THE POLITICAL ECONOMY OF IMMIGRATION

by

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A Dissertation
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of
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The Political Economy of Immigration

A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy at George Mason University

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Dedication

I dedicate this dissertation to everyone who has left their home in search of a better life.
Acknowledgments

Thanks to my parents, Tony and Carolyn, for encouraging me to pursue a lifetime of asking questions and chasing dreams. Thanks to Sara, without whose love, support, and good points I would have been lost. Thanks to all my friends who believed in me and supported me on this quest. Finally, a special thanks to Bryan: my advisor, mentor, and friend. I am forever in your debt.
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This dissertation investigates the sources and consequences of political and social change regarding immigration to the United States. Specifically, I investigate the political and economic consequences of immigration on the welfare state, how immigration policy evolved in the U.S., and how changes in policy change how firms and individuals organize to circumvent immigration restriction. The first chapter, “The Political Externalities of Immigration: Evidence from the States” explores the connection between immigrants and state-level support for spending on social welfare programs. In a standard median voter model, low-income immigration increases the size of the welfare state. Other research suggests evidence for a group-interested voter model, which predicts that welfare will shrink with an increase in low-income immigration. I contend that neither model accurately describes political reality after testing these theories with United States data from 1970 to 2010. I use a variety of measures for welfare and related public spending such as K-12 education, Medicaid, and unemployment insurance. Contrary to expectations from previous work focused on Europe, I find that the amount of immigrant-driven heterogeneity does not have a significant effect on these spending areas, whether considered in total expenditure or per capita. This could be due to countervailing pressures from these two models of voter motivation or due to factors unrelated to immigration, such as differences in institutions. The second chapter,
“Putting a Lid on the Melting Pot: The Political Economy of U.S. Immigration 1875-1925,” investigates the closing of the United States to immigrants: arguably the most economically and socially significant policy shift in American history. The U.S. had virtually open borders until 1879, when the first of a series of federal laws prohibiting or limiting immigration of particular groups was passed. By 1924, immigration had been reduced to a small fraction of the peak in the 1890s. During this time frame, 42 major votes were considered in the House and 31 in the Senate to limit immigration. Using data from the U.S. Congressional record, I explain the policy shift in public choice terms: identifying voting patterns that can be explained by shifts in public and elite opinion, the incentives of policymakers, and changing economic conditions. Explanations of the policy shift from previous scholarship are evaluated in light of roll-call voting data and NOMINATE scores. Using multivariate analysis, I find that Congressional ideology was an important factor in the development of immigration restriction policy, with the most restrictive legislation passed when legislators from the rural South joined a Congressional coalition against immigration. 

The third chapter, “Coyotes: The Industrial Organization of Human Smuggling,” explains changes in a criminal industry structure as a result of government immigration policy. Human smuggling is a criminal enterprise where immigrants pay smugglers to help them cross borders and forge immigration documents. Over the past few decades, this enterprise has become dominated by large criminal organizations, who have displaced independent smugglers. I argue that changes in U.S. immigration enforcement policy is responsible for the change in market structure. As in any market, changes in costs can affect how producers organize. Under strict border enforcement, large criminal firms have a comparative advantage over small firms, mostly due to scale economies. Since 2001, U.S. border patrol agents have doubled, increasing the cost of border crossing and attracting organized criminal involvement.
Chapter 1: The Political Externalities of Immigration: Evidence from the States

It is one thing to have free immigration to jobs. It is another thing to have free immigration to welfare. And you cannot have both. *Milton Friedman*\(^1\)

1.1 Introduction

Opposition to immigration is a bipartisan issue. Since many predict that open or liberalized immigration will result in an influx of impoverished foreigners who will place demands on the welfare system, both proponents and opponents of the welfare state favor some level of immigration restriction. Proponents fear decline or collapse of the system, whereas opponents fear expansion of size and scope. Building on previous work on the welfare and immigration connection, this paper investigates whether these immigration fears are well-founded by analyzing how immigration and immigration driven increases in ethnic and racial diversity affect the size of the welfare state in the United States in recent decades.

There are two competing theories of voter motivation, previously considered in literature from economics and political science. The first view posits a world where narrowly self-interested voters use the political system to maximize their payoff after redistribution. These assumptions have long been considered standard in economics. In this model, the introduction of low-income immigrants result in a widening gap between median and mean income, thus an increase in per-capita redistribution as the new citizens vote to increase the level of tax and benefits, taking advantage of their new home’s economic prosperity.

\(^1\)Friedman was an advocate of free immigration, but thought that most immigration was only good so long as it remained *illegal*, since these immigrants would not qualify for welfare. Friedman originally made this point in a public lecture entitled *What Is America?*
Another model, which we will formalize, posits group-interested voter motivation where voters care about outcomes for their group, such as others of their ethnicity, and not simply their own material well-being. If this form of motivation dominates at the polls, support for welfare among the native population will diminish if a larger proportion of government funds are diverted from the native group to support outsiders. Such a model is consistent with the research of [Alesina et al 2001] who have argued that higher levels of ethno-racial heterogeneity (ERH) in the U.S. explain its lack of a European-style welfare state. In this view, it is not social democratic ideology that best explains the extensive welfare states of Europe, but ethnic and racial homogeneity. Furthermore, because immigration threatens this homogeneity, we should expect immigration to be a particularly important and divisive issue in European-style welfare states.

Our original contribution is to (a) formalize the group-interested theory and (b) empirically determine the relationship between welfare and immigration in the U.S. Whereas previous work has focused on European polities and the African-American population in the United States [Alesina et al 2001], we use U.S. state level data on several measures of spending and immigrant demographics in our analysis. State governments have wide latitude in determining their level of spending on many different types of welfare, such as Temporary Assistance for Needy Families (TANF) and food stamp (SNAP) benefits [Soss et al 2001]. Our novel method of comparing state level foreign born population and immigration driven increases in diversity over time to the size of welfare benefits over a long time horizon will help determine the impact of immigration on the size of the welfare state.

Studies of the U.S. use the proportion of blacks to measure ERH [Stichnoth 2010,Alesina et al 2001]. However, that is an incomplete measurement because the proportion of blacks does not capture ethno-racial heterogeneity: 72.9 percent of U.S. foreign born are neither white nor black [Census 2010], so any attempt to measure the impact of immigration on the welfare state must focus on the ethnic and racial groups that dominate the immigrant flow.

Our paper compares state-level total and per capita spending on TANF/AFDC, K-12
education, and Medicaid spending with the proportion of Hispanics, blacks, and Asians, proportion foreign-born (immigrants), and proportion unauthorized immigrants per state over several decades. This method is similar to that used by Alesina, et al (2001), but with more years for comparison, more spending measures, and measures of other ethnic and national origin groups. Our paper also differs from Soss (2001) because we examine the percentage of group heterogeneity of the entire state as opposed to focusing only on welfare recipients.

The paper is organized as follows: Section 2 describes the two models of voter motivation referenced above; Section 3 describes the data and empirical strategy; Section 4 provides a discussion of estimation results and robustness checks; Section 5 concludes.

1.2 Models of Voter Motivation

1.2.1 Self-Interested Voter Model

The use of assumptions like self-interested motivation, along with methodological individualism, has long been the defining characteristic of public choice economics. Early work in the field was openly hostile to romanticized ideas of “public-” or “group-” interest, and for the most part little has changed. Politicians and voters will act the same in the context of politics as any other context; they act in accordance of what maximizes their material well-being. Applying this model of voter motivation to the connected issues of immigration and redistribution predicts immigration liberalization will result in higher levels of redistribution through a variety of mechanisms.

For our self-interest model we refer to Meltzer and Richard (1981). In this model of the “optimal” size of government, the only function of government is redistribution, so voters choose a tax rate and corresponding redistributive payment that all citizens receive. The decisive (median) voter chooses a tax rate that maximizes his post-redistribution income;
this rate will be higher the larger the difference between his income and the mean income. Since immigrants are predominantly poor, immigration increases the distance between mean and median income, thus increasing the level of redistribution.

To illustrate, consider a model where income is Pareto-distributed and every voter chooses a flat tax and receives an equal proportion of the total amount of collected taxes. Following Meltzer-Richard, the utility function is assumed to be a strictly concave function $u(c, l)$ for consumption, $c$, and leisure, $l$, both normal goods. The individual’s endowment consists of an ability to produce and a unit of time that he allocates to labor, $n$. An individual with productivity $x$ earns pretax income,

$$y(x) = xn(x)$$

Tax revenues finance lump-sum redistribution of units of consumption per capita, and taxes are levied against earned income. The tax rate is a constant fraction of earned income. There is no saving and consumption equals disposable income. The decisive (median) voter chooses a tax rate that maximizes his utility, knowing that higher taxes rates will disincentivize productive citizens to work. The key results of this model are that voters with income below the income of the decisive voter will favor higher taxes and more redistribution, while the voters with income above the decisive voter desire lower taxes and less redistribution. Since immigrants are, as a rule, generally below the median income, on the margin they will favor higher levels of redistribution.

In the real world, several other models of voter motivation could lead to the same conclusion as the self-interested model.\(^3\)

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\(^3\) Immigrants could migrate and then fail to secure employment once arriving, becoming welfare dependent as a result; this would increase the size of the constituency over time that supports welfare [Borjas 1999]. Alternatively, since immigration increases economic inequality, it could influence both immigrants and natives who dislike inequality to vote for pro-welfare political parties [Alesina and Glaeser 2004]. Immigrants also tend to be younger and have higher fertility rates than natives, increasing the amount of welfare spending for children [Stroka, Johnson, and Banting 2006]. Yet another formulation is that welfare decreases economic competition between natives and immigrants, producing a higher degree of solidarity between those two groups and more support for welfare [Oorschot and Uunk 2007].
1.2.2 Group-Interested Voter Model

While it is perfectly reasonable to assume humans act in primarily self-interested ways, the rational choice framework may easily be misapplied to the act of voting. The probability of casting the decisive vote in virtually any election is infinitesimal. Since the act of voting is costly, from the perspective of maximizing their material self-interest, voters are better off staying away from the polls. This realization has led some social scientists to consider alternative voter motivations. Of particular interest to us is group-interested voter motivation, where voters derive utility from supporting causes that favor their group, usually ethnic or racial, even if they themselves do not receive a direct payoff from the policy. For example, according to the General Social Survey, high-income blacks are much more likely to vote Democratic and support welfare than poor whites who would actually qualify for these programs. Jews in the U.S. are far more supportive of Israel than the median citizen. Group conflicts have been shown to be more empirically relevant to political life in general [Sears and Funk 1990, Bobo 1983].

Applying the group-interested voter motivation to the issue of welfare, voters support welfare when it enriches members of their group. This might explain, for instance, why people in every country are more supportive of welfare for their own citizens than they are of foreign aid initiatives. When considering the issue of immigration, group-interest could explain why redistribution enjoys far more support in racially homogeneous Europe but is relatively unpopular in the racially diverse United States [Alesina et al 2001, Oorschot and Uunk 2007, Quadagno 1994, Stroka, Johnson, and Banting 2006].

We will use the same assumptions as in the self-motivation save one: voters gain utility from voting for the tax and redistribution package which maximizes the welfare of their group instead of themselves. Each voter belongs to some relevant group $g$; for simplicity we will consider only two groups, immigrants $I$ and natives $N$. In the pre-immigration equilibrium, everyone belongs to group $N$ and chooses a tax rate $\tau$ and corresponding redistribution level $r$ that maximizes the total utility.
\[ u = f(\tau, r) \]  \hspace{1cm} (1.2)

Once the immigrant group is added to the population, tax rate \( \tau \) now corresponds to a smaller proportion of \( r \) for each member of group \( N \). If \( \rho \) is the proportion of the population belonging to the native group, for total taxes \( T \) collected

\[ r = (1/N) \times \rho \times T \]  \hspace{1cm} (1.3)

Therefore, a fall in \( \rho \) will result in a decrease in support for redistribution for each member of the native group relative to the pre-immigration equilibrium.

In this case, the inclusion of the immigrant group has an ambiguous effect on native support for welfare. If the immigrant group is a minority of voters with a lower mean income than the native group, as is the case for most immigration to the U.S., then native support for welfare will decline with immigration. Simply stated, the proportion of each dollar collected in taxes distributed to other natives has declined. Since each voter only cares about the welfare of his own group, on the margin each voter will decrease support for redistribution when the size of the immigrant group increases.

This model predicts a negative relationship between immigration and welfare, which has been suggested by some previous research [Bay et al 2006, Lund and Thori 2007]. Some researchers suggest that interpersonal altruism is linked to race for evolutionary reasons [Alesina et al 2001]. These theories suggest “racial fragmentation... and the disproportionate representation of ethnic minorities among the poor clearly played a major role in limiting redistribution” in the U.S. compared to other developed nations which have larger welfare states and far greater ethnic and racial homogeneity [Alesina et al 2001, Stroka, Johnson, and Banting 2006]. The U.S. has at least 3 times as much ethno-racial heterogeneity as any country in Northern Europe [Alesina et al 2002], which might explain the stark contrast in their welfare states. This also means that increasing heterogeneity could be a concern for the welfare states of Europe: in 2000, over 50 percent of the European population was
concerned about immigrant abuse of the welfare, with those living in nations with higher social expenditures convinced that immigrants are more likely to abuse welfare [Boeri 2006]. A Norwegian survey about the political feasibility of introducing a minimum income found that 66 percent of Norwegians initially favored the scheme. However, merely mentioning that non-Norwegians residing in the country would receive the same benefits reduced support for the program to only 45 percent [Bay et al 2006]. In Sweden, increased immigrant population share led to less support for redistribution among native Swedes according to surveys conducted every election year by the Swedish National Election Studies Program [Dahlberg et al 2011]. Furthermore, some authors have suggested that immigration has given new life to political parties that bundle anti-welfare policies with xenophobic policies [Lee et al 2006a]. ERH can also explain variances in government supplied services across U.S. cities, metropolitan statistical areas, and urban counties [Alesina, Baqir, and Easterly 1999].

1.3 Data and Empirical Strategy

1.3.1 Data

We constructed a unique data set of TANF benefits on the state level per family of three for specific years going back to 1970. Prior to the mid-1990s, we constructed the data from reports on TANF delivered to the House Ways and Means Committee. The data for TANF benefit levels is presented in [Table 1]. The number of TANF beneficiaries on the state level was reported by the Office of Family Assistance at the U.S. Department of Health and Human Services. An employee from the United States Department of Agriculture gave us data on the SNAP data prior to 2006. From 2006 to the present, we relied on data published on the department’s website. Data on the size of unemployment insurance

\[ \text{A 1 standard deviation increase in ERH reduced the total spending on roads by .25 and welfare by .2 of a standard deviation. The shares of public spending on sewers and trash pickup are also inversely related to an area's degree of ERH.} \]

\[ \text{The Urban Institute has compiled TANF benefit level data since the mid-1990s, which we used to confirm our findings.} \]

\[ \text{We corresponded with Nicholas Nadine at the U.S. Department of Agriculture, October 11, 2012} \]
benefits by state were only available from 1986 onward through correspondence with an employee from the Department of Labor\footnote{We corresponded with Kevin Stapleton at Department of Labor, March 15, 2012}.

For the Hispanic, Asian, Black, and immigrant populations we relied on the United States Census. We also use data from the American Community Survey for estimates in 2005, 2008, and 2010. This data can be found in [Table 2] Estimates of the unauthorized or illegal immigrant populations on the state level came from estimates conducted by the Department of Homeland Security, the Pew Research Hispanic Center, and the Heritage Foundation. Data on K-12 spending and state Medicaid expenditures came from annual reports of the National Association of State Budget Officers. Data on inflation was gathered from the Bureau of Labor Statistics. Data on the income of individuals and households was gathered from the Census.

1.3.2 Empirical Model

Given there exists some theoretical and empirical (based on European work) argument that increased immigration decreases support for the welfare state, we will put both self-interest and group-interest to the test. Our empirical analysis is performed using U.S. state-level time series data on median benefits as the dependent variable, and proportion Hispanic, proportion Asian, and proportion immigrant as independent variables.

We estimate the regression

\[ \text{Welfare}_{it} = \alpha \times ERH_{it} + \beta \times X_{it} + \rho_i + \tau_t + \epsilon_{it} \]  

(1.4)

where Welfare is a measure of either (a) total spending or (b) benefit levels for the variety of programs we analyzed: TANF, Medicaid, and K-12 education budgets. \( ERH_{it} \) measures heterogeneity in state \( i \) in year \( t \), vector \( X \) contains demographic covariates and controls, such as income and income inequality, and \( \rho, \tau \) represent state and time level fixed effects.

For our covariates, we include median income in each state, recognizing that states with higher costs of living will have higher benefit levels than other states representing
about the same level of relative support for welfare. Other specifications define ethno-racial-nativity heterogeneity as proportion blacks, Hispanics, Asians, immigrant, and *illegal* immigrant. Previous worked established that percentage black is a significant contributor to the relatively low level of US spending, with states having higher proportion black having significantly lower TANF benefit levels [Alesina et al 2001].

1.4 Results

1.4.1 Estimation Results

We present the results of the regressions described in Tables 3-4. Income controls and state and year fixed effects were used in most specifications. These results differ from previous work and do not support either theoretical model of the effect of immigration on redistribution. Strikingly, this result holds for both per-capita benefits and total spending levels.

These findings are consistent and robust. No effect was found for immigrant population share or ethnic diversity on TANF benefits per family or the total spent on the program. Likewise, there was no effect for total or per-pupil K-12 spending, nor was there a total or per-capita effect on Medicaid spending. Therefore, these findings lend no support to the idea that immigration or the resulting immigration-driven increases in ethnic diversity are linked to higher or lower public spending on any of these measures.

Limited TANF eligibility for immigrants could help explain the lack of native reaction to immigration and diversity. However, data from the GSS suggests that the median American thinks the government provides too much assistance to immigrants. In reality, the programs have stricter eligibility requirements than before: the Personal Responsibility and Work Opportunity Reconciliation (welfare reform) and Illegal Immigrant Reform and Immigrant Responsibility Acts (IIRIRA) of 1996 restricted non-citizen eligibility for TANF. Prior to 1996, non-citizens were generally eligible for the same welfare benefits as citizens but welfare reform and the IIRIRA barred TANF for new immigrants for five years after their entry.
After the five year bar, states were allowed discretion in allowing non-citizens access to TANF. As of 2010, 34 states and Washington, D.C. allowed lawful permanent residents who have been in the U.S. for more than five years to draw on TANF. Many states restored portions of the welfare benefits limited by welfare reform. Because of these laws and a diminishing poverty rate among immigrants, 4 percent of immigrants were using TANF in 1995 but only 1 percent were in 2009 [Wasem 2010].

Immigrant eligibility for SNAP benefits was also limited to lawful permanent residents by the 1996 reform, but states can extend SNAP benefits to some immigrants if they choose. On the eve of welfare reform, 7.1 percent of SNAP beneficiaries were non-citizens. After the passage of welfare reform, the enrollment of non-citizens as a percentage of total beneficiaries dropped steep so that by 2009 only 3.8 percent of SNAP beneficiaries were non-citizens. States have wide discretion in setting SNAP benefit levels in partnership with the United States Department of Agriculture. Several states choose to give SNAP benefits to immigrant groups excluded by the federal welfare reform law.

Data from fifty states and the District of Columbia for several decades ensures sufficient statistical power. Immigration has virtually no role in determining the level of benefits for TANF, either per-capita or for the entire program. Nor does immigration cause higher spending on K-12 education or Medicaid. Political institutions, regional differences in ideology, and other factors not influenced by ethnic and racial heterogeneity determine the size of the welfare state. We are left to conclude that neither the self-interest or group-interest model sufficiently explains the effect of immigration on welfare policy outcomes. While these tests are not exhaustive, it would seem that fears about immigration’s effect on welfare in either direction should be tempered.

We must address why our results differed from previous research for both the U.S. and Europe which find strong evidence for the group-interest model.

Our analysis of immigrant-induced ethno-racial heterogeneity extends back to 1970, 26 years before welfare reform and the IIRIRA. Furthermore, those laws had no impact on the level (per-capita) of welfare benefits, only eligibility.
1.4.2 Alternative Explanations

Political institutional factors that could explain the difference in welfare state size between Europe and the U.S. are American federalism, non-democratic institutions such as the Supreme Court, representation by state and not by population in the U.S. Senate, substantive checks and balances, and a lack of proportional representation that might favor pro-welfare political parties are all potential explanations [Alesina and Glaeser 2004]. The differences could also simply be derived from a different sense of social justice and differing evaluations of how meritocratic economic outcomes are in the capitalist system. This suggests that it is ideology, not demographics, that determines the size of the welfare state.

Our analysis reveals that Texas and California have the largest Hispanic populations in the United States but radically different levels of welfare. In 2010, California TANF payments to a family of 3 are $694 which is 167 percent greater than the benefit for a similar family in Texas ($260). In 2010, nearly 37 percent of both states’ populations were Hispanic, but California had a proportional immigrant population that was 65.8 percent greater than Texas; in California, a larger proportion of immigrants come from more source countries, especially Asia. In 2010, 53.4 percent of all foreign born residents in California were Hispanic while 71.6 percent of foreign residents in Texas were Hispanic. In the same year, New Mexico (the most Hispanic state at 46.1 percent) had a TANF level halfway between Texas and California at $447 per month. The Hispanicity of these states’ populations does not seem to predict the size of the welfare benefit in any way.\[9\]

\[9\]California, its large welfare state, and large Hispanic population may be an outlier and skew our results because of political circumstances. The political institutions of California and Texas are very different; California relies heavily on direct democracy and has frequent state-level referenda regarding social spending. Texans do not vote for state level referenda so outrage over perceived problems like immigration are not immediately reflected in policy. Meanwhile, California voters are conflicted, voting for caps on property and other taxes to pay for those programs [Senrik 2009]. Moreover, Texas has a part-time legislature constitutionally limited to a 140 calendar day session, while the California legislature is full-time. Texas’s Republican Party has a reputation as focused on long term courting of the Hispanic vote, unlike the Republican Party of California which is openly hostile to immigration. Demographic trends have also differed in these states for some time: in Texas, Mexican immigrants have been a major part of the state since its founding. California, on the other hand, went from one of the whitest states in 1960 to one of the least white in 1994 and that rapid change may help explain the radical anti-immigrant campaign under Pete Wilson [Unz 2011]. California’s peculiar history, political institutions, and Republican Party strategy could explain California’s unusually large welfare state.
Successful immigrant assimilation likely decreases negative native reactions to immigrants [Burgoon 2011]. Although different ethnic and racial groups produce social anti-solidarity that diminishes support for the welfare state [Lee et al 2006a], the more culturally assimilated immigrants are, the more native-born Americans support welfare programs that assist immigrants. Therefore, the lack of evidence for group-interest motivation in welfare policy outcomes could be evidence of rapid assimilation. Native perceptions of assimilation are possibly influenced by the rate of immigration into a community relative to that community’s historical rate of immigration. A large influx of immigrants in a short period of time, such as was the case in recent decades in California, could stifle the ability of immigrants to culturally assimilate [10]. Unease about immigration has less to do with the level of heterogeneity and more to do with the different cultural practices, religions, and immigrant enthusiasm to assimilate [Epstein and Hillman 2003]. 73 percent of American voters think that immigrants should adopt America’s culture, language, and heritage [Rasmussen 2011].

The lack of effect of immigration on benefit spending could suggest that American citizens believe that immigrants are successfully assimilating into American society.

Another possibility is that ethnic diversity among the working class prevents them from effectively organizing and supporting a successful national labor movement and political action for a large welfare state. American labor unions in the late 1800s and early 1900s were largely organized along racial and ethnic lines, not along class lines like in Europe. Karl Marx noted that the American working classes were beset by sectarian and ethnic differences that kept them from uniting against their employers. Marx gives the example of Irish and English working men refusing to join unions or be consolidated into one political party because of religious and ethnic grievances. Socialists and labor unionists favoring redistribution had much greater success organizing people by their shared ethnicity or other sub-cultural membership. Their greatest successes were in overwhelmingly German areas such as Reading, PA and ethnically homogeneous Oklahoma and Milwaukee [Lipset et al]

[10] Recently, Arizona, Georgia, Alabama, Indiana, South Carolina, and Wisconsin became immigrant destination states for the first time in over a century. Each has passed restrictive immigration laws, so future research should explore the link between historically unprecedented rates of immigration and native reactions.
Most organized workers decided that their best course of action was to defend their narrow individual job prospects against incursion by labor market competitors of other racial groups (Ibid, p. 133).

1.5 Conclusion

In this paper, we demonstrated that immigrant-driven increases in ethnic and racial heterogeneity do not have a statistically or economically significant effect on the level or amount of welfare benefits (total or per family), K-12 education (per pupil or total), or Medicaid per-capita expenditure. Our result is surprising because this is contrary to similar studies of European polities. Moreover it is not consistent with other popular models of voter motivation like self-interest or group-interest. We suggest that countervailing pressures from different sources of voter motivation, as well as the varied political institutional environment of the U.S., work to balance any effect of immigration on the welfare state.

Since the probability of decisiveness is so low, the cost of making any particular choice at the poll is low. If voters have preferences over beliefs, we should expect them to indulge those preferences rather than vote for candidates and policies which are in their material self-interest [Caplan 2008]. Group-interest is a possible alternative, but our research does not support that as a sole motivation. There are likely many reasons why people vote for the policies they do: self-interest, group-interest, culture and ideology, with weights that vary from person to person and election to election. This paper furthers our understanding by providing evidence against some popular theories, but it represents only the beginning of a larger research program which seeks to explain why certain policies are chosen over others.

This paper furthers our understanding by providing evidence against some popular theories, but it represents only the beginning of a larger research program which seeks to explain why certain policies are chosen over others. Future research into the interaction between immigration and welfare should apply a similar comprehensive analysis to other polities and time periods to see if these results are truly robust. Researchers should also
pay attention to which group memberships are important when testing for group-interested motivations. Since both group membership and welfare are slightly ambiguous terms, future research should also focus on using different measures. When it comes to how polities choose the size of welfare benefits, our results show that an ethnically diverse population is not destiny.
### Table 1.1: Welfare Per Capita

<table>
<thead>
<tr>
<th>Table 3</th>
<th>Real Benefit Levels</th>
</tr>
</thead>
<tbody>
<tr>
<td>TANF (per family of 3)</td>
<td>K-12 (per student)</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>immigrant</td>
<td>253</td>
</tr>
<tr>
<td>block</td>
<td>-.52</td>
</tr>
<tr>
<td>income</td>
<td>-.003</td>
</tr>
<tr>
<td>hispanic</td>
<td>617</td>
</tr>
<tr>
<td>asian</td>
<td>-605</td>
</tr>
<tr>
<td>illegal</td>
<td>169</td>
</tr>
</tbody>
</table>

State/Year FE? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes
R-Squared | .21 | .25 | .29 | .29 | .29 | .29 | .29 | .29

* p < .05
** p < .01

T-scores in parentheses

### Table 1.2: Welfare Total

<table>
<thead>
<tr>
<th>Table 4</th>
<th>Real Total Expenditures</th>
</tr>
</thead>
<tbody>
<tr>
<td>TANF</td>
<td>K-12 (state and local)</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>immigrant</td>
<td>-331</td>
</tr>
<tr>
<td>block</td>
<td>1338</td>
</tr>
</tbody>
</table>

State/Year FE? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes
R-Squared | .04 | .09 | .02 | .02 | .05 | .21 | .18 | .10 | .16 | .11 | .09 | .06 | .07

* p < .05
** p < .01

T-scores in parentheses
Chapter 2: Putting a Lid on the Melting Pot: The Political Economy of American Immigration Policy 1875-1924

2.1 Introduction

How did the United States come to limit immigration? The country is truly a nation of immigrants, founded by settlers from Great Britain and other western European nations in the 18th Century. The high cost of travel and uncertain world political climate kept immigration to the United States low until 1830, with only 1.6 percent foreign-born population in the 1830 Census. Economic opportunities in rapidly growing American cities like New York and Chicago, as well as frontier opportunities in railroad work and mining brought immigrants by the millions. Immigration totaled only 8,385 in 1820, but had grown to 1,713,000 in 1850, mostly consisting of individuals of Irish, German, British, and French origin [Dolan 2010]. By the time of the 1850 Census, a full 9 percent of the U.S. population was foreign-born.\footnote{Between 1831 and 1840, immigration more than quadrupled to a total of 599,000. Between 1841 and 1850, immigration nearly tripled again.} The invention of steam powered ships lowered fares for trans-oceanic travel, eventually bringing immigrants from Italy, Eastern Europe, and Asia. Until the 1850s, there was no major organized political resistance to immigration.\footnote{The anti-Catholic Know Nothing party, mainly active from 1854 to 1856, is considered by some historians [Dolan 2010] as the prototypical anti-immigration party. They saw Catholic immigrants as hostile to republican values. While they had some influence as a third party in the 1856 presidential election, they were not successful in passing any legislation. Most merged with the Republican Party after the election of 1860.} Federal laws restricting immigration were first proposed on the floor of Congress only in 1875; by 1924 immigration from most of the world was strictly capped by quotas based on national origin. The policy change was drastic and effectively changed the demographic composition of the country, representing the most economically and socially significant shift in American political history and sparking an intense debate that continues to this day.
Historical scholarship on immigration emphasizes the role of racism in support for immigration restriction [Dolan 2010, Peffer 1986, Kennedy 2002, Van Nuys 2002]. This explanation has some intuitive appeal consistent with the legislative history: most immigration acts targeted specific ethnicities and countries of origin, starting with immigrants whose looks and customs would have been most foreign to Anglo-American citizens of the 19th Century such as those from China and Japan. The immigrants during the American Gilded Age were also much more likely to be non-Protestant and even non-Christian. The narrative which emphasizes xenophobia, however, gives little insight into how these fears were translated into policy. Why did the restrictions take the form they did? What explains the timing of the restrictions? Xenophobia was nothing new: nativist sentiment and political action predate the passage of the first federal immigration law by at least three decades. Restriction took a full 50 years to fully implement, and despite the severity of the policy shift, immigration remained high until the passage of the Emergency Quota Act in 1921.

Following economists [Timmer and Williamson 1998, Goldin 1994], and others, this article investigates what other factors might explain the timing and content of this policy shift. Was there a role for economic conditions and public finance, as at least one economic historian has suggested [Kanazawa 2005]? Following the lead of researchers in public choice, recent research [Gilens 2014] has emphasized the role of elite opinion and special interests in determining U.S. policy. Could elite opinion and special interests have been the real force behind the policy shift? If so, which interests and groups stood to gain the most from changing policy? The contribution of this paper is to fuse economic, demographic, and political explanations and judge the relative merits of each using roll-call voting data from the U.S. Congress. Using multivariate analysis and other analytical tools, I find that Congressional ideology was an important factor in the development of immigration restriction policy, with the most restrictive legislation passed when legislators from the rural South joined a Congressional coalition against immigration.

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3Some historians emphasize that the racism was driven in part by economic competition. See, for example, Saxton, Indispensable Enemy, pp. 72-75; Mann, After the Gold Rush, pp. 188-93; Daniels, Asian America, pp. 33-56; Marks, Precious Dust, pp. 300-01; and Takaki, Strangers, pp. 92, 95-99, 110-12.

4Immigration to the United States peaked in 1890.
The paper is organized as follows: Section 2 describes the legislative history of successful immigration restriction in the U.S., but this is only one part of the political discussion, as 42 major bills or amendments were considered in the House and 31 bills or amendments considered in the Senate during the period. Section 3 describes the data used in my analysis: NOMINATE [Poole and Rosenthal 1997, Poole and Rosenthal 1984, Poole and Rosenthal 2007] scores and the U.S. Congressional record for all immigration-related bills during the period 1875-1925 in order to predict political support for immigration restriction as a function of party identification and ideology, demographic characteristics of the state or district, as well as looking at correlations between support for immigration-restricting policy and other types of policy. Section 4 continues the analysis and compares it to other explanations given by historians and economists. Section 5 concludes.

2.2 Legislative History

Despite the promise of the Burlingame Treaty[6], the first federal immigration law was the Page Act, first proposed in 1873 and finally passed in 1879[7]. The law classified as “undesirable” any individual from Asia who intended to become a contract laborer. It imposed a $2000 fine and maximum two-year jail sentence for traffickers who brought people from Asia without their full and voluntary consent for the purposes of holding them to a term of service. The law was named after its sponsor, Representative Horace F. Page, a Republican who introduced it to “end the danger of cheap Chinese labor and immoral Chinese women.” The large number of Chinese laborers immigrating to the Western United States, who usually came without their families intending to return to China, resulted in high demand for prostitutes, which infuriated natives [Peffer 1986]. Other justifications given for the law include the American Medical Association’s belief that Chinese immigrants “carried distinct
germs to which they were immune, but from which whites would die if exposed” [Luibheid 2002]. Historians have generally attributed the success of the law to American concern for maintaining social ideals of marriage and morality [Abrams 2005]. The ultimate effect of the law would be to severely limit the supply of Chinese-born women in the United States. In 1882 alone, during the few months before the enactment of the Chinese Exclusion Act of 1882 and the beginning of its enforcement, 39,579 Chinese entered the U.S., and only 136 of them were women. [Abrams 2005, p. 701].

The Chinese Exclusion Act, signed into law on May 8, 1882, was the second federal immigration law passed. It was originally written to limit immigration from China for a period of 10 years, though it was renewed in 1892 and made permanent in 1902[8]. The act provided deportation instructions for illegal Chinese laborers, effectively creating the first illegal immigrants to the United States. Many Chinese had come to the United States to work in railroad construction and gold mining [Norton 1924], but the end of the gold rush reduced labor demand. Many of these laborers sought work in other industries, and the increased competition was the stated impetus for restrictive legislation. Labor leader Denis Kearney and his Workingman’s Party[9] as well as California Governor John Bigler, blamed Chinese coolies for depressed wage levels and called for federal solutions. Kanazawa (2005) argues that Chinese immigrants were important taxpayers when both the state and localities were experiencing major fiscal difficulties starting in the 1850s, making it difficult to build support for immigration restriction until the fiscal situation improved[10]. The most vocal critic of the act was the anti-slavery and anti-imperialist Republican Senator George Frisbie Hoar of Massachusetts, who described the Act as “nothing less than the legalization of racial discrimination.”[11] The act received considerable support from the nascent labor unions in the United States, such as the Knights of Labor [Kennedy 2002].

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[8] It was finally repealed by the Magnuson Act of 1943.

[9] The expressed goal of the California Workingman’s Party was to “rid the Country of cheap Chinese labor” according to Kearney [Kearney 1878], and their primary enemies were Chinese immigrants and the Central Pacific Railroad. Their party slogan was “The Chinese must go!”

[10] Kanazawa reports that in several years during the 1850 and 1860s, taxes on foreign miners represented over 15 percent of total state revenues.

[11] Legalization, in this case, refers to the codification of mandated discrimination, as discriminatory practices were common at the time in private and public settings.
1882 also saw the passage of another piece of federal immigration legislation which established a head tax on immigrants, meant to pay for the expanding federal immigration bureaucracy. Prior to the 1880s, immigration was primarily handled by state governments and city port authorities. The 1882 act also created a new group of immigrants subject to restriction, those “likely to become a public charge,” which would leave a lasting legacy on the immigration debate. The bureaucracy was further expanded by the Immigration Act of 1891 which established a Bureau of Immigration within the Treasury Department whose role was to oversee and enforce federal immigration policies. In 1885, Canada passed a similar law called the Chinese Immigration Act, placing a head tax on Chinese immigrants and directing the proceeds toward the development of an immigration bureaucracy. The Scott Act (1888) expanded on the Chinese Exclusion Act by prohibiting re-entry of deported Chinese.

The Chinese Exclusion Act was extended in 1892 with another law known as the Geary Act, sponsored by Democratic California Congressman Thomas Geary. The act was not only extended for another ten years, but several new onerous requirements were added for Chinese nationals living in the U.S., such as a requirement to carry a residency permit at all times or risk deportation. The law was extremely unpopular among Chinese workers, and a protest was led by the Chinese Consolidated Benevolent Association encouraging workers not to register, to refuse to pay for transportation costs if they were deported, and to issue several legal challenges in court.\footnote{The Geary Act was ultimately upheld by the United States Supreme Court in an opinion by Justice Horace Gray, Fong Yue Ting v. United States, 149 U.S. 698, 13 S. Ct. 1016, 37 L.Ed. 905 (1893), Justices David Josiah Brewer, Stephen J. Field, and Chief Justice Melville Fuller dissenting. The majority opinion states that the U.S., as a sovereign nation, has the right to exclude any non-citizen for any reason.}

The first immigration restriction not to specifically target Chinese workers was the Immigration Act of 1903, also called the Anarchist Exclusion Act. It codified previous immigration law, and added four inadmissible classes: anarchists, people with epilepsy, beggars, and importers of prostitutes\footnote{Prostitutes themselves were already prohibited from immigrating under the terms of the Geary Act [Dolan 2010].}. Concerns about terrorism caused by foreign anarchists had
been mounting since the Haymarket Affair of 1886\textsuperscript{14} and two attempts had been made to pass anarchist-excluding legislation in 1894, though both died in committee \cite{Hurchinson1981, p.111}.

The Naturalization Act of 1906 standardized naturalization procedures, made some knowledge of English a requirement for citizenship, and established the Bureau of Immigration and Naturalization. The naturalization act was strongly supported by President Theodore Roosevelt \cite{Hurchinson1981, p.125}. This was quickly followed by a 1907 Immigration Act which prohibited immigrants with disabilities and diseases, an extension of the argument for excluding any immigrants “likely to become a public charge.” During the time between the establishment of a federal immigration bureau in 1891 and the act of 1907, the immigration bureaucracy had more than tripled in size \cite{Daniels2001, p.15}. Ostensibly to prevent disease, section eleven of the act expanded on the ban of infected persons by stipulating that a medical examiner could turn away the person and any other immigrant accompanying them. The head tax per immigrant was also increased from fifty cents to four dollars per person, to be placed in a deportation fund for captured unlawful immigrants. The act’s most long-term consequence was the creation of the Dillingham Commission\textsuperscript{15}, a bipartisan special committee intended to study the origins and consequences of immigration to the United States. This commission would conclude in 1911 that immigrants from Southern and Eastern Europe posed a serious threat to American society and culture \cite{Croxton1911}.

Legislative focus returned to Asia with the passage of the Asiatic Barred Zone Act of 1917. An overwhelming majority of Congress overrode President Woodrow Wilson’s December 14, 1916, veto and added a number of restricted persons categories, including homosexuals, alcoholics, polygamists, and illiterate adults. Literacy tests had previously been vetoed by presidents Cleveland (1897) and Taft (1913) and were strongly supported by

\textsuperscript{14}On May 4, a policeman was killed and several others were wounded, of which six later died, after a bomb exploded in Chicago’s Haymarket Square. Eight members of the recently formed International Working People’s Association, were found guilty of the bombing.

\textsuperscript{15}Named for Republican Senator William Dillingham of Vermont
anti-immigration Congressman such as Henry Cabot Lodge and his “Immigration Restriction League” who were vehemently opposed to immigration from Asia, Southern Europe, and Eastern Europe. Importantly, the act completely barred immigration from a specific geographic “barred” zone. While immigration from Japan was technically allowed, it had been severely curbed by the Gentleman’s Agreement between the United States and the Empire of Japan in 1907, which stipulated that the U.S. would not officially ban Japanese immigration in return for the Japanese government restricting emigration to the United States [Van Nuys 2002, p. 19].

The Immigration Act of 1918 expanded and elaborated the definition of anarchist, but only a relatively small number were ever affected by the act. Immigration in general, however, was surging in the aftermath of WWI. A turning point for immigration policy came in 1921 with the passage of the Emergency Quota Act. The act added two new features to American immigration law: numerical limits on immigration from Europe and the use of a quota system for establishing those limits. The Emergency Quota Act restricted the number of immigrants admitted from any country annually to 3 percent of the number of residents from that same country living in the United States as of the U.S. Census of 1910. Based on that formula, the number of new immigrants admitted fell from 805,228 in 1920 to 309,556 in 1921-22 [Murray 1976, p. 7]. Skilled professionals and Latin American immigrants were not affected by the legislation.

The act was soon modified by the Immigration Act of 1924, widely known as the National Origins Act. This reduced the cap set in 1921 from 3 percent to 2 percent of the

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16 The text of the Act states: “the following classes of aliens shall be excluded from admission to the U.S... persons who are natives of islands not possessed by the United States adjacent to the Continent of Asia, situated south of the 20th parallel latitude north, west of the 160th meridian of longitude east from Greenwich, and north of the 10th parallel of latitude south, or who are natives of any country, province, or dependency situated on the Continent of Asia west of the 110th meridian of longitude east from Greenwich and south of the 50th parallel of latitude north...”

17 Also known as the Dillingham-Hardwick Act, after its sponsors.

18 Although famed terrorist Luigi Galleani and anarchist writers Emma Goldman and Alexander Berkman were among the 556 deported under the act between its passage and repeal in 1952.

19 67th Congress: Ch. 8, 42 Stat. 5 of May 19, 1921. Also known as the Emergency Immigration Act of 1921, the Immigration Restriction Act of 1921, the Per Centum Law, and the Johnson Quota Act

20 Pub.L. 68139, 43 Stat. 153, enacted May 26, 1924. Also known as the Johnson-Reed Act, for its sponsors, or the Asian Exclusion Act.
population in 1890. The stated purpose of the act was the “preserve the ideal of American homogeneity,” and Congressional opposition was minimal, enabling the act to pass both houses quickly. Even immigration from Great Britain and Ireland were affected, falling by about 19 percent from the 1920 level; whereas immigration from Italy fell by more than 90 percent \cite{Murray1976}. The law was heavily lobbied for by eugenics groups\footnote{Famed eugenicist Madison Grant wrote in support of such a law in his 1916 book \textit{The Passing of the Great Race}.} and by labor groups such as the AFL \cite{Gompers1924}. The quotas reduced immigration to only a small fraction of its previous level, and would remain in place until 1965.

2.3 Data

A comprehensive analysis of any major legislation program must include more than just the history of successful legislation. Most immigration acts that were ultimately passed faced little Congressional opposition in the final vote, and all the major restrictionist programs such as a literacy test and national quotas for most of the world were \textit{eventually} enacted. However, final votes show only a portion of the debate and give little information about what challenges these policies faced. Many acts went through multiple votes before reaching a consensus in Congress. To this end, I have used roll call voting\footnote{A recorded vote, under the Constitution, may be obtained upon the demand of one-fifth of the members present. Most recorded votes are obtained by calling a roll of members of the Congressional house and recording yea, nay, and abstentions.} information collected by Poole and Rosenthal for the NOMINATE \footnote{Nominal Three-Step Estimation} and VoteView projects \cite{Poole1997} which are taken directly from the U.S. Congressional record. This data tracks yea or nay responses for almost every Congressional roll-call vote\footnote{A small number of Congressional roll-call votes, especially in the pre-Civil-War period, have been lost.}

The analysis begins with the 43rd Congress, which met from March 4, 1875 to March 4, 1877 and ends with the 68th Congress, which met from March 4, 1923 to March 4, 1925. A listing of the immigration-related major votes can be found in the Appendix: I consider any vote that would result in significant changes to immigration policy to be a major vote, such as enacting or modifying immigration legislation, and exclude roll calls for procedural

\footnote{21 Famed eugenicist Madison Grant wrote in support of such a law in his 1916 book \textit{The Passing of the Great Race}.}
The roll call data reveal some general trends. Most early acts restricting immigration faced little opposition and were a mostly regional issue: very few Asian immigrants were settled anywhere other than California and other western frontier states and territories. Contested policy that met with serious opposition, particularly by the executive branch, began with a movement to severely limit European immigration by passing a literacy test. The literacy test was first voted on in 1897, but would not ultimately succeed until 1917. The South was firmly in the pro-immigrant camp until the 1890s, but began voting with large sectors of the West and Midwest for immigration restrictions starting in the early 1900s.

2.3.1 NOMINATE

NOMINATE (Nominal Three-Stage Estimation) is a multidimensional scaling application developed by political scientists Keith T. Poole and Howard Rosenthal to analyze preferential and choice data, such as legislative roll-call voting behavior. Multidimensional scaling is a means of measuring and visualizing the level of similarity of individual cases of a data set. Several forms of NOMINATE exist, but current applications use the Dynamic Weighted NOMINATE score which allows comparisons to be made between houses and over time using consistent scores. This is particularly useful in tracking the role of ideology and party coalitions in shaping policy.

NOMINATE assumes that alternative choices can be projected on a basic, low-dimensional Euclidean space. Within that space, individual legislators have utility functions which are normally distributed and maximized at their ideal point. NOMINATE also assumes that individuals have symmetric, single-peaked utility functions which center on their ideal point. Ideal points are determined from observing choices, with individuals exhibiting similar preferences placed more closely than those behaving dissimilarly: legislators are given scores which place them closer to other legislators who have similar ideal points. NOMINATE is useful because it gives quantitative measures of Representatives’ and Senators’ ideology.
across chambers and across time. Errors in prediction can also be quite valuable because they are indicative of cases where individual voters went against party lines and voted in a manner inconsistent with the preferences they revealed through other votes.

A key finding from NOMINATE and other literature in political science is low-dimensionality in Congress [Poole and Rosenthal 1997, p. 104]. Most votes can be predicted by a single, uni-dimensional score on a continuum of liberal-conservative economic policy, despite the many complexities of Congressional politics. Interestingly, there is often a second-dimension that represents some salient social issue of the day. During the 1875-1925 period, the social dimension is related to racial issues such as slavery or civil rights, or regional issues related to the Civil War and Reconstruction [Poole and Rosenthal 1997, p. 270]. The second dimension is highly context dependent. Today, the most important second dimension in the United States is a Washington insider-outsider dichotomy [Enten 2013]; in Europe, the second dimension is usually conceived as pro- or anti-integration with other EU member nations [Szczerbiak 2008].

An important part of my analysis will be to see how much strength of ideology in either dimension affected votes on immigration and naturalization related issues in the period. Previous work has not explored the role of ideology and political polarization in the development of immigration policy. In order to illustrate the relevance of these scores, I make use of the VoteView software developed by the creators of NOMINATE in order to visualize legislator scores in two dimensions for each roll call vote.

VoteView creates a 2-dimensional chart for a particular roll call vote. Voters are placed on the chart according to their DW-NOMINATE scores and colored differently depending on their recorded vote in the roll call. A cutting line is drawn in the graph to show the NOMINATE prediction of where votes will change from yea to nay.

### 2.4 Analysis

Most previous scholarship in economics on this topic has focused on market factors [Timmer and Williamson 1998, Goldin 1994, Shughart, et al 1996] in determining the timing and
content of immigration legislation. Timmer and Williamson (1998) conclude that there is no evidence that macroeconomic conditions as measured by growth and unemployment had consistent influence on shifts in policy. Relative wages and income inequality appears to have been a more important, but weak, determinant. They conclude that over the long run, the United States and other countries try to maintain the relative economic position of unskilled labor compared to skilled labor, landowners, and industrialists. James Foreman-Peck defends claims that the 1830s anti-immigrant movement was counteracted by the Democratic Party’s recruitment of immigrant voters, and immigration restriction was heavily supported by native voters but floundered in areas where immigrants could not or did not vote. Shughart, et al. (1996) claim that immigration enforcement is lenient during times of wage and employment growth while it is more strictly enforced during times of economic contraction. Goldin (1994) echoes this sentiment, concluding that immigration restrictions were held at bay during the largest immigrant flows because the new immigrants were able to capture many Congressional districts. She also writes that the South became anti-immigrant after 1900 when they “realized immigrants would never settle there.” The alternative explanation offered here is that a shift in ideological coalitions regarding race explain why the South shifted to a restrictionist position.

A key assumption behind this previous work is that policy is both sensitive to public opinion and that public opinion is determined primarily by narrowly economic self-interest. An alternative explanation that emphasizes the role of interest groups in directing policy and a passive public is consistent with both rational ignorance about policy (following Downs (1954) and the Virginia Public Choice school) and rational irrationality (following Caplan (2007)), where interests groups can capitalize on the public’s biases in directing policy.

I separate the development of immigration restriction into three overlapping periods leading up to the passage of important pieces of legislation. The first are the votes leading up to the important Chinese Exclusion Act of 1882 and its extension in 1892. The second

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25 Macroeconomic conditions considered by Timmer and Williamson are real wage growth, growth in real GDP, unemployment, real wage effects, relative wages of unskilled to per capita GDP, trade openness, human capital content of immigrants, rate of immigration. The authors find that changes in real wages are a significant explanatory variable in accounting for the Congressional vote to override Wilson’s veto in 1917.
period tracks the movement to pass a literacy test from 1890 to 1917. The last period tracks
the movement to restrict European immigration by country of national origin, which began
in 1903 but gained serious momentum in 1918\textsuperscript{26} eventually culminating in the passage of
the National Origins Act in 1924.

2.4.1 Chinese Exclusion

Many studies point out that Chinese workers competed with native workers for jobs, intensi-
sifying feelings of racism and xenophobia among natives. This argument does not, however,
explain why exclusion legislation took 30 years to pass after the first Chinese immigrants be-
gan arriving in significant numbers to work in mining and railroad construction. Kanazawa
(2005) emphasizes the role of public finance: in 1850, California instituted a “foreign miners
tax” which required non-citizens to pay a $20 fee to obtain a gold mining license. But what
about ideology?

The first vote on limiting Chinese immigration took place on January 21, 1879 at the
tail end of the Long Depression (1873-1879), a worldwide economic recession. The bill’s
sponsor, Horace Page (R, California), introduced it to “end the danger of cheap Chinese
labor and immoral Chinese women” [Peffer 1986, p. 25]. It is worth noting that all bills
limiting Chinese immigration were proposed by House members or Senators from California
and Oregon [Hurchinson 1981, p. 74]. A near-unanimous vote brought the bill to the floor
for discussion, where it was passed. A presidential veto was overridden by roll call in the
house; there was no Senatorial opposition. [FIGURE 1] Western senators immediately
began demanding more severe action, but discussion was tabled until the 47th Congress, in
continued hope that the treaty negotiations in progress would reduce Chinese immigration
without additional Congressional action, as had been done with the Gentleman’s Agreement
with Japan. Ultimately, the Chinese government recognized the right of the United States
to “regulate, limit, or suspend such coming of residence,” although they added that the
United States “may not absolutely prohibit it.”

\textsuperscript{26}Concerns over European anarchists dominated much of the early rhetoric in newspapers and the Congress
floor regarding the targeting of ethnicities in Southern and Eastern Europe [Zimmer 2010].
The 47th Congress saw the most action on immigration of any to that point; ultimately, three major acts concerning immigration were enacted. The first concerned regulations for vessels carrying immigrants: the new bill added minimums for carrying capacity and deck area per passenger. It was vetoed by President Arthur on July 1, 1882, but a new bill with fewer restrictions was passed on July 22. A second immigration issue concerned the passage of a head tax for immigrants, to be paid by the steamship operators, proposed by Congressmen from New York.\(^{27}\)

Work had begun on a comprehensive act banning Chinese immigration in 1881, but this bill stayed in committee until 1882. During the 1880 Democratic party convention, Chinese exclusion was considered a key part of the new platform; Republicans, on the other hand, voiced support for relatively minor restrictions. The vote to pass the Chinese Exclusion Act did face significant floor opposition, particularly from Midwestern and Northeastern Republicans, such as George Frisbie Hoar (R-Massachusetts). The Act was strongly supported by the AFL, who claimed that factory and mine owners were using Chinese labor to keep wages depressed [Briggs 2001, p. 22]. After a lengthy debate, the Act was passed 29-15 in the Senate and 167-66 in the House, but was vetoed on April 4 by President Arthur, who claimed it was contrary to foreign relations and treaty obligations. After addressing some of the President’s wording concerns, and lowering the time the bill would be in effect from 10 to 20 years, the Act passed both houses of Congress and was confirmed by the President.

After the Chinese Exclusion Act reached its original expiration date in 1892, bills were put forward to extend the law. Republican leadership strongly backed the legislation [Kanazawa 2005] and opposition was mild. An attempt to extend the bill for 20 years was in fact defeated, but the wording was quickly changed and the law extending California representatives claimed that while the original act had helped stabilize wages in California, it did not go far enough and achieve full exclusion [Sandmeyer 1991, p.104].

Overall, votes for Chinese Exclusion faced little principled opposition. Eastern states

\(^{27}\)The head tax passed by an overwhelming 110 to 16 in the House.
had little Asian immigration and while there is no evidence of public clamor for exclusion,\footnote{In the West, however, public clamor was a common justification for the aggressive Congressional pursuit of exclusion. In March 1882, Congressmen from California, Nevada, Utah, and Oregon all presented results of state-wide ballots on immigration restriction. In Nevada, one such result was reported as 17,259 voting in favor of restriction out of 18,397 votes cast.} they were not strongly opposed. The most significant hurdle seems to have been even bringing the legislation to Congress in the first place.

**Regression Results**

[TABLE 1]

Note: Ordinary least squares regression weighted by the number of Congressmen voting. For consistency, higher-value coefficients always represent voting in favor of immigration restriction or against liberalization. Foreign born is percent foreign born in most recent Census in that Congressman’s state. Immigration rate is the change in foreign born population in the last two Censuses for that Congressman’s state.

The votes chosen for analysis all involve the actual passage of a bill including a provision for Chinese exclusion: I have not included purely procedural votes.\footnote{Although in some cases, these procedural votes were important in delaying the passage of legislation. For instance, several times Congress has voted to table discussion until a future session, then not actually considered the bill again for several sessions. In many cases this delay came at the President’s request so that immigration issues could be solved by diplomacy.} Results for Chinese exclusion indicate there is some effect of Congressman ideology as measured by NOMINATE score, but also a strong element of pure party-line voting. Congressmen from the West strongly supported these bills, left and right, but elsewhere in the country Democrats were considerably less restrictionist than Republicans. Only in Western states did Congressmen provide ballot data from their state indicating public concern for the issue of Chinese immigration.

The biggest point of contention, which caused several bills to fail on their first try, was how long restriction should last. Ultimately, Chinese restriction lasted for generations, as it continued to be renewed every 10 years until it was replaced by the National Origins Quotas. At the time, Congressmen spent considerable time debating whether the Act should last 10 or 20 years (and later, whether the Act should be extended by 10 or 20 years). While it
may seem to be a small point, this seems to be the margin for negotiation.

Interestingly, the second dimension of NOMINATE, which describes voting behavior on racial issues, seems to have no effect. During the 46th-47th Congress, both the House and Senate were highly polarized along the left-right liberal-conservative axis. The second dimension of NOMINATE was not yet influential on very many issues, immigration included.

2.4.2 Literacy Test

Calls for a Literacy Test began in the early 1890s, but a vote was not brought to Congress until 1897. The House overwhelmingly affirmed the bill on February 9, 1897, and it was affirmed by the Senate a week later. While most of the country seemed to favor the bill, the South and Northeast were united against it. President Cleveland, having campaigned on a platform that included opposition to the literacy test, vetoed the bill. A vote to override passed the House, but the Senate, which had originally only passed the bill by a narrow 34-31-25 (Yea-Nay-Abstain) margin, took no action. [FIGURE 3]

The Senate introduced a new literacy test bill in 1898, but the House narrowly voted against consideration of the bill. The literacy test would not be considered by Congress again until 1912, when it was affirmed by large majorities in both houses, but once again vetoed by President Taft. The House then failed to override the veto in early 1913. [FIGURE 4]

Supporters of a literacy test were not long deterred. A new bill containing the test was introduced in January 1915, also passing easily in the Senate and House, but once again faced a presidential Veto from Wilson that the House failed to override. In March 1916 both Houses passed a nearly identical bill by a larger margin, which was once again vetoed by Wilson. Like Cleveland and Taft, he had promised in his campaign to oppose a literacy test. This time, however, the veto was successful overridden by both houses and became law on February 5, 1917. [FIGURE 5]

While previous research has noted the importance of the shift of the South to the anti-immigrant coalition [Goldin 1994, Timmer and Williamson 1998], the NOMINATE data offers an alternative explanation. Votes on immigration are mostly non-ideological and best
predicted by regional interests in the Chinese Exclusion period, and early votes for the literacy test fell mostly along left-right ideological lines. Subsequent votes show the second dimension, racial issues, becoming more salient. The South had few immigrants and little reason to fear they would soon be flooded with more, but politically began to associate anti-immigration with a general xenophobic sentiment that extended distaste for American blacks to distaste for the foreign-born. Only when Southern democrats were firmly in the anti-immigrant camp was the literacy test able to become law.

Regression Results

[TABLE 2]

Previous analysis of votes on the literacy test in [Goldin 1994] found significant, persistent effects of urbanization and immigrant growth on these votes. I have included these variables as well as party identification and both dimensions of NOMINATE. While urbanization and immigrant both are sometimes statistically significant, my results do not support the hypothesis that these variables are of primary importance.

Early votes on the literacy test were predicted well by the liberal-conservative dimension of NOMINATE. As in Goldin’s analysis, I find that an important contributor to the eventual passage of the literacy test (eventually overcoming several presidential vetoes) was the move of Southern politicians from the pro-immigration coalition to the restrictionists.

This effect can be described in terms of NOMINATE scores: much of the South was controlled by the Democratic party, which had historically voted against restriction more often than not. These Southern Democrats voted with their Democratic allies in many issues, and had similar nominate scores along the liberal-conservative axis to other democrats. On racial issues, Southern Democrats were more likely to vote against other democrats.

During the time of the literacy test, immigration from all around the world meant that immigrants were more racially diverse than ever [Kennedy 2002]. Racial issues were also

\[30\] There is also separation on racial issues within the Republican Party, especially before the 1920s. The Republicans would eventually go from being the party of anti-slavery to being the party of Jim Crow, with little dissent amongst it ranks.
becoming important topics in newspapers and even universities. Before the early 1900s, position on racial issues seemed to have little predictive power in determining votes on immigration. The literacy test, then, perhaps represents the complete racialization of the immigration issue.

2.4.3 National Origins Quotas

Several early votes considered the growing concern with terrorism by European anarchists. While anarchist terrorism was actually rare, the few attacks (including the assassination in 1901 of U.S. President William McKinley) caused a cascade of media attention and legislators were called to action [Zimmer 2010]. Images of Southern and Eastern European terrorists were frequent in newspapers [Murray 2009, p. 211], and low levels of unionization among these new immigrants was probably linked to hostility to these groups by the AFL and Knights of Labor [Jacobson 2008].

With the literacy test firmly in place, immigration restriction proponents set their sights on a national origins program which would limit the number of immigrants based on a proportion of the foreign-born population originating from any country in the U.S. Census of 1890. A national origins quota was strongly supported by the AFL [Jacobson 2008] who saw the Chinese Exclusion Act as a model for U.S. immigration policy. The AFL was attempting to distance itself politically from communism and socialism, which had recently been the subject of a successful revolution in Russia [Murray 2009, p. 106]. Immigrants from Eastern and Southern Europe were viewed suspiciously as potential communist agitators, presenting additional political arguments used by the AFL to oppose immigration from those regions, and to oppose the organization of immigrant workers from those areas [Briggs 2001, p. 73].

Few Congressmen were adamantly against restriction, and even their opposition weakened with successive votes. Senator Henry Lodge (R, Massachusetts) had begun lobbying for a law limiting immigration from all of Europe in 1909, but the first serious discussion on a national origins quota occurred in February, 1913. While supported by a strong sector
in the Midwest, opposition to the bill was strong enough to avoid a vote, and a similar bill as defeated in 1916.

Finally, an Emergency Quota Act was proposed in 1921, originally intended as a temporary measure in response to a poor economic climate combined with a surge of immigration in the post-WWI period. The Act would in fact be an important turning point in American immigration policy, as the quota system would be the defining characteristic of policy until the 1960s. The emergency act passed the House and Senate by overwhelming majorities, with only one dissenter in the Senate. The intensity of the post-war recession is likely to have provided a climate for these changes, in keeping with similar poor economic climates in early 1880s California and nationally in the late 1890s.

By 1924, however, the economy had recovered. Perhaps surprisingly, the Emergency Quota Act was revised in 1924 and made more restrictive. Once again, Congressional opposition was minimal, and the Immigration Act of 1924 soon became law. [FIGURE 6] The “emergency” quotas were reduced from 3 percent to 2 percent. Historians have traditionally attributed the success of this legislation to increased nativist sentiment in the wake of WWI and hostility to the growing Jewish and Italian ethnic groups [Peffer 1986, Foreman-Peck 1992].

Regression Results

[TABLE 3]

Regression results support the hypothesis that immigration has become an important element of the racial-issues NOMINATE dimension. Several votes are predicted best by this dimension, and some even with no statistically significant effect of party identification or position on the usually dominant liberal-conservative dimension. Urbanization, foreign-born proportion, immigrant growth, and party identification had no statistically significant effects on the votes: evidence for their declining importance in an increasingly ideological debate. The debate seems to be at least partly over race.

Interestingly, this was not a long debate. Support built for immigration quotas very
quickly. Only a decade before, Congress was embroiled in a long battle amongst itself and with the Presidency over the passage of a literacy test. It is very likely that supporters of the literacy act found that their policy did not achieve close to the desired deterrent effect - immigration remained historically high in 1920 [Van Nuys 2002]. Steamship operators and Jews were the target of newspaper editorials, indicating public concern for the issue was at least partly motivated by racial concerns [Foreman-Peck 1992]. By then, the United States government had made up its mind, and restriction seemed inevitable. Congressional debate about immigration became filled with rhetoric about racial purity - the official purpose of the 1924 immigration act was “to preserve the ideal of American homogeneity.”

Political entrepreneurs in the postbellum South either manufactured an opposition to immigration there or capitalized on growing anti-immigrant sentiment possibly related to racism; either way, the South became firmly ideologically anti-immigrant despite the lack of immigrants in the South. Joining with the predominantly Northern eugenicists and labor unions, the immigration restriction coalition faced few challenges for several decades – the first successful immigration liberalization vote coming in 1965.

2.5 Concluding Remarks

The history of immigration legislation in the United States seems carefully targeted at particular ethnic groups. The reasons for the shift in policy, however, are deeper than racism. Careful analysis of Congressional votes in the period of 1875-1925 shows that ideology has played a large role. This period was also a very dynamic period for Congressional ideology: the “second-dimension” of policy had shifted from a slavery-abolition dimension to a racial dimension that put the Southern U.S. firmly into the immigration-restriction camp as ideological battle lines were drawn. After capturing the South, immigration restriction faced relatively little Congressional opposition. The highest hurdle for immigration restriction was the executive branch, which vetoed the addition of a literacy test, for instance, on three separate occasions.

While data on unionization rates for this period is unavailable, the official position of
groups like the Knights of Labor and the AFL suggests correlation between support for the nascent labor movement in the United States and immigration restriction. Immigrants were mostly non-unionized and unskilled, making them a direct competitor to union interests. While Irish immigrants formed the backbone of many Northeastern unions, Jewish, Italian, and Eastern European immigrants had near-zero rates of union participation \cite{Dolan2010}. Unlike individual firms or individuals who might have benefited from immigration, organized labor had the incentives and ability to lobby for protection. Work by \cite{BoudreauxDilorenzo1993} shows a similar pattern for the development of antitrust policy in the United States, which was also strongly supported by organized labor and eventually formed one of the pillars of the new progressive political ideology.

Previous scholarship has emphasized the roles of xenophobia and nativism, labor market pressures, and the increased influence of urbanites and established immigrant communities. While previous work by economists emphasized the role of market forces, particularly Kanazawa (2005), Timmer and Williamson (1998), and Goldin (1994), roll-call data lends little support to this story. Similarly, Goldin’s (1994) contention that urbanized areas, independent of party and ideology, remained pro-immigration even as the rural south switched to restrictionism has little support in roll-call data: Congressmen from the urban Northeast did oppose restriction, but not at greater rates than Congressmen from non-urban districts with similar ideology. During the economic boom of the late 1890s, support for restriction was weaker across the board, which several economists have previously claimed or predicted \cite{Kanazawa2005,Shughart1996,Goldin1994}. NOMINATE data shows that ideology is the most consistent predictor of Congressional voting on this issue. We can only speculate on the reasons for the ideological shift: Progressive ideology became closely associated with the labor and eugenics movements, both of which were strongly anti-immigrant, at least regarding immigrants from Southern and Eastern Europe.

While immigration policy has changed much since this period, many of the issues central to the discussion then are relevant today. Fears about wage pressure, cultural assimilation,
and maintaining political institutions are still part of an ongoing immigration debate. Im-
migration restriction ultimately carried the day, and while future laws would eliminate
the racially-charged National Origins quota system, other regulations immediately took its
place. Still, economic opportunity draws residents to the United States in large numbers,
often in violation of the laws. Would-be immigration reformers should see hope in the 1890s
period, where the tide of restriction was held back by a booming economy. An expanding
economy creates a favorable climate for other good economic policies that most people do
not favor under other conditions.

Future research should expand this analysis to other countries and time periods. Ev-
idence suggests that the restriction of immigration to the United States increased immi-
gration to the United States increased immigration to other countries such as the United
Kingdom, Canada, Brazil, and Argentina [Foreman-Peck 1992]. Following the work of
Foreman-Peck (1992) and Shughart, et al (1996), attention should be given to the responses
of other countries to the policy changes in the United States. Furthermore, while the pre-
1925 period was the most dynamic period in U.S. immigration policy, a similar analysis
could extend the time frame to give a better understanding of how and why immigration
policy has evolved. While immigration is an important and understudied topic in political
economy, this analysis can be applied to a variety of issues to better understand how policy
evolves over long time periods. The facts often challenge and sometimes overturn long-held
beliefs about how people make decisions in political contexts. Economists in particular
should make more use of analysis tools like NOMINATE which enable us to quantify the
role of ideology in political decision-making for any issue.
Table 2.1: Chinese Restriction

TABLE 1: Key Votes on Chinese Immigration
Dependent Variable = Vote Favoring Restriction (absolute value t-scores in parentheses)

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<th>Date</th>
<th>Chamber</th>
<th>Vote (Yea-Nay)</th>
<th>Urbanization</th>
<th>Foreign-Born</th>
<th>Immigrant Growth</th>
<th>Democrat</th>
<th>Liberal-Conservative</th>
<th>Racial Issues</th>
<th>Adj. R-Sq.</th>
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Defeated Bills

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Figure 2.1: Limit Chinese Immigration (Page Act)
Figure 2.2: Chinese Exclusion Act
Figure 2.3: First Literacy Test (Vetoed)
Figure 2.4: Second Literacy Test (Vetoed)

Figure 2.5: Third Literacy Test (Vetoed, Veto Overridden)
Figure 2.6: National Origins Act
Table 2.2: Literacy Test

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Defeated Bills

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Table 2.3: National Origins

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TABLE 3: Key Votes on National Origins Quotas
Dependent Variable = Vote Favoring Restriction (absolute value t-scores in parentheses)

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<th>Foreign-Born</th>
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Chapter 3: Coyotes: The Industrial Organization of Human Smuggling

3.1 Introduction

According to the U.S. Department of State, human smuggling is “the facilitation, transportation, attempted transportation or illegal entry of a person or persons across an international border, in violation of one or more countries’ laws, either clandestinely or through deception, such as the use of fraudulent documents.” Importantly, human smuggling should be carefully distinguished from human trafficking, which implies coercion. Individuals voluntarily contract with human smugglers in order to evade border enforcement and assist with their transition to their new home. Smugglers often provide more than transportation, connecting their customers to social networks and jobs. Their service is essential a large proportion of the U.S. illegal immigrant stock, which was estimated at about 11 million in 2010 [Mahmoud and Trebesch 2010]. Illegal immigration now accounts for approximately half of worldwide international migration [Amin and Mattoo 2006].

The international community has classified human smuggling as a serious crime. In recent decades, many national governments of developed countries have increased their efforts to deter migrants and smugglers by imposing larger fines and penalties and increasing the number of border patrols [Angelucci 2003]. The effectiveness of deterrence efforts aimed at black market activity has received attention from economists, who have reached sometimes wildly different conclusions.

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1 Also known as “migrant smuggling” and “people smuggling”
2 Classified here as consensual transactions that do not hurt a readily identifiable party, such as illegal immigration, drug trade, gambling, prostitution, and the like.
3 A survey of the deterrence literature for victimless crimes can be found in [Miron 2003], mostly focusing on illicit drug use, and [Reyes, Johnson, and Van Swearingen 2002], which focuses on unlawful immigration.
Increased enforcement deters illegal immigration, like other illicit activities, by raising the probability of apprehension or by increasing the punishment for apprehension. Previous research into the deterrent effect reveals a range of estimates sensitive to time, place, and type of activity [Espenshade 1994, Espenshade 1995, Petros 2005, Reyes, Johnson, and Van Swearingen 2002]. Migrants will spend resources on a smuggler to reduce the probability of apprehension, or may seek crossing routes known to have lower enforcement, possibly because these crossing routes are fraught with natural dangers [Gathmann 2008]. The smugglers, called “coyotes” on the U.S.-Mexico border and “snakeheads” for migrants smuggling from China, specialize in illegal border crossing. This specialized knowledge often includes detailed information about border patrol staffing patterns or limitations, methods of detection, and alternative paths across the border. In some cases, it includes access to capital such as hidden compartments in vehicles or tunnel systems that completely bypass detection. The first coyotes operated during the 1940s when demand for migrant labor outstripped the quotas set by the Bracero program. In 1953, U.S. Border Patrol reported that they detained 1,545 persons on suspicion of people smuggling. By the 1980s, about 60 percent of successful border crossings were facilitated by a coyote (Browning et al 1985). Currently, the total value of the coyote industry is estimated at about $5 billion per year (Massey 2011). Today, over 90 percent of people who are assisted in illegally entering the United States are smuggled, rather than attempting a self-crossing [U.S. Dept. of State 2006, Gathmann 2008].

Surprisingly, human smuggling has received comparatively little attention from economists. The best empirical work on the economics of human smuggling is Gathmann (2008), which studied the effect of border enforcement spending on the price of smuggling services as reported by the Mexican Migration Project. This data is the most reliable and comprehensive extant data on illegal border crossings on the U.S. Southwestern border; I use data from this set also, updated from 2001 to 2011. This was a turbulent period in border enforcement: the number of U.S. border guards on active duty more than doubled in this period, as did the average price of border crossings. The principle finding in Gathmann’s study was that
increased spending on the border was not associated with a significant increase in prices, but did cause migrants and smugglers to substitute their old crossing routes from heavily patrolled areas into more remote, dangerous routes. In this paper, I show updated data that challenges the previous findings, and focus on another change brought on by increased enforcement: the structure of the human smuggling industry, which has changed in response to an increase in fixed operating costs of smuggling.

This paper is divided into the following sections, each representing distinct but related contributions to the literature: section 2) an up-to-date reporting on relevant facts about the human smuggling industry, such as prices, the extent of the market, resources devoted to enforcement, and other factors that affect demand for smuggling services; section 3) an economic analysis of the human smuggling industry on the U.S.-Mexico border and its changing structure in recent decades. The final section contains a summary of findings and concluding remarks.

3.2 Human Smuggling Data

3.2.1 Data Sources

The best data source for information about illegal border crossings, which I use in this paper, comes from the Mexican Migration Project. This academic project studies migration from Mexico to the United States, and includes a comprehensive annual survey. Those interviewed comprise a random sample of 200 households in Mexican communities each year since 1982. The communities represent a wide range of regions, ethnic compositions and economic conditions. After gathering social, demographic, and economic information on the household and its members, interviewers collect basic immigration information on each person’s first and last trip to the United States. From household heads and spouses, they compile detailed year-by-year labor history and migration information; in addition, for household head migrants, they administer a detailed series of questions about their last trip to the U.S., focusing on employment, earnings, and use of U.S. social services.
Following completion of the Mexican surveys, interviewers travel to destination areas in the United States to administer identical questionnaires to migrants from the same communities sampled in Mexico who have settled north of the border and no longer return home. These surveys are combined with those conducted in Mexico to generate a representative binational sample.

The questions asked in the MMP survey are extensive and notable for their willingness to ask about a range of illegal activity. In this paper we will focus on questions involving whether an illegal border crossing was attempted, what reasons were given for the decision to immigrate, and whether or not a coyote was employed. The unit of observation is an undocumented trip: legal trips are not counted. Of the 15,422 household heads in the sample, around two-thirds have never made a trip to the United States (a proportion that has stayed relatively constant for two decades).

Since its inception, the MMP survey has expanded in three stages. In 2011, MMP expanded their survey efforts from 128 communities (MMP128) to 143 communities, having previous increased from 107 communities to 128 in 2005 [FIGURE 1]. This data set contains border crossing histories of over 3000 illegal Mexican migrants. The survey has been conducted annually since 1982. The sampled communities include isolated rural towns as well as large metropolitan centers such as Mexico City.

To track enforcement efforts along the Southwestern border, the panel is linked to enforcement statistics from the Immigration and Naturalization Service and data on punishments for smugglers from the Sentencing Commission. Other data are taken from the Department of Homeland Security and Department of State. The main enforcement variable is the number of “linewatch” hours, where border patrol agents are actively monitoring the border for illegal crossings.

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4 About 10 percent of respondents did not know where they crossed, and a similar proportion did not remember how much they paid for coyote services.

3.2.2 Data Summary

[TABLE 1] contains summary statistics of illegal immigration data from the Mexican Migration Project.

Comparing self-crossers to those who employ a coyote, self crossers are older and more educated than coyote users and typically have border crossing experience. Coyotes are very frequently used on the first trip and for any migrant from small, rural communities. Self crossers are much more likely to have family already in the United States and are more likely to come from large families and have more children.

3.3 Industrial Organization of Human Smuggling

3.3.1 Demand for Smuggling Services

Factors Influencing Demand

According to Gallup polling data (Esipova 2009, 2010) which surveyed 259,942 adults in 135 countries from 2007 to 2010, 600-700 million individuals would like to immigrate permanently to another country. About 1.1 billion would like to cross borders for temporary work. The most popular destination for potential migrants is the United States, which is also the top destination for actual migrants. Estimates based on polling research suggest that between 250 and 350 thousand permanent migrants from Mexico entered the United States illegally each year in the 1990s [Angelucci 2003].

Both legal and illegal immigrants cite the opportunity for vastly higher wages as the most important factor in their decision to immigrate. The difference in wages between countries for identical workers is called the *place premium* and provides enormous incentives for migration. In their 2009 study, Clemens et al. show that the policy-induced portion of the place premium in wages represents the largest remaining price distortions in any global market. According to the authors, a conservative estimate of the welfare gain to a moderately skilled worker in the median country of their sample moving to the United States is the purchasing power parity equivalent of $10,000 per worker, per year: roughly
double income per worker in the developing world. The place premium exists for both high and low-skilled labor, but the relative difference in wages for low-skilled laborers is far greater.

Most immigrants from Mexico are unskilled laborers, and many have no family in the United States, making legal entry a virtual impossibility. The place premium for low-skilled workers from Mexico is 2.53 using 2008 wage data [Clemens, Montenegro, and Pritchett 2008], meaning that Mexican workers can expect to make over three and a half times their current wage if they can perform an identical task in the United States. This puts coyote fees into stark perspective: an increase of 17 percent in coyote fees, as observed from 1984-2004, is equivalent to about 10 days of additional labor in the United States. Immigrants also cite improved working conditions, better infrastructure, and proximity to family in their new host country as additional benefits to migration.

Most illegal immigrants rely on smugglers to help them enter the United States. MMP interview records suggest that most smuggling arrangements are made in northern Mexico, especially border towns at major bus and train depots. Parties discuss specifics such as price and desired destination; the coyote then meets a group of immigrants with similar destinations, usually at night, to make the border crossing. Usually, migrants pay half the price up front and half when the destination is reached. Often, this cost is paid by family members are friends already in the United States [Varynen 2003]. In other cases, especially since 2001, the cost is financed through debt - supplied by organized crime [Friebel and Guriev 2006, Garoupa 2007]. These debts are paid after working in the United States and earning higher income, or in other cases, by assisting with smuggling drugs, weapons, or other contraband [Varynen 2003].

From a law enforcement perspective, border control is primarily tasked with apprehending illegal immigrants. Most of the border patrol’s resources (63 percent in 1994) are devoted to paying people to monitor and patrol the border, measured in linewatch hours: hours per mile spent watching the border.

6The remaining resources are spent mostly on inspection of migrants at legal ports of entry.
7The border is 1,989 miles, crossings along this land border accounted for 97 percent (in 1998) of all
Migrant’s Decision Problem

I propose a simple model where the migrant $M$, in consideration of the probability of a successful border crossing $P(S)$ compares the expected benefit of migrating, in terms of increased wages ($\Delta W = wage_{U.S.} - wage_{Mexico}$), to the expected cost (punishment denoted as $D$), and migrates if the benefits are greater:

$$P(S) \times \Delta W > (1 - P(S)) \times D \quad (3.1)$$

Bearing in mind that $\Delta W$ is very large, migrants are willing to attempt border crossings at wide ranges of $D$. The place premium is the largest contributor to the demand for illegal border crossing; if the wage differential were not significant, low levels of enforcement and punishment would suffice.

Importantly, the migrant has many options to increase $P(S)$, such as through the hiring of a coyote or crossing at a more dangerous location with lower levels of enforcement. This probability is also the variable with the most potential for manipulation from the perspective of a migrant or border enforcer: $D$ is relatively fixed.\(^8\)

Another way which migrants can increase $P(S)$ is by taking alternative crossing routes, which often have other associated costs, such as risk of death on an unsuccessful crossing. One migrant explained the situation to an interviewer: “Since you can no longer cross the line in Tijuana, you have to go through the desert, where you have to walk three or four or six days and sometimes even more.. And in the desert, you run out of water, of food, of everything, because you can’t carry much, because of the distance. The safer routes are longer, you have to walk longer and although it’s safer it’s uglier, with more desert. And the heat is intense, and the water runs out...” [Reyes, Johnson, and Van Swearingen 2002]. While substitution from the most well-guarded crossings can decrease the probability of apprehension, it comes with its own risks, since these crossing routes

\(^8\)Since the attempted migrants are not U.S. citizens, only a few punishment options are available to border patrol. Over 98 percent of apprehended migrants admit to their illegal attempt, spend little time in the U.S., and are quickly returned to Mexico.
often present considerable physical danger.

The coyote’s ability to influence $P(S)$ will be a major contributor to the decision to hire a coyote and what price the migrant will be willing to pay. As enforcement efforts increase, *ceteris paribus*, we expect that migrants will make choices that keep their $P(S)$ constant. Ultimately, increases in linewatch hours and manpower on the border has made the coyote service invaluable to the majority of migrants. The specialized knowledge, and sometimes capital, of the coyotes enables them to have a significant degree of control over $P(S)$.

### 3.3.2 The Effect of Enforcement on Price

Given the nature of the migrant’s choice problem, increased levels of enforcement will mostly act to deter illegal border crossing attempts by increasing the price of effective coyote services. As deterrence efforts rose in the early 1980s, migrants quickly began relying on specialized agents to facilitate their crossings. Since most migrants have almost no knowledge of illegal border crossing methods or how to minimize risks involved, this should be no surprise.

[FIGURE 2] and [FIGURE 3] show linewatch hours and apprehensions and coyote prices, respectively. Visual inspection reveals an obvious correlation between coyote prices and linewatch hours; [Gathmann 2008] uses a number of methods to establish a significant and robust connection between the two. The correlation is maintained and strengthened by the data released in 2011, showing nearly yet another doubling of linewatch hours and a similarly large increase in coyote prices during the period.

The increased probability of apprehension on any trip encourages larger investments in order to get it right the first time. Between 1986 and 2010, the average number of trips taken per successful crossing in the MMP data set has decreased steadily throughout the time period from 1.6 trips to 1.21 [MMP 2011]. If enforcement increases, we should expect to see the average number of trips continue to decline.

What are we to make of this result? Border crossing location information from the MMP reveals that the proportion of migrants using available routes has changed very little
since 2001. Since migrants have several margins for increasing their probability of success, a likely possibility is that the benefits of taking alternative crossing points no longer outweigh the costs.

Previous research [Becker, Murphy, and Grossman 2004, Lopez 1998, Garoupa 2007, Gathmann 2008] suggests that the price elasticity of demand for coyotes is about -0.5, similar to estimates of elasticities for illegal drugs. Updated data, however, sheds new light on the elasticity question. In Gathmann’s 2008 study, which uses a data set ending in 2002, changes in border enforcement are positively correlated with changes in prices, but the correlation is weak and not statistically significant. Regressing smuggling price on log border enforcement (in 1000 linewatch hours) had a coefficient of 0.038 and standard deviation of 0.032. Performing the same regression with data going until 2011 reveals a much stronger correlation, with a coefficient of 0.32 and standard deviation of 0.087 (t-statistic of 3.68). This indicates that the relationship between linewatch hours and coyote prices is stronger than previously estimated.

New data does not, however, indicate a stronger relationship between the price of coyotes and the quantity demanded. Border crossings have declined since 2008, which may have more to do with the relative state of the U.S. and Mexican economies, which lowers the incentive to cross [Passel 2012]. MMP interviews of those choosing not to migrate have cited the ongoing recession as a reason not to migrate, but none mention rising coyote prices. For those determined to migrate, coyotes are still a great deal: coyote usage increased or stayed the same every year in the 2000s, with reported self-crossings in continual decline. While the border buildup of the 2000s has certainly had an effect on price, it has not had its intended effect on quantity of illegal crossings.

3.3.3 The Effect of Price on Structure

Earlier, I assumed that coyotes were able to use their specialized knowledge or other capital to raise $P(S)$. We have not, however, explored how coyotes or smuggling firms are able to translate these higher prices into better smuggling outcomes. Smugglers are able to make
investments in knowledge and capital in order to increase their odds of success: knowledge of the optimal time and place to make a crossing, capital in the form of transportation technology (such as the use of vehicles with hidden compartments, or in more extreme cases, tunnels that can completely avoid above-ground detection).

While information about black market structure is notoriously unreliable, it bears some theoretical discussion. The introduction of new fixed costs acts as a barrier for many small-time operations. Organized crime has several advantages in the smuggling market. Firstly, economies of scope play an important role as the criminal firm is able to use existing infrastructure to move people as well as other illegal goods, such as drugs and weapons. These scope economies are an important factor in the growth and success of organized crime in general, as existing investments can be repurposed for a variety of illicit activities [Becker, Murphy, and Grossman 2004, Fiorentini and Peltzman 1995]. This has been particularly important to the rise of organized crime in the United States before, when alcohol prohibition enabled criminal organizations to make fortunes from existing smuggling networks [Garoupa 2000].

Another advantage of organized crime is their ability to debt-finance crossings. Cartels act as intermediaries, financing the migration costs of wealth-constrained migrants, who enter into a type of indentured servitude to repay the debt. These debt/labor contracts are easier to enforce in the illegal than in the legal sector. Hence, when moving from the illegal to the legal sector becomes more costly for instance, because of stricter deportation policies fewer immigrants default on debt, making this sort of financing a more attractive option for the financiers. Friebel and Guriev (2006) suggest that because of this, stricter deportation policies may increase rather than decrease the flow of illegal migrants. Furthermore, their ability to use violence successfully to enforce contracts outside the scope of the state is very important, especially when crossings are financed by debt and individual crossings fetch increasingly high prices.

Until the 2000s, human smuggling operations were mostly carried about by a loose network of independent contractors [Petros 2005]. These small operations had low startup
costs: anecdotally, from interviews conducted in the MMP, the typical cost of starting a coyote business in 1986 was only $500. But in the face of a highly sophisticated, well-funded border patrol, hiring a coyote affiliated with a large criminal organization has become an increasingly attractive option for migrants. There appears to be an upper limit to the effectiveness of independent smugglers, and it is likely we have passed the threshold at which independent coyotes cease to operate efficiently.

According to interviews, migrants generally prefer not to work with organized crime. Reasons cited are increased risk of violence and a fear of being linked to other serious crimes such as drug and weapon smuggling. It is, however, difficult to argue with results, and in many cases, organized crime has become the only game in town. In 2011, U.S. Border Patrol agents spoke to news media about the rise of organized crime in the coyote business. “These smuggling organizations like to operate from dusk till dawn. They like to operate under the cover of darkness because they think they’re not going to be seen,” the agent said. “The whole smuggling organization has changed. It’s not your mom-and-pop-shop anymore. Now everything is organized crime” [Romo 2011]. Border patrol agents now use state-of-the-art technology in a control room located near the border, and are equipped with infrared technology to detect crossings at night, making the underground tunnels even more attractive. Tunnel detection technology is expensive and mostly ineffective, making the use of tunnels an incredibly reliable way to make a successful border crossing.

Criminal organizations have always dominated smuggling operations from overseas. “Snakeheads,” who smuggle people from China to the United States, are inextricably linked with groups such as the Triads, who are willing to make big investments in order to move thousands of people across the Pacific Ocean, mostly into Guatemala, where they will continue to be smuggled north, eventually across the U.S.-Mexico border [Chin 1999]. The earliest snakeheads began smuggling immigrants in the 1970s, transporting customers from Fuzhou into Hong Kong; today these transnational criminal organizations facilitate over 95 percent of the illegal immigration from China [Kyle and Koslowski 2001, Varynen 2003]. These organizations have also been pioneers in the debt-financed model of payment: in the
case of Fujian Chinese, repayment takes between half a year and four years with an average of 26 months [Chin 1999, p. 119] in 1999.

Finally, due to the high fixed costs, established cartels may find little competition for their services at any crossing area which they effectively control. According to Leeson and Rogers (2012), this means they will likely organize “flatly,” with little organizational hierarchy or attempts to violently prevent others from entering the smuggling business.

3.4 Concluding remarks

In this paper I have shown that earlier findings suggesting that enforcement has little effect on human smuggling should be re-evaluated in light of new data. While enforcement spending quadrupled between 1986 and 2004, it has nearly doubled again between 2004 and 2012. Unlike previous findings, I have found the corresponding increase in price to be relatively large in recent years. Similar to findings regarding illegal drugs [Miron 2003], I have found that demand for border crossing services is mostly inelastic. Immigrants, seeking huge increases in wages, remain willing to pay even in the face of higher costs. So long as wages in the U.S. are significantly higher than in Mexico, we should expect demand to be strong and robust to what is ultimately a relatively minor change in price. Net migration from Mexico has fallen to zero in 2012, with some estimates even showing negative net migration [Passel 2012] from Mexico, but wage differentials continue to keep demand for immigration to the U.S. high, particularly from other countries in Latin America.

The increase in prices attracts new entrants to the smuggling market. Until the 2000s, border crossing was mostly a small-time affair with relatively low knowledge and capital requirements. The build-up of border enforcement has been drastic enough to change the industry by significantly increasing the capital requirements of doing business. Large criminal organizations have a comparative advantage in the kind of highly organized, capital intensive activity now required to successfully move large numbers of immigrants across the border. Furthermore, these criminal organizations are able to act as an intermediary,
financing the migration costs of wealth-constrained immigrants. These debt and labor contracts are easier to enforce in the illegal than in the legal sector, giving large criminal firms an added advantage.

Criminal organizations have long made investments in elaborate, difficult to detect smuggling systems used to move guns, drugs, and other contraband across international lines. Using these systems is costly, especially if other individuals are gaining knowledge of their location; until the price was high enough, organized crime was not willing to use these systems to supply human smuggling services. Such networks have long been the most reliable method of smuggling from overseas locations, such as China [Schloenhardt 1999]. A fundamental finding in this paper is that the drastic increase in enforcement at the Southwestern border, and resultant increase in price, has made this an attractive option for organized crime facilitating purely land-based crossings as well. If current trends continue, organized crime may be involved in a much larger proportion of migration activities, often bringing customers in to other illegal activities in order to finance their journeys.

The main contribution of this paper has been to highlight this unintended consequence of enforcement. While previous research has cast doubt on the efficacy of deterrence efforts, I argue that the border build-up has reduced immigration, although perhaps at great cost. Because the border build-up has directed resources to violent criminal organizations who have a comparative advantage in large-scale smuggling operations, the unintended consequences of these laws should be closely considered.
### Table 3.1: Descriptive Statistics

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<thead>
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<th>Mean</th>
<th>S.D.</th>
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</thead>
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<tr>
<td>Age</td>
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<tr>
<td>Education</td>
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<td>3.18</td>
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<tr>
<td>Duration of US Trip (Months)</td>
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<td>Working in Agriculture</td>
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<tr>
<td>Hourly Wage in US$ (Mexico)</td>
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<td>1.35</td>
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<tr>
<td>Hourly Wage in US$ (US)</td>
<td>4.03</td>
<td>0.98</td>
</tr>
</tbody>
</table>

### Figure 3.1: Mexican Migration Project

MMP143

*Available to the public (MMP143)*
Figure 3.2: Linewatch Hours

U.S. Border Patrol: Linewatch hours by Fiscal Year, 2002-2011

Figure 3.3: Coyote Prices

Coyote Prices

Price

Year


Curriculum Vitae

Zachary Gochenour received a Bachelor of Arts degree in Mathematics and a Bachelor of Science degree in Economics from George Mason University in 2005. He returned to George Mason University in 2010 and earned a Master of Arts in Economics in 2012. After completing his Ph.D. in Economics at George Mason University in 2014, he will begin working as an Assistant Professor of Economics at Western Carolina University.