting predictions about the nature of the link from immigration to factor incomes to policy preferences, and this section briefly summarizes three models: the Heckscher-Ohlin trade model, the factor-proportions analysis model, and the area-analysis model.

Across all three models we make two important assumptions. First, we assume that current factor income is a major determinant of people's economic well-being. Second, we assume that U.S. citizens think that current immigrant inflows increase the relative supply of less-skilled workers. As will be seen below, although this assumption about the skill-mix effects of immigrants is not explicitly stated in the NES question about immigration preferences, this assumption clearly reflects the facts about U.S. immigration in recent decades. Borjas, Freeman, and Katz (1997) report that "on average, immigrants have fewer years of schooling than natives—a difference that has grown over the past two decades, as the mean years of schooling of the immigration population increased less rapidly than the mean years of schooling of natives. As a result, the immigrant contribution to the supply of skills has become increasingly concentrated in the lower educational categories" (p. 6). We assume that NES respondents are aware of these facts.[5]

Given these two assumptions, we think that the economic determinants of an individual's immigration-policy preferences depend on how an immigration-induced shift in the U.S. relative endowment towards less-skilled workers affects that individual's factor income. To maintain focus on equilibrium wage determination, in all models we assume that wages are sufficiently flexible to ensure full employment. This allows us to abstract from unemployment, both equilibrium and frictional, although unemployment is considered in our empirical work. To maintain focus on different skill groups, in all models we assume just two factors of production: skilled labor and unskilled labor. This keeps our analysis as simple as possible.[6]

A. *The Heckscher-Ohlin Model*

The Heckscher-Ohlin (HO) trade model usually makes two key assumptions. First, there is one national labor market for each factor. Thanks to sufficient mobility of natives (and immigrants upon arrival), there are no geographically segmented "local" labor markets. The second key assumption is there are more tradable products (that is, sectors) than primary factors of production, with products differentiated by their factor intensities. Multiple products are essential for establishing many fundamental trade-theory results, such as comparative advantage.

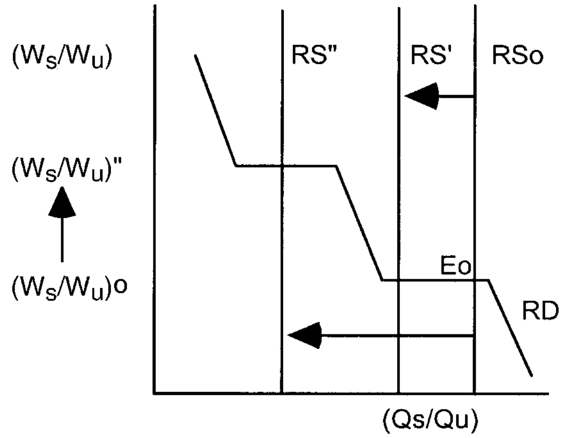
With these assumptions, in equilibrium a country chooses (via the decentralized optimization of firms) the output mix that maximizes national income subject to the constraints of world product prices, national factor supplies, and national technology. This output mix consists of both which products actually get produced as well as the quantities of production. In turn, this output mix helps determine the country's national factor prices. The general intuition is that the technology parameters and world price for each produced sector help determine national wages. In the standard case wherein the country makes at least as many products as the number of primary factors, equilibrium wages are a function of just the world prices and technology parameters of the produced sectors. These wages do not depend on the prices and technology of the nonproduced sectors. They also do not depend directly on the level of endowments (only

[4] For example, in the recent research on the rising U.S. skill premium, the two most commonly used measures of the skill premium have been the relative wage between college graduates and high-school graduates and the relative wage between nonproduction workers and production workers (in manufacturing only). See Katz and Murphy (1992) or Lawrence and Slaughter (1993), for example. Berman, Bound, and Griliches (1994) document for the United States that employment trends for this job-classification measure track quite closely the employment trends measured by the white-collar/blue-collar job classification, which in turn closely reflects the college/high-school classification.

[5] This skills gap between immigrants and natives does not address other interesting facts about the distribution of skills among immigrants. For example, Borjas et al. (1997) show that the skill distribution of U.S. immigration has been somewhat bimodal at both the high- and low-skill ends of the distribution.

[6] In the political-economy literature, some researchers analyze the theory of economic determinants of immigration-policy preferences. Benhabib (1996) considers a one-good model in which natives have different endowments of capital. Kessler (1998) focuses on how trade and immigration affect native factor returns in standard trade models. Bilal, Grether, and de Melo (1998) consider the case of a three-factor, two-household, two-country world.

FIGURE 1.—LABOR MARKET EQUILIBRIUM: THE HECKSCHER-OHLIN MODEL



Skilled labor is subscripted "*s*" and unskilled labor "*u*". The ***RS*** schedule is national relative supply, and the ***RD*** schedule is national relative demand.

indirectly through the endowments' role in selecting the product mix).

Immigration's wage effects depend on the initial product mix, on the size of the immigration shock, and on whether the country is large or small (that is, on whether its product mix does or does not have any influence on world product prices). Consider the standard case in which the initial output mix is sufficiently diversified so that wages depend on just world prices and technology.

In this case, with sufficiently small shocks, the country absorbs immigrants by changing its output mix as predicted by the Rybczynski theorem: the same products are produced, but output tends to increase (decrease) in the non-skill-intensive (skill-intensive) sectors. Whether wages change depends on whether the country is big or small: if the country is small, world prices do not change, and thus there are no wage effects. Leamer and Levinsohn (1995) call this insensitivity of national wages to changes in national factor supplies the ***factor price insensitivity*** (FPI) theorem. If the country is large, wages do change: the relative price of non skill-intensive products declines, which tends to lower (raise) wages for unskilled (skilled) workers.

With sufficiently large immigration shocks, national wages do change. Large-enough shocks induce the country to make a different set of products, which entails a different set of world prices and technology parameters and thus different wages. This absorption of large shocks via changes in both output mix and wages holds whether the country is big or small: in either case, wage inequality rises. In the literature on U.S. immigration, Hanson and Slaughter (2001) find immigration-related changes of output mix among U.S. states.

Figure 1 displays the national labor market for the case of a small HO country with three products. The distinguishing feature is the shape of relative labor demand. It has two perfectly elastic portions, each of which corresponds to a range of endowments for which FPI holds. The national output mix varies along the demand schedule. A different set of two products is made on each elastic part; accordingly, different relative wages prevail on each elastic part. On the downward-sloping portions, the country makes only one product. Output-mix changes are not possible along these portions, and so immigrants must price themselves into employment by changing wages. Point $\boldsymbol{E_o}$ designates the initial labor-market equilibrium, with relative labor supply $\boldsymbol{RS_o}$ and relative wages $(\boldsymbol{w_s/w_u})_{\boldsymbol{o}}$. Two immigration shocks are shown. The sufficiently small immigration shock shifts $\boldsymbol{RS_o}$ to $\boldsymbol{RS'}$. Relative wages do not change, as immigrants trigger Rybczynski output-mix effects with no product-price changes. The sufficiently large shock shifts $\boldsymbol{RS_o}$ to $\boldsymbol{RS''}$, and the country now produces a new set of products. As a result, the unskilled wage falls relative to the skilled wage (to $(\boldsymbol{w_s/w_u})''$); with fixed produce prices, this relative-wage decline will be a real-wage decline as well.[7]

The HO model has different predictions about the link between skills and immigration-policy preferences. If individuals think FPI holds, then there should be no link from skills to preferences. In this case, people evaluate immigration based on other considerations. If individuals think that immigration triggers both output-mix and wage effects then unskilled (skilled) workers nationwide should prefer policies that lower (raise) immigration inflows.

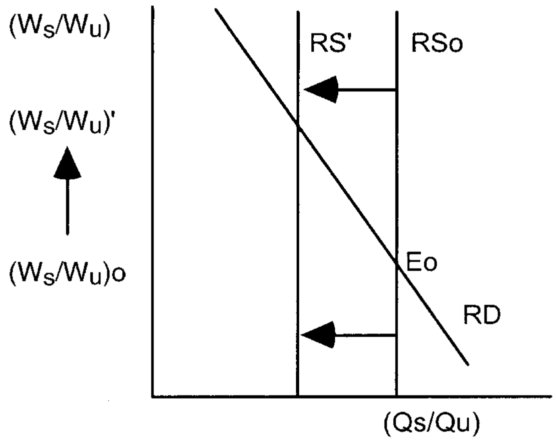
B. The Factor-Proportions Analysis Model

Like the HO model, this model also assumes a national labor market. The fundamental difference between the two is that this model assumes a single aggregate output sector. Under this assumption, there can be no output-mix changes to help absorb immigrants. Accordingly, any immigration inflow affects national wages by the same logic described above. Lower relative wages for unskilled workers induce firms to hire relatively more of these workers. The greater the immigrant inflow, the greater the resultant wage changes. In the labor literature, studies using this framework include Borjas et al. (1996, 1997), and these studies calculate immigration-induced shifts in national factor proportions and then infer the resulting national wage changes.

Figure 2 displays the national labor market for the factor-proportions analysis world. Here, the relative labor demand schedule slopes downward everywhere, with no portions where FPI holds. Initial relative labor supply is again given

[7] Three comments are necessary on figure 1. First, the relative-supply schedule is vertical under the assumption that all workers are sufficiently willing to work that they price themselves into employment regardless of the going relative wage. Second, along the national demand schedule the country's output mix progresses according to sector factor intensities. The likely output mixes are as follows. Along the leftmost branch of ***RD***, the country makes only the most non-skill-intensive product. Along the first flat, it makes this product and the "middle" intensity product, switching to only the middle product along the middle downward-sloping branch. The country picks up the most skill-intensive product as well along the second flat; finally, along the rightmost branch, it makes only the skill-intensive product. Third, underlying the downward-sloping portions of ***RD*** is the assumption of flexible production technologies with factor substitutability. With Leontief technology, these portions would be vertical.

FIGURE 2.—LABOR MARKET EQUILIBRIUM: THE FACTOR-PROPORTIONS ANALYSIS MODEL OR THE AREA-ANALYSIS MODEL



Skilled labor is subscripted "*s*" and unskilled labor "*u*". The ***RS*** schedule is relative supply, and the ***RD*** schedule is relative demand. For the factor-proportions analysis model, this picture represents the single national labor market; for the area-analysis model, it represents each separate local labor market.

by the schedule $\boldsymbol{RS_o}$, with initial equilibrium again at $\boldsymbol{E_o}$ and $(w_s/w_u)_o$. Immigration shifts the supply schedule back to $\boldsymbol{RS'}$, and the national skill premium rises to $(w_s/w_u)'$. Again, for fixed product prices, real wages change, too.

This model makes a single prediction about the link from skills to immigration-policy preferences: unskilled (skilled) workers nationwide should prefer policies to lower (raise) immigration inflows. This prediction can also come from the HO model without FPI. Accordingly, evidence of a link between skills and preferences is consistent with both models.

C. *The Area-Analysis Model*

Like the previous model, the area-analysis model also assumes a single output sector. The fundamental difference between the two is that this model assumes distinct, geographically segmented labor markets within a country. This assumption is likely untrue in the very long run, but it may be true over shorter time horizons thanks to frictions such as information and transportation costs that people (both natives and immigrants upon arrival) must incur to move. U.S. "local" labor markets are usually defined by states or metropolitan areas. Each local market has its own equilibrium wages determined by local supply and local demand.

If there is literally no mobility among local labor markets, immigrants' wage effects are concentrated entirely in the gateway communities where they arrive: immigration lowers (raises) wages for the unskilled (skilled). In contrast, in a national labor market, immigrants' wage pressures spread beyond gateway communities. Natives can leave gateway communities when immigrants arrive, immigrants can move on to other communities, or natives can choose not to enter gateway communities as they may have planned. In cases between these two extremes, immigrants affect wages everywhere but to a greater extent in gateway labor markets. The area-studies framework has guided many empirical studies of immigration—Card (1990), Altonji and Card (1991), Butcher and Card (1991), LaLonde and Topel (1991), and Goldin (1994)—that have tested for correlations between immigrant flows into local labor markets and local native wages.

Graphically, the area-analysis model also looks like figure 2, but with the key difference that now this figure represents local and not national conditions. Here, immigration shifts only the local relative supply of labor and thus depresses only local unskilled wages. Given this, the area-analysis model predicts the following: unskilled (skilled) workers in gateway communities should prefer policies to lower (raise) immigration inflows. What about workers in nongateway communities? With no geographic labor mobility over time horizons relevant to individuals when evaluating immigration policy, there should be no correlation between these workers' skills and their preferences. More generally, with some labor mobility, workers in nongateway communities should have qualitatively similar preferences as do workers in gateway communities, but the skills-preferences link should be stronger among the gateway workers.

IV. Data Description and Empirical Specification

A. *Data Description*

We measure immigration-policy preferences by responses to the following question asked in the 1992, 1994, and 1996 NES surveys.

> "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?"

This question requires respondents to reveal their general position on the proper direction for U.S. immigration policy. To apply our theory framework to this question, we assume that respondents think that U.S. immigrant inflows increase the relative supply of less-skilled workers. As we discussed, this assumption clearly reflects the facts about U.S. immigration in recent decades. Later, we revisit this assumption in our data analysis. We constructed the variable ***Immigration Opinion*** by coding responses with a range of 5 (for those individuals responding "decreased a lot") down to 1 (for those responding "increased a lot"). Thus, higher values of ***Immigration Opinion*** indicate preferences for more-restrictive policy.[8]

[8] The 1992 NES survey asked other questions about immigration-related topics that we do not analyze. For example, respondents were asked whether they think Asians or Hispanics "take jobs away from people already here." We do not focus on this question because it does not explicitly address immigration policy. Moreover, its responses cannot clearly distinguish among our three competing economic models. All our models assume full employment, so no natives could have jobs permanently "taken away" from immigrants. Moreover, our models are silent on the dynamics of adjustment. All three models could have immigrants

Our theoretical framework hypothesizes that immigration policy can affect individuals' factor income according to their skill levels. To test whether skills are a key determinant of immigration-policy preferences, for each individual we construct two commonly used skill measures. First, respondents were asked to report their occupations coded according to the three-digit 1980 Census Occupation Code classification. From the U.S. Department of Labor (1992, 1994, 1996) we obtained the 1992, 1994, and 1996 U.S. average weekly wages for each three-digit occupation. Under the assumption that the average market returns for a given occupation are determined primarily by the skills required for that occupation, these average wages, called ***Occupation Wage,*** measure respondents' skill levels. As a second skill measure, the NES survey also records the years of education completed by each respondent, ***Education Years.*** Educational attainment is another commonly used measure of skills, so we use it as an alternative skills variable.

As discussed earlier, Citrin et al. (1997) primarily interpret educational attainment as a demographic variable rather than a skills variable. Below, we present strong evidence that education measures labor-market skills once other considerations such as gender and political ideology are controlled for. Also, our mapping of occupation categories into average occupation wages captures skills across occupations much more accurately than do the occupation categorical variables in Citrin et al.

In addition to skill measures, we need measures of where respondents live combined with information about gateway communities. For each respondent, the NES reports the county, state, and (where appropriate) metropolitan statistical area (MSA) of residence. We combine this information with immigration data to construct several alternative measures of residence in a high-immigration area. First, we defined local labor markets two ways: by a combination of MSAs and counties, and by states. In our MSA/county definition, each MSA (with all its constituent cities and counties) is a separate labor market; for individuals living outside an MSA, the labor market is the county of residence. Following the extensive use of MSAs in area-analysis studies and Bartel's (1989) finding that immigrants arrive mostly into cities, we prefer the MSA/county definition but try states for robustness. Second, for each definition of local labor markets, we try three different definitions of a high-immigration labor market: 5%, 10%, and 20% shares of immigrants in the local population. These immigration and labor force data are from the 1990 decennial census as reported by the U.S. Bureau of the Census (1994). Altogether, for each of our six primary measures, we construct a dichotomous variable, ***High Immigration MSA,*** which is equal to 1 for residents in high-immigration labor markets. In the tables, we report the results for our preferred measure, the MSA/county-10% definition. Alternative measures are discussed in the robustness checks.[9]

"taking" jobs from natives during adjustment to a new full-employment equilibrium.

We also constructed several measures of non-economic determinants of preferences. Following previous work in the political-economy literature, we include the following measures in our baseline analysis: gender, age, race, ethnicity, personal immigrant status, party identification, and political ideology. ***Gender*** is a dichotomous variable equal to 1 for females. ***Age*** is a continuous variable. For race, we construct the dichotomous variable ***Black,*** which is equal to 1 if the respondent is African-American. For ethnicity, we construct the dichotomous variable ***Hispanic,*** which is equal to 1 if the individual self-identifies with a Hispanic ethnic group. ***Immigrant*** is a dichotomous variable equal to 1 if the respondent or his/her parents were immigrants into the United States. ***Party Identification*** is a categorical variable ranging from 1 for "strong Democrat" to 7 for "strong Republican." Finally, ***Ideology*** is a categorical variable ranging from 1 for "extremely liberal" to 7 for "extremely conservative." In addition to these variables, for certain specifications we included additional regressors which we discuss below.

B. Missing Data and Multiple Imputation

Upon constructing the variables described in subsection IV A and combining them into individual-level data sets for each cross-sectional survey, we observed that there was a significant amount of missing data. In each survey, some individuals did not report either occupation or educational attainment; thus, for these respondents, we could not construct skill measures. Missing data also existed for some of our non-economic determinants of immigration-policy preferences. Across the range of models that we estimated, when we simply dropped observations with any missing data, we generally lost between 25% and 45% of the total observations.

This standard approach for dealing with missing values, known as ***listwise deletion,*** can create two major problems. One is inefficiency caused by throwing away information that is relevant to the statistical inferences being made. Furthermore, inferences from listwise-deletion estimation can be biased if the observed data differs systematically from the unobserved data. In our case, inefficiency was clearly a problem. We also had little reason to think our data were missing at random, so we worried about biased inferences. (See King et al. (2001) for a detailed discussion.)

Alternatives to listwise deletion for dealing with missing data have been developed in recent years. The most general and extensively researched approach is multiple imputation

[9] In 1990, immigrants accounted for 7.9% of the overall U.S. population. Accordingly, our 5% cutoff might seem too low, but for completeness we estimated the specification. Also, the 1990 Census MSA data are organized by 1990 MSA definitions, but the 1992 and 1994 NES surveys locate individuals by 1980 MSA definitions. Using unpublished information on 1980–1990 MSA changes obtained from Census officials, we corrected discrepancies as best we could.

(King et al., 2001; Schafer, 1997; Little & Rubin, 1987; Rubin, 1987). Multiple imputation makes a much weaker assumption than does listwise deletion about the process generating the missing data. Rather than assuming that the unobserved data is missing completely at random, multiple imputation is consistent and gives correct uncertainty estimates if the data are missing randomly conditional on the data included in the imputation procedures. The approach has several variations but always involves three main steps. First, some algorithm is used to impute values for the missing data. In this step, $m(m > 1)$ "complete" data sets are created consisting of all the observed data and imputations for the missing values. The second step simply involves analyzing each of the m data sets using standard complete-data statistical methods. The final step combines the parameter estimates and variances from the m complete-data analyses to form a single set of parameter estimates and variances. Importantly, this step systematically accounts for variation across the m analyses due to missing data in addition to ordinary sample variation.

The first step in our multiple-imputation procedures was to create imputations in the missing data cells for all the variables discussed in subsection IV A. We based our imputations for the 1992, 1994, and 1996 data on 36, 28, and 26 variables selected, respectively, from each NES survey. These variables included all those used in our analysis as well as additional information from each survey that we determined would be helpful in predicting the missing data.[10] Altogether, we imputed ten complete individual-level data sets for each year.[11] The exact imputation algorithm we used is known by the acronym ***EMis*** because to generate imputations it combines a well-known expectation-maximization missing-data algorithm with a round of importance sampling. King et al. (2001) provide a complete explanation of the use of this algorithm for missing data problems.[12] The final data sets for each year contain completed observations equal to the actual number of individuals in each NES survey. Also, all data sets contain the same nonimputed information; they differ only in the imputations for missing data.

TABLE 1.—SUMMARY STATISTICS

Variable	1992	1994	1996
Immigration Opinion	3.595	3.982	3.785
	(1.027)	(1.064)	(0.982)
Occupation Wage	0.512	0.574	0.601
	(0.187)	(0.227)	(0.225)
Education Years	12.923	13.153	13.328
	(2.815)	(2.637)	(2.660)
Gender	0.534	0.534	0.552
	(0.499)	(0.499)	(0.497)
Age	45.755	46.264	47.544
	(17.711)	(17.646)	(17.416)
Black	0.129	0.115	0.122
	(0.336)	(0.319)	(0.327)
Hispanic	0.072	0.046	0.087
	(0.259)	(0.209)	(0.282)
Immigrant	0.181	0.166	0.147
	(0.385)	(0.371)	(0.355)
Party ID	3.701	3.916	3.673
	(2.027)	(2.102)	(2.102)
Ideology	4.237	4.446	4.275
	(1.399)	(1.348)	(1.398)
High Immigration MSA	0.235	0.227	0.215
	(0.424)	(0.419)	(0.411)
Number of observations	2485	1795	1714

These summary statistics are multiple-imputation estimates based on the ten imputed data sets for each year. Each cell reports the variable mean and (in parenthesis) its standard deviation. ***Occupation Wage*** reports the actual weekly wage divided by 1000.

The second step in our multiple-imputation analysis was to run various ordered-probit models separately on each of the ten final data sets for each survey year. The last multiple-imputation step was to combine the ten sets of estimation results for each specification to obtain a single set of estimated parameter means and variances. The single set of estimated means is simply the arithmetic average of the ten different estimation results. The single set of estimated variances is more complicated than a simple average because, as mentioned above, these variances account for both the ordinary within-sample variation and the between-sample variation due to missing data. See King et al. (2001) and Schafer (1997) for a complete description of these variances.

Table 1 reports the summary statistics of our immigration-opinion measure and explanatory variables calculated by pooling together all ten of the imputed data sets for each year. The average value for ***Immigration Opinion*** was 3.60 in 1992, 3.98 in 1994, and 3.79 in 1996. The values reflect responses between "left the same as it is now" and "decreased a little."[13]

[10] For 1992, the variables included in the imputation model were ***Immigration Opinion, Occupation Wage, Education Years, Gender, Age, Black, Hispanic, Immigrant, Party ID, Ideology, High Immigration MSA,*** interactions of ***High Immigration MSA*** with skill measures, a continuous measure of percent immigrant in MSA/county of respondent, feeling thermometer scores for Hispanics and immigrants, family income, home ownership, union membership, retrospective evaluation of the national economy, retrospective evaluation of respondent's personal finances, three measures of respondent's tolerance, three responses to questions about the impact of Hispanic immigration on the United States, three responses to questions about the impact of Asian immigration on the United States, the respondent's view of welfare restrictions for immigrants, three measures of the skill composition of immigrants in the respondent's geographical location, and a sample weighting variable. For 1994 and 1996, these same variables, if available in the survey, were included. The variables for the imputation model were selected because they were included in the analysis models, were highly predictive of variables in the analysis model, or were highly predictive of the missingness in the data.

[11] The imputation procedures were implemented using ***Amelia: A Program for Missing Data*** (Honaker et al., 1999).

[12] In this analysis, the imputation model was multivariate normal with a slight ridge prior.

[13] For 1992, the exact breakdown of all responses to ***Immigration Opinion*** is as follows: 58 "increased a lot" (2.3% of the total sample, or 2,485); 116 "increased a little" (4.7%), 937 "left the same" (37.7%), 552 "decreased a little" (22.2%), and 505 "decreased a lot" (20.3%). In addition, we imputed responses for the 87 people (3.5%) who responded "don't know/no answer" and the 230 people (9.3%) who were not asked the question because of survey design. (All results reported in the paper are robust to excluding these 230 observations from the analysis.) We also note that the summary statistics in our data are similar to those obtained from the Current Population Survey (CPS). For example, in the 1992 CPS,

TABLE 2.—DETERMINANTS OF IMMIGRATION-POLICY PREFERENCES: TESTING THE HECKSCHER-OHLIN AND FACTOR-PROPORTIONS ANALYSIS MODELS

	1992		1994		1996	
Regressor	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
Occupation Wage	−0.349		−0.811		−0.541	
	(0.130)		(0.135)		(0.133)	
Education Years		−0.044		−0.074		−0.059
		(0.010)		(0.011)		(0.012)
Gender	−0.022	−0.008	0.022	0.083	−0.020	0.024
	(0.048)	(0.046)	(0.056)	(0.054)	(0.060)	(0.057)
Age	−0.000	−0.002	0.000	−0.002	0.004	0.002
	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)
Black	−0.207	−0.225	−0.222	−0.211	−0.238	−0.241
	(0.080)	(0.080)	(0.091)	(0.092)	(0.096)	(0.097)
Hispanic	−0.064	−0.122	−0.306	−0.360	−0.124	−0.172
	(0.111)	(0.110)	(0.136)	(0.137)	(0.120)	(0.121)
Immigrant	−0.158	−0.150	−0.213	−0.193	−0.220	−0.207
	(0.066)	(0.066)	(0.076)	(0.076)	(0.087)	(0.087)
Party ID	0.003	0.008	−0.006	−0.002	−0.023	−0.016
	(0.013)	(0.013)	(0.016)	(0.016)	(0.016)	(0.016)
Ideology	0.057	0.050	0.054	0.041	0.080	0.072
	(0.020)	(0.020)	(0.028)	(0.029)	(0.025)	(0.025)
Number of observations	2485	2485	1795	1795	1714	1714

These results are multiple-imputation estimates of ordered-probit coefficients based on the ten imputed data sets for each year. Each cell reports the coefficient estimate and (in parenthesis) its standard error. In both models, the dependent variable is individual opinions regarding whether U.S. policy should increase, decrease, or keep the same the annual number of legal immigrants. This variable is defined such that higher (lower) values indicate more-restrictive (less-restrictive) policy preferences. For brevity, estimated cut points are not reported.

C. *Econometric Model*

Our empirical work aims to test how skills and other factors affect the probability that an individual supports a certain level of legal immigration. The level of immigration preferred by a respondent could theoretically take on any value, but we do not observe this level. We observe only whether or not the respondent chose one of five ordered categories. Because we have no strong reason to think, ex ante, that these five ordered categories are separated by equal intervals, a linear-regression model might produce biased estimates. The more appropriate model for this situation is an ordered probit which estimates not only a set of effect parameters but also an additional set of parameters representing the unobserved thresholds between categories.

In all our specifications, we estimate an ordered-probit model in which the expected mean of the unobserved preferred immigration level is hypothesized to be a linear function of the respondent's skills, a vector of demographic identifiers, political orientation, and (perhaps) the immigration concentration in the respondent's community. The key hypothesis we want to evaluate is whether more-skilled individuals are less likely to support restrictionist immigration policies as predicted in the HO trade model and in the factor-proportions analysis model. Accordingly, in our baseline specifications, we regress stated immigration-policy preferences on skills, demographic identifiers, and political orientation. In a second set of specifications, we also include a dummy variable indicating whether or not the respondent lives in a high-immigration area and an interaction term between this indicator and the respondent's skills. These second specifications test whether the skills-immigration correlation is strongest in high-immigration labor markets, as hypothesized in the area-analysis model. To allow for any differences across our three survey years, we estimate each cross section separately.

52.2% of the sample was female, 11.5% was black, and the average age was 43.3.

V. Empirical Results

A. *Testing How Skills Affect Immigration-Policy Preferences*

Our initial specifications allow us to test the HO and factor-proportions analysis models. Table 2 presents the results for each year's full sample, where in model 1 we measure skills with ***Occupation Wage*** and in model 2 we use ***Education Years.*** The key message of table 2 is that, by either measure, skill levels are significantly correlated with ***Immigration Opinion*** at at least the 99% level. Less-skilled (more-skilled) individuals prefer more-restrictionist (less-restrictionist) immigration policy. This skills-preferences link holds conditional on a large set of plausible non-economic determinants of ***Immigration Opinion.*** Among these other regressors, ***Gender, Age, Hispanic,*** and ***Party Identification*** are mostly insignificantly different from zero. Black and Immigrant are mostly significantly negative: blacks, and the group of immigrants plus children of immigrants, prefer less-restrictionist immigration policy. ***Ideology*** is significantly positive: more-conservative individuals prefer more-restrictionist immigration policy. Our nonskill estimates are similar to those in Citrin et al. (1997) and Espenshade and Hempstead (1996).[14]

[14] Appendix A table A1 reports results for the table 2 specifications estimated on the listwise-deletion data sets for each year. The qualitative results are similar to those discussed in the paper using multiple imputation. However, using conventional rules for inference, the statistical

The actual coefficient estimates in table 2 identify the qualitative effect on ***Immigration Opinion*** of skills and our other regressors. However, these coefficients do not answer our key substantive question of how changes in skill levels affect the probability that an individual supports immigration restrictions. To answer this question, we used the estimates of model 1 and 2 to conduct simulations that calculate the effect on immigration preferences of changing skills, while holding the other variables constant at their sample means.

Our simulation procedure works as follows. Recognizing that the parameters are estimated with uncertainty, we drew 1,000 simulated sets of parameters from their sampling distribution defined as a multivariate normal distribution with mean equal to the maximum-likelihood parameter estimates and variance equal to the variance-covariance matrix of these estimates. For each of the 1,000 simulated sets of coefficients, we then calculated two probabilities. Setting all variables equal to their sample means, we first calculated the estimated probability of supporting immigration restrictions (that is, the probability of supporting a reduction in immigration by either "a lot" or "a little"). We then calculated the estimated probability of supporting immigration restrictions when our skills measure is increased to its sample maximum, while holding fixed all other regressors at their means. The difference between these two estimated probabilities is the estimated difference in the probability of supporting immigration restrictions between an individual with average skills and someone with "maximum" skills. We calculated this difference 1,000 times, and then—to show the distribution of this difference—we calculated its mean, its standard error, and a 90%-confidence interval around the mean.

Table 3 reports the results of this simulation for our two skills regressors. For 1992, increasing ***Occupation Wage*** from its mean to its maximum ($512 per week to $1138 per week), holding fixed all other regressors at their means, reduces the probability of supporting immigration restrictions by 0.086 on average. This estimated change has a standard error of 0.031 and a 90%-confidence interval of (−0.138, −0.036). The 1992 results for ***Education Years*** are similar: increasing ***Education Years*** from its mean to its maximum (approximately 12.9 years to 17 years), holding fixed all other regressors at their means, reduces the probability of supporting immigration restrictions by 0.126 on average. This estimated change has a standard error of 0.029 and a 90%-confidence interval of (−0.174, −0.081). All three years give the same result: higher skills are strongly and significantly correlated with lower probabilities of supporting immigration restrictions. (Table A2 gives simulation results for all variables in model 1 and 2).[15]

TABLE 3.—ESTIMATED EFFECT OF INCREASING SKILL LEVELS ON THE PROBABILITY OF SUPPORTING IMMIGRATION RESTRICTIONS

Increase Skill Measure From Mean to Maximum	Year	Change in Probability of Supporting Immigration Restrictions
Occupation Wage	1992	−0.086 (0.031) [−0.138, −0.036]
Education Years		−0.126 (0.029) [−0.174, −0.081]
Occupation Wage	1994	−0.337 (0.050) [−0.416, −0.252]
Education Years		−0.112 (0.019) [−0.143, −0.081]
Occupation Wage	1996	−0.201 (0.047) [−0.274, −0.120]
Education Years		−0.085 (0.017) [−0.113, −0.057]

Using the estimates from model 1 and 2, we simulated the consequences of changing each skill measure from its mean to its maximum on the probability of supporting immigration restrictions. The mean effect is reported first, with the standard error of this estimate in parentheses followed by a 90%-confidence interval.

One possible objection to our analysis is the claim that ***Occupation Wage*** and ***Education Years*** measure labor-market skills. For example, ***Education Years*** might indicate greater tolerance or civic awareness. To test this possibility, we split our sample between those in the labor force and those not in the labor force and then reestimated model 1 and 2 on each subsample. We defined the subset of labor-force participants as those individuals reporting that they were either employed or unemployed but seeking work. In every year, the not-in-labor-force subsample was disproportionately female: approximately two females for every male, versus a majority of males in the labor-force group. In every year, the not-in-labor-force subsample was also much older: an average age of approximately sixty versus forty for those in the labor force. It is well known that females and older people have much lower labor-force participation rates than the overall population.

If ***Occupation Wage*** and ***Education Years*** measure labor-market skills, then the correlation between these regressors and ***Immigration Opinion*** should hold among only labor-force participants. If these regressors measure non-labor-market considerations, then their explanatory power should not vary across the two subsamples. Table 4 reports the results. For the labor force subsample, both ***Occupation Wage*** and ***Education Years*** are strongly significant, with larger coefficient estimates than the full-sample estimates from table 2. For the not-in-labor-force subsample, the coefficient estimates are much smaller than the full-sample

significance of the effects of several control variables differs across the two methodologies.

[15] For our simulation procedures, we used the Stata program ***CLARIFY*** (Tomz, Wittenberg, & King, 1998). These procedures are discussed in King et al. (2000).

TABLE 4.—DIFFERENTIAL IMPACT OF SKILL ON IMMIGRATION-POLICY PREFERENCES: LABOR FORCE PARTICIPANTS AND NON-LABOR-FORCE PARTICIPANTS

Sample	Year	Occupation Wage	Education Years
In labor force	1992	−0.396	−0.077
		(0.158)	(0.013)
Not in labor force		−0.248	−0.012
		(0.254)	(0.015)
In labor force	1994	−0.886	−0.092
		(0.149)	(0.014)
Not in labor force		−0.648	−0.053
		(0.262)	(0.018)
In labor force	1996	−0.703	−0.089
		(0.162)	(0.015)
Not in labor force		−0.088	−0.013
		(0.302)	(0.020)

This table displays multiple-imputation estimates of ordered-probit coefficients for our skill regressors when the sample is limited to either respondents who are currently in the labor force or those who are not currently in the labor force. The standard error of each estimate is listed in parentheses. Each specification includes all the other control variables from table 2.

estimates and are not significantly different from zero in two of the three years.[16]

As a second check on the interpretation of our skills regressors, we added to model 1 and 2 direct measures of ethnic and racial tolerance, as proxied by respondent answers to three different tolerance statements or questions (such as, "We should be more tolerant of people who choose to live according to their own moral standards, even if they are very different from our own"). In all specifications, greater tolerance was significantly correlated with preferences for less-restrictionist immigration policy, but our significant skills-preferences correlation persisted. Overall, we interpret these two checks as evidence that the strong relationship between ***Occupation Wage/Education Years*** and ***Immigration Opinion*** represent considerations of labor market pressures.

The result that skills correlate with immigration-policy preferences is inconsistent with an HO model in which immigration is completely absorbed by Rybczynski output-mix effects. It is consistent both with the factor-proportions analysis model and with an HO model in which immigration affects both wages and output mix. By pooling all regions of the country in table 2 through 4, however, we have not yet tested the area-analysis model. To do this, we modify our initial specifications by adding the regressor ***High Immigration MSA*** and its interaction with skills. If preferences are consistent with the area-analysis model, then less-skilled workers in gateway communities should have stronger preferences for more-restrictionist immigration policies than do less-skilled workers in nongateway communities. Further, the differences between more- and less-skilled workers should be stronger in high-immigration communities. These preferences imply a positive coefficient on ***High Immigration MSA*** and a negative coefficient on its interaction with skills.

Table 5 presents the results for this specification, with model 3 using ***Occupation Wage*** and model 4 ***Education Years.*** The results for all the non-skill regressors are qualitatively the same as before. Our skill measures are still negatively correlated with preferences at at least the 95% level, but in neither case is ***High Immigration MSA*** significantly positive or its interaction with skills significantly negative. In unreported specifications, we tested this specification using our other five definitions of ***High Immigration MSA*** and/or splitting the sample as in table 4. In almost every case, the interaction term's coefficient was positive but not significant; in no case did the interaction term ever have a significantly negative coefficient or ***High Immigration MSA*** a significantly positive one. Overall, people living in high-immigration areas do not have a stronger correlation between skills and immigration-policy preferences than do people living elsewhere. This finding is inconsistent with the area-analysis model.

B. Robustness Checks

We checked the robustness of the empirical results by trying other measures of our important skill and immigration regressors. For skills, we tried three dichotomous variables of educational attainment (high-school dropouts, high-school graduates, and some college, with the omitted group being college and beyond) to look for any nonlinearities in how skills affect preferences.[17] We discovered no clear nonlinearities: the relative coefficients on the dichotomous measures seemed consistent with an overall linear effect. We also tried respondents' previous-year income and obtained qualitatively similar results to those for ***Occupation Wage*** and ***Education Years.***[18]

In addition to the six measures of ***High Immigration MSA*** discussed earlier, we also tried a dichotomous measure of residence in one of the "big six" immigrant states of California, Florida, Illinois, New Jersey, New York, and Texas. Borjas et al. (1997) report that, in 1960, 60% of all U.S. immigrants lived in these six states and that, by 1990, that share had risen to 75%. Borjas et al. (1996) report that, in 1992, 60% of all U.S. legal immigrants came into California or New York alone; another 20% entered the other four gateway states. We also tried measuring immigration concentration with a continuous variable (the foreign-born

[16] For 1992, the labor-force subsample is 64.9% of the total sample, which is close to the 1992 aggregate labor-force participation rate of 66.6%. The reported occupation for those not in the labor force is their most recent job. Also, we obtained the same results qualitatively from an alternative specification of our skills test in which we pooled the full sample and interacted skills with a dichotomous variable for labor-force status participation. The split-sample test is more general in that it does not constrain the non-skill regressors to have the same coefficient for both labor force groups.

[17] In 1992, among those answering the ***Education Years*** question were 466 high-school dropouts, 812 high-school graduates, 572 people with some college, and 570 people with a college degree or higher.

[18] Despite this similarity, we regard average occupation wages and education to be superior skill measures. These two variables probably better reflect an individual's long-run earnings capacity; in contrast, annual income can fluctuate more for reasons unrelated to skill (such as illnesses, inheritances, or overtime).

TABLE 5.—DETERMINANTS OF IMMIGRATION-POLICY PREFERENCES: TESTING THE AREA-ANALYSIS MODEL

	1992		1994		1996	
Regressor	Model 3	Model 4	Model 3	Model 4	Model 3	Model 4
Occupation Wage	−0.334		−0.801		−0.572	
	(0.161)		(0.151)		(0.150)	
Occupation Wage × High Imm. MSA	−0.030		0.119		0.231	
	(0.309)		(0.291)		(0.319)	
Education Years		−0.054		−0.073		−0.061
		(0.011)		(0.013)		(0.013)
Education Years × High Imm. MSA		0.038		0.012		0.016
		(0.019)		(0.024)		(0.030)
High Imm. MSA	−0.005	−0.501	−0.218	−0.299	−0.206	−0.264
	(0.168)	(0.264)	(0.192)	(0.343)	(0.225)	(0.441)
Gender	−0.021	−0.009	0.023	0.081	−0.022	0.023
	(0.048)	(0.046)	(0.056)	(0.054)	(0.060)	(0.057)
Age	−0.000	−0.002	0.000	−0.002	0.004	0.002
	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)
Black	−0.204	−0.224	−0.206	−0.196	−0.231	−0.236
	(0.080)	(0.078)	(0.091)	(0.092)	(0.097)	(0.098)
Hispanic	−0.057	−0.085	−0.250	−0.299	−0.102	−0.150
	(0.117)	(0.115)	(0.138)	(0.138)	(0.121)	(0.125)
Immigrant	−0.154	−0.151	−0.176	−0.158	−0.206	−0.198
	(0.069)	(0.069)	(0.079)	(0.079)	(0.090)	(0.090)
Party ID	0.003	0.009	−0.007	−0.003	−0.023	−0.015
	(0.013)	(0.013)	(0.016)	(0.017)	(0.016)	(0.016)
Ideology	0.057	0.050	0.052	0.040	0.079	0.072
	(0.020)	(0.020)	(0.029)	(0.029)	(0.025)	(0.025)
Number of observations	2485	2485	1795	1795	1714	1714

These results are multiple-imputation estimates of ordered-probit coefficients based on the ten imputed data sets for each year. Each cell reports the coefficient estimate and (in parenthesis) its standard error. In both models, the dependent variable is individual opinions about whether U.S. policy should increase, decrease, or keep the same the annual number of legal immigrants. This variable is defined such that higher (lower) values indicate more-restrictive (less-restrictive) policy preferences. For brevity, estimated cut points are not reported.

share of each area's population) or with ***High Immigration MSA*** plus an analogous low-immigration dummy. With all these measures, we again found no evidence of preferences that are consistent with the area-analysis model.

We also checked the robustness of our results by including a number of other regressors. Our main findings on skills and geography were consistently robust to our alternative specifications. Perhaps most importantly, we added a measure of the skill-mix of immigrants in the local community. Recall that the NES immigration-preferences question does not specify any skill level of prospective immigrants, and that we have assumed—consistent with the data—that respondents think U.S. immigrant inflows increase the relative supply of less-skilled workers. Different communities, however, may have very different skill mixes of immigrants, and this may affect how local citizens think about immigration policy.

To try to control for this possibility, we obtained data on the educational attainment of the stock of immigrants in local communities as reported in the 1990 decennial Census. We then defined the skill mix of immigrants using three different cutoffs: the share with a college degree or higher, the share with more than a high-school degree, and the share with a high-school degree or higher. Adding this immigrant skill-mix regressor to model 3 and 4 does not alter our results for local labor market effects. As for the new regressor itself, individuals living in communities with a higher skill mix of immigrants are somewhat more likely to support more immigration: the estimated coefficient in model 3 and 4 is negative, and significantly so in a minority of cases.[19]

Other added regressors included union membership: union members preferred more-restrictionist immigration policy, an effect that was statistically significant in some specifications. Two other regressors were retrospective evaluations of the national economy and retrospective evaluations of personal finances. Both retrospective measures tended to have the expected sign (those with gloomier retrospections preferred more-restrictionist immigration policy), but they were always insignificant. Finally, we included state unemployment rates, which is another geography-varying regressor, to control in the cross section for any business-cycle effect on immigration-policy preferences. This regressor was always insignificant, however.

VI. Conclusion

In this paper, we have provided new evidence on the determinants of individual immigration-policy preferences and on what these preferences imply about how economies

[19] We thank George Borjas for providing us with these data. One might worry that each NES respondent interprets the immigration question to mean immigrants of the same skills as the respondent him/herself. Were this the case, one might reasonably expect every respondent to support fewer immigrants. That reported preferences look very different from this—and that we find a robust skills-preferences correlation—suggests respondents are not interpreting the immigration question in this manner.

absorb immigrants. In particular, we documented a robust link between labor market skills and preferences: less-skilled (more-skilled) people prefer more-restrictionist (less-restrictionist) immigration policy. This link strongly supports the contention that people's position in the labor force influences their policy opinions. It is consistent both with the factor-proportions analysis model and with a Heckscher-Ohlin model. We found no evidence that this skills-preferences link is stronger in high-immigration labor markets. This finding is inconsistent with the area-analysis model.

These results are important for constructing empirically useful models of the political economy of immigration policymaking in receiving states. In particular, the link between skills and immigration-policy preferences suggests the potential for immigration politics to be connected to the mainstream redistributive politics over which political parties often contest elections. In addition, our findings shed further light both on how individuals form preferences over international economic policies and what these preferences imply for the domestic politics of countries with significant flows of goods, capital, and people across their borders. The skills cleavage over immigration policy reinforces our earlier finding of a strong relationship between individual skill levels and support for trade protection in the United States (Scheve & Slaughter, 2001). Taken together, these two studies suggest that skill levels play an important role in shaping political divisions in the electorate over international economic policies.

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APPENDIX A

TABLE A1.—DETERMINANTS OF IMMIGRATION-POLICY PREFERENCES: TESTING THE HECKSCHER-OHLIN AND FACTOR-PROPORTIONS ANALYSIS MODELS, LISTWISE-DELETION ESTIMATES

	1992		1994		1996	
Regressor	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
Occupation Wage	−0.524		−0.850		−0.607	
	(0.160)		(0.146)		(0.151)	
Education Years		−0.061		−0.095		−0.068
		(0.012)		(0.013)		(0.013)
Gender	0.031	0.015	0.005	0.065	−0.072	−0.390
	(0.060)	(0.056)	(0.067)	(0.062)	(0.068)	(0.063)
Age	−0.002	−0.003	0.001	−0.001	0.006	0.003
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Black	−0.144	−0.137	−0.178	−0.106	−0.132	−0.176
	(0.101)	(0.098)	(0.121)	(0.111)	(0.121)	(0.115)
Hispanic	0.045	0.007	−0.152	−0.243	−0.165	−0.178
	(0.149)	(0.138)	(0.180)	(0.160)	(0.143)	(0.130)
Immigrant	−0.120	−0.162	−0.241	−0.193	−0.238	−0.232
	(0.080)	(0.078)	(0.090)	(0.085)	(0.100)	(0.094)
Party ID	0.018	0.026	0.001	0.015	−0.025	−0.016
	(0.016)	(0.016)	(0.018)	(0.018)	(0.019)	(0.018)
Ideology	0.074	0.060	0.059	0.038	0.088	0.071
	(0.023)	(0.023)	(0.028)	(0.027)	(0.028)	(0.027)
Number of observations	1380	1475	1173	1309	1111	1212

These results are estimates of ordered-probit coefficients based on the listwise-deletion data sets for each year. Each cell reports the coefficient estimate and (in parenthesis) its standard error. In both models, the dependent variable is individual opinions about whether U.S. policy should increase, decrease, or keep the same the annual number of legal immigrants. This variable is defined such that higher (lower) values indicate more-restrictive (less-restrictive) policy preferences. For brevity, estimated cut points are not reported.

TABLE A2.—ESTIMATED EFFECT OF VARYING REGRESSORS ON THE PROBABILITY OF SUPPORTING IMMIGRATION RESTRICTIONS

	1992		1994		1996	
Regressor	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
Occupation Wage	−0.086		−0.337		−0.201	
	(0.031)		(0.050)		(0.047)	
Education Years		−0.126		−0.112		−0.085
		(0.029)		(0.019)		(0.017)
Gender	−0.013	−0.010	0.008	0.029	−0.008	0.008
	(0.019)	(0.018)	(0.020)	(0.020)	(0.023)	(0.021)
Age	−0.012	−0.047	0.006	−0.035	0.067	0.033
	(0.024)	(0.025)	(0.027)	(0.028)	(0.029)	(0.031)
Black	−0.071	−0.078	−0.086	−0.080	−0.096	−0.095
	(0.028)	(0.027)	(0.035)	(0.034)	(0.038)	(0.036)
Hispanic	−0.009	−0.029	−0.123	−0.138	−0.053	−0.067
	(0.039)	(0.040)	(0.052)	(0.053)	(0.045)	(0.047)
Immigrant	−0.065	−0.061	−0.081	−0.072	−0.087	−0.081
	(0.026)	(0.027)	(0.030)	(0.031)	(0.034)	(0.035)
Party ID	0.007	0.016	−0.008	−0.003	−0.032	−0.022
	(0.025)	(0.025)	(0.021)	(0.021)	(0.023)	(0.022)
Ideology	0.095	0.086	0.071	0.056	0.108	0.099
	(0.039)	(0.041)	(0.035)	(0.038)	(0.031)	(0.033)

Using the estimates from model 1 and 2, we simulated the consequences of changing each regressor on the probability of supporting immigration restrictions. We changed each continuous variable from its mean to its maximum; each dichotomous variable we changed from 0 to 1. The mean effect is reported first, with the standard error of this estimate in parentheses.