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RACISM, XENOPHOBIA OR MARKETS? THE POLITICAL ECONOMY OF IMMIGRATION POLICY PRIOR TO THE THIRTIES

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ABSTRACT

Contrary to conventional wisdom, the doors did not suddenly slam shut on American immigrants when Congress passed the Emergency Quota Act of May 1921. Rather, the United States started imposing restrictions a half century earlier. Argentina, Australia, Brazil, and Canada enacted similar measures, although the anti-immigration policy drift often took the form of an enormous drop in (or even the disappearance of) large immigrant subsidies. Contrary to conventional wisdom, there wasn't simply one big regime switch around World War I. What explains immigration policy between 1860-1930? This paper identifies the fundamentals that underlay the formation of immigration policy, distinguishes between the impact of these long run fundamentals and short run timing, and clarifies the difference between market and non-market forces. The key bottom line is this: Over the long haul, immigrant countries tried to maintain the relative economic position of unskilled labor, compared with skilled labor, landowner and industrialist. The morals for the present are obvious.

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Racism, Xenophobia or Markets?
The Political Economy of Immigration Policy Prior to the Thirties

After the 1880s, there was a gradual closing of New World doors to immigrants. The words that matter here are gradual and New World. Contrary to what American history textbooks may suggest, the doors did not suddenly and without warning slam shut on American immigrants when the United States Congress overrode President Wilson's veto of the immigrant literacy test in February 1917 or when it passed the Emergency Quota Act of May 1921. Not too long after the Civil War, a half-century prior to the Literacy Act, the United States started imposing restrictions on what had been free immigration. The United States was hardly alone. Argentina, Australia, Brazil, and Canada enacted similar measures, although the timing was different, and the policies often took the form of an enormous drop in (or even disappearance of) large subsidies for immigration rather than of outright exclusion. In short, there was considerable variance in immigration policy across these five countries and over the half century. Contrary to the conventional wisdom, there was not simply one big regime switch around the time of World War I.

What was true of immigration policy was also true of trade policy. Globalization proceeded in fits and starts after 1846 when Britain repealed the Corn Laws and started a liberal trend towards free trade. In the late-nineteenth century, enormous declines in international transport costs precipitated the first great globalization boom. It took the form of mass migrations, a trade boom, and international capital flows at (relative) levels never reached before or since, and it helped induce economic convergence (Williamson 1996a). The liberal trend did not last long, however. There was a globalization backlash. Tariffs started to rise on the European continent. Immigration and trade restrictions emerged in the New World. With the end of World War I, the world economy plunged into a dark age of

de-globalization and policy antagonism towards the mobility of goods and factors. The long interwar period of darkness was followed by a liberal renaissance. Globalization, convergence, and more liberal policy have been on the rise ever since 1945, especially since the early 1970s.

What explains a change in immigration policy? The answer ought to be consistent with the correlations invoked in the previous paragraph, but a number of candidates have been nominated: increasing racism, xenophobia, widening ethnicity gaps between previous and current immigrants, more immigrants, lower-quality immigrants, the threat of even lower-quality immigrants, crowded-out native unskilled workers, rising inequality, greater awareness of that inequality by the powerful, and greater voting power in the hands of those hurt most--the working poor. There have, however, been few attempts to introduce these underlying, long-run fundamentals into explicit models of policy formation. We have already discussed the exceptions to this generalization in the survey by Timmer and Williamson (1995), and we start this paper by stripping that survey down to what we think is relevant to our empirical attack here on a newly-constructed panel data set.

The goal of this abridged survey is to identify the fundamentals that might underlie changes in immigration policy, to distinguish between the impact of these long-run fundamentals and the determinants of short-run timing, to clarify the differences between market and non-market influences, and to look at the tools others have used to assess these influences. The literature on immigration policy is not nearly as mature as the parallel literature on trade policy, but we hope to exploit a few connections between the two.

The Theory of Political Economy

The "new" political economy attempts to make positive predictions about the interaction between political institutions and the marketplace. This interaction has its roots in two schools of thought. The social choice school, following Kenneth Arrow (1963), looks for equilibrium policies that are relatively free of any particular institutional framework. The school analyzes various rules for aggregating the preferences of individuals into a social welfare function. An elegant median-voter result under majority rule has emerged. Political economy models that use a majority-voting framework have proliferated, especially those confronting politically-driven business cycles and growth.[1]

The public choice school, founded by James Buchanan (Buchanan and Tullock 1962), explicitly addresses the nature of political institutions, political agents, and multidimensional policy goals. The basic premise of the public choice school is that politicians do exist and they rationally maximize their own utility functions. These utility functions include preferences for money and power, and thus they might not reflect the preferences of the majority. The public choice school recognizes that few decisions are made by majority vote of the electorate. Rather, politicians and bureaucrats control the agenda and often make decisions unilaterally. Those who are in a position to give political agents the power and money they want are able to influence policy in their favor. These have come to be called "pressure groups." In general, pressure group models define a policy equilibrium where the political agent maximizes his utility, subject to the constraints imposed by the various interest groups and perhaps the public at large.[2]

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[1] See Persson and Tabellini (1994) for a survey.

[2] Pressure group theory has developed in tandem with the theory of "rent-seeking," as first elaborated by Tullock (1967) and formalized by Krueger (1974). Pressure group models are an ideal way to think about rent-seeking; conversely, potential rents are an ideal way to define an interest group.

Each of these approaches to political economy has benefits and shortcomings. Median-voter models require a single policy dimension, and single-peaked preferences along that dimension, in order to guarantee an equilibrium. When policies are redistributive, it cannot be guaranteed that preferences are single-peaked. The pressure-group model requires more detail about the parties involved, and it therefore lacks the elegant simplicity of the median-voter model. Models with their origins in the public choice school seem more promising as explanations for policy differences across countries in the pre-1930s, and even over time. After all, these countries were undergoing political liberalism and more inclusive suffrage, albeit some much faster than others. Yet, to introduce political institutions is to create difficulties in making comparisions across countries. For example, Canada chose to give the power to adjust immigration quotas to bureaucrats, whereas the United States set quotas which could be changed only by legislative vote (Green 1995). Canada's policy was to set quotas on the basis of individual industries, substantially reducing the free-riding problem for those lobbies. In the United States, legislators set quotas by country of origin, so that no one industry stood to gain much by lobbying for a quota change.

In what follows, we take an eclectic view of this debate. Our interest is to identify which market and non-market forces mattered, rather than to explore the mechanisms by which they were translated into policy. Indeed, we are much more interested in community attitudes towards those forces than in the actual impact of the policies implemented.

Immigration Policy: Searching for Hypotheses

There is a general consensus in the literature that immigration policy has always been sensitive to labor market conditions.[3] At the same time, immigration flows themselves have always been sensitive to wage differentials between countries and unemployment rates. For example, Claudia Goldin (1994) notes that in the United States in the late 1890s, during a time of economic recession and high unemployment, there was a new push for immigration restrictions. At that time, however, the rate of immigration slowed dramatically, reaching a low in 1897, the same year that the first vote on immigration restriction was taken in the House of Representatives. Similarly, Australian inflows dropped sharply in the recession of the 1890s when attitudes towards immigrant subsidies hardened (Pope and Withers 1994). These concurrences would seem to suggest that the impetus to restrict immigration was far more sensitive to labor market conditions than to immigration levels.

On the other hand, the ethnic composition of immigrants is clearly a factor in the politics of restriction. Australia maintained a strict policy aimed at keeping the country one of British and Irish descent, and certainly not "yellow" (Pope and Withers 1994). The United States completely banned immigrants from China in 1882 and immigrants from all of Asia in 1917 (Green 1995). In the United States, increasing demands for restriction in the 1880s and 1900s paralleled an increase in the relative numbers of immigrants from southern, central, and eastern Europe, the so-called "new" immigrants. The world labor market was by 1890 almost completely segmented into what economists today would call "North" and "South" (Lewis 1978; Taylor 1994; Hatton and Williamson 1994). Because of this segmentation, it is unclear whether these policy goals were a result of racism and

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[3] After World War II, a focus on human rights developed; most Western countries changed their immigration policies to provide for special consideration of political and economic refugees. Prior to the 1930s, such classifications did not exist.

xenophobia or whether ethnic origin merely served to signal, however imperfectly, the human capital content or "quality" of the immigrants (Foreman-Peck 1992).

Three Models of Immigration Policy

As James Foreman-Peck (1992) notes, two questions for any model of policy formation are: Who gains and who loses? Who decides the policy? There is a clear consensus regarding the first question. Wage earners--unskilled workers in particular--lose with immigration, as the labor pool swells and wages sag. Owners of other factors of production--land, capital, and perhaps even skills--gain from the more abundant unskilled labor supply that makes these other factors more productive. Having said this, two caveats deserve stress. While most attempts to measure the impact of immigration on wages have found that wages were downwardly sensitive to immigration (Williamson 1974; Taylor and Williamson 1997; Green 1994; Goldin 1994; Hatton and Williamson 1995; Williamson 1996a), one study, of Australia, found that wages actually increased with immigration, if only marginally (Pope and Withers 1994). This perverse result can emerge if immigrants augment labor demand enough to offset their impact on increased labor supply (for example, by working previously unsettled land or by inducing an accumulation response). If labor demand keeps pace with labor supply, it looks as though native labor is not hurt by immigration. The problem for us and the voters, however, is to distinguish between labor demand conditions that are dependent on the immigrants and those that are not. Under conditions of sagging wages, policy might still be used to keep out immigrants even if their presence had nothing to do with the deteriorating labor-market conditions.

The issue of unemployment has not really been examined in the context of immigration policy. Suppose wages are sticky downwards and unrelated to the size of the unemployment pool, perhaps for efficiency reasons or "fairness." Immigration in this case

will not have any effect on wages, but it will add to the unemployed, all the more so if new immigrants are last hired and first fired (Hatton and Williamson 1995). No one benefits. Capitalists do not gain by a fall in wages, nor do the unemployed gain. In addition, unemployed workers tend to express their discontent by strikes and street violence. Eventually, both sides might unite in favor of immigration restrictions. Goldin (1994) suggests that this aligning of interests is exactly what happened in the United States during the 1890s.

On the other hand, "guestworker" effects should minimize the impact of an economic downturn on native unemployment, as recent (but now jobless) immigrants return home--that is, immigrants do voluntarily what policy aims to do.[4] While this argument was used to justify postwar European guestworker policies, and while it was certainly present in the United States in the 1890s, the "guestworker" effect failed to work with any quantitative muscle during that critical decade (Hatton and Williamson 1995).

These caveats aside, most discussions of the politics of immigration assume that the interests of capital and labor are divided. Foreman-Peck (1992) argues that land ownership might have mattered too, especially in the late-nineteenth century when agriculture was still a big sector. Foreman-Peck takes the following approach. Assume that the individuals receive their incomes primarily from one source: wage earnings, capital income, or land rents. Depending on the franchise, the government maximizes the following weighted objective function:

[4] Immigrants do it even better, of course. A policy of immigrant exclusion can do no better than reducing the net inflow to zero. Voluntary return migration can drive up emigration rates to levels high enough to make net inflows negative.

$$\max_{L_2} \quad V = \alpha w_1 + \beta\pi + (1 - \alpha - \beta)r$$
$$s.t. \quad Q = f(L_1, L_2, T, K)$$
$$\alpha f_{L1L2} + \beta f_{KL2} + (1 - \alpha - \beta) f_{TL2} - f_{L2} = 0$$

where L_1 and L_2 are, respectively, native and immigrant labor. Note that the return to immigrant labor, w_2, is excluded from the objective function. Output is subject to the constraints of the production function, and the critical question is this: are immigrant and native labor complements or substitutes? Estimating a trans-log production function, Foreman-Peck concludes that they were substitutes in the late-nineteenth century U.S. economy. Thus, the larger the weight on labor interests, α, the more restrictive the immigration policy. The reverse is true as the political system attaches larger weights on capital or land.

Foreman-Peck allows for the possibility of two types of immigrant labor: skilled and unskilled. It might be that skilled immigrant labor was a complement to domestic labor, whereas unskilled immigrant labor was a substitute. We would then expect to see a policy that encouraged immigration of skilled workers and discouraged unskilled ones. Foreman-Peck argues that this concern, and not any racism or xenophobia, was responsible for policies in the Americas that restricted Asian immigrants and for South Africa's policy toward African immigrants.

Although Foreman-Peck does not implement a formal empirical test, his discussion of Argentina, Britain, South Africa, and the United States indicates that some of the facts are consistent with his theory. For example, landed interests were largely in control of Argentina's policy, and the government offered generous immigration subsidies to attract farm laborers from the Mediterranean Basin. In contrast, the United States had a more universal franchise, rejected subsidies, and gradually closed the door as the frontier itself was closed (by 1890, or so said the Census Commissioner at that time).

Goldin (1994) takes a different approach. Following a long tradition in American historiography that has focused on "sectional interests," Goldin looks at regional splits and rural-urban differences in a way consistent with a median-voter model. Although she does not model the relationship formally, she assumes that individual Senators and Representatives pursue policies that favor their constituents, in proportion to the numbers represented by each urban, rural, and regional interest group. The passage of the literacy test, which was first attempted in 1897 and was finally successful in 1917, seems to have been the result of two (often opposing) forces: demographic changes, and changes of heart. The changes of heart were many. Goldin suggests that capitalists were for the first time aligned with labor in opposing immigration during the recessionary years of the 1890s (for reasons we have already conjectured). Later, capital would shift back to its pro-immigration stance, but the South would shift to an anti-immigration stance, probably a change of heart motivated by the urge to protect its relative population share, since few immigrants ended up in the South. Finally, the northern Midwest, fairly pro-immigration in the 1890s, would undergo an anti-immigration switch following World War I. Goldin argues that this was mostly a change of heart by older immigrant groups, pushed to patriotism by the war.

Where does demographic change enter the story? As the South and northern Midwest were shifting to anti-immigration positions, cities were becoming increasingly pro-immigration. Goldin finds that the probability that a legislator would vote for immigration restrictions was strongly negatively related to the proportion of foreign-born in the district and was also negatively related to the level of urbanization. This relationship suggests that efforts to reunify families were operating in the cities, or, alternatively, that there were only small differences in the ethnic make-up of resident stocks and new immigrant flows. In

any case, cities were on the rise, and thus pro-immigration urban interests increasingly made themselves heard.

More important than either of these non-market forces, however, was the impact of increasing immigration on wages and the subsequent effect on votes. Especially after the turn of the century, Goldin finds a significant negative impact of immigration on wages, a result consistent with other historical studies. The change in real wages is, in turn, a significant explanatory variable in accounting for the Congressional vote to override the presidential veto of the literacy test in 1915. The higher the growth in wages, the less likely was the representative to vote for an override (and thus for restriction). At the same time, the higher the proportional increase in the foreign-born population, the more likely was the congressman to vote for an override (and thus for restriction). But large, established communities of immigrants had the reverse effect. Once a district attained a foreign-born population of about one-third of the total in the district, there was almost no chance that the representative would support restrictions on immigration.

The two important elements of Goldin's model for our cross-country study are the role of changing wages on policy and the evidence that confirms that immigrants influenced wages. All that is really required, however, is that politicians and their constituents *believed* that immigration retarded wage advance. It appears that they did.

William Shughart, Robert Tollison, and Mwangi Kimenyi (1986) offer a model of the shifting degrees of enforcement of immigration restrictions over business cycles. The model would apply readily to changes in policy as well. The basic premise is that politicians try to maximize votes by catering to different interest groups. Workers want high wages, and they pressure politicians to enforce immigration restrictions. Capitalists and landowners want lower wages in order to raise rents and profits, and they try to reduce enforcement. As the economy goes through business cycles, the ideal policy mix shifts,

resulting in changes in the degree of enforcement against immigration. The authors test their model empirically on data from the United States from 1900 to 1982, using two alternative measures of the degree of enforcement. The explanatory variables include three alternative measures of economic well-being: unemployment, real wages, and real GNP. The authors' results are supportive of the model. Even taking into account official changes in immigration policy, the size of the enforcement budget, and the party in the White House, the degree of enforcement is significantly, and negatively, related to real GNP. Unemployment and the real wage were also significant explanators, but not so consistently as real GNP. Had Shughart, *et al.*, looked at U.S. policy towards indentured labor contracts prior to 1900, they would have seen the same correlation: harsh policy during slumps; soft policy during booms.

The models of immigration policy built by Foreman-Peck, Goldin, and Shughart, *et al.*, are the only ones that offer empirical support for their theories.[5] These models focus on the *absolute* gains and losses associated with some given immigration policy, however. What about *relative* gains and losses? What about income distribution?

The Politics of Income Distribution

Economists have recently awakened to the fact that migration can create more inequality in the receiving country and, perhaps, lessen inequality in the sending country. In only a short time, the empirical literature on this issue has grown to enormous proportions, perhaps because the consequences of immigration have been given renewed emphasis on the American political scene. The debate began over the impact of

[5] Jess Benhabib (forthcoming) takes the median-voter approach, allowing individuals to earn both labor and capital income in the spirit of the growth model of Alesina and Rodrik (1994); voters determine the amount of capital that immigrants must bring with them in order to be admitted. The model is an attempt to look at the dynamics of policy implications, and it gets very complicated. Perhaps for that reason, Benhabib does not test the model empirically.

immigration in the United States (Borjas 1994), expanded to consider European immigration (Freeman 1995), and spilled over into emigration from developing countries (Wood 1994). The distributional impact of migration has even been confirmed for the late-nineteenth century--that is, inequality increased in the receiving countries, and inequality decreased in the sending countries (Williamson 1996b).

Rational and farsighted voters will consider the impact of immigration on future economic growth. A labor-scarce country will do better to allow immigration than to allow the export of capital, thus becoming larger rather than smaller (Cheng and Wong 1990). But if immigration induces greater inequality, and inequality in turn inhibits economic growth (a rejection of the more traditional Smithian trade-off), additional immigrants might not foster faster growth. If a country lets its median voter become too poor, that individual might vote for distortionary redistributive policies that can slow growth.

What are the facts? Does inequality speed up or retard growth?[6] While economists do not yet have a clear answer, citizens might vote for restriction on immigration simply because they dislike the increased inequality in their social environment and the lower living standards of their unskilled neighbors. Alternatively, changes in income distribution might tip the balance of political power among competing interest groups, leading to policy change (Timmer, 1996).

[6] Perotti (1996) attempts to answer this empirical question.

Links to the Literature on Trade Policy

The literature on the political economy of migration policy is recent and small, whereas the related literature on the political economy of trade policy is mature and large. Trade theorists have been puzzled for a long time by the widespread use of protectionist policies when free trade is usually welfare-maximizing. By adding politicians, interest groups, and distributional matters to the theory, models of "endogenous tariffs" have flourished.

As Wong (1983) has noted, trade and immigration policies have an historical symmetry. Trade policy might seek to protect wages in labor-intensive industries by restricting imports of goods made with cheap labor. Immigration policy might seek to protect wages by restricting growth in the labor pool. While free trade can be a partial substitute for free migration, we expect open trade policy and open immigration policy to go hand in hand.[7]

Who are the interest groups in trade theory? In the short run, when factors are assumed to be relatively immobile, protection of a given industry (like textiles or steel) benefits both capital and labor in that sector. As prices rise, the marginal value product of all factor inputs rises, raising wages and profits. In the long run, when capital and labor have had time to reallocate, protection helps the scarce factor (labor in countries of net immigration) as long as import-competing industries use relatively more of the scarce factor. Most models of trade policy take the short-run approach, focusing on the pressure from specific industries, although some of the empirical tests focus on the long-run importance of factor endowments.

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[7] Heckscher, Ohlin, Stolper, and Samuelson explored this substitution long ago (Flam and Flanders 1991; Stolper and Samuelson 1941).

Magee, Brock, and Young (1989) present some empirical evidence for the United States from 1900 to 1988 that confronts the long-run issues. As capital per worker rose after World War II, tariff levels fell, but any long-run change in the terms of trade was not significant. To complement these findings, the authors run regressions to test short-run predictions of their model. They propose that the median voter opposes protectionist policies but is unlikely to vote unless "roused out of his normal stupor" by high inflation. On the other hand, rising unemployment weakens the voter's hostility toward protection. Their empirical results tend to support these hypotheses. Changes in tariffs are significantly and positively related to changes in unemployment and negatively related to changes in the inflation rate.[8]

Marvel and Ray (1983) also provide empirical support for the pressure-group approach. They look at the ability of United States industries to resist tariff reductions in the Kennedy Round of GATT negotiations. Among other things, they hypothesize that industries with higher concentration ratios (and therefore less of a free-rider problem) will be able to fight off tariff reductions, as will industries whose outputs are consumer products rather than industrial inputs, since consumer groups are theoretically the weaker political actors compared with industry groups. They find that both variables are significant (and of the correct sign) in predicting tariff levels after the Kennedy Round.

We have offered only a small window on a very large literature, but it should be large enough to see the obvious parallels between the literature on endogenous tariffs and that on immigration policy. The concepts and paradigms are similar. The important point is that trade policy can undo what immigration policy does. Thus, we expect consistency between them--unless, of course, immigration policy is driven entirely by non-economic

[8] Unfortunately, U.S. tariffs are also significantly lower under a Democratic administration, adversely affecting workers. Because Democrats are the pro-labor party in the *Magee, et al.*, model, this result does not fit with their theory.

concerns. Policies towards the mobility of international capital can also undo the effect of immigration policy, but political-economy models have yet to look at these general-equilibrium effects.

A Menu of Hypotheses

This brief review of the literature offers several promising hypotheses, which we organize here around a set of explanatory variables.[9]

First, immigration policy might respond to either the quantity or the quality of immigration, or both. The size of the immigrant flow as a share of the native labor force is one obvious candidate, although the experience of the 1890s has already suggested that net labor market conditions might have mattered far more. The quality of the immigrants is another candidate, measured in comparison with the native labor force. The vast majority of the immigrants came from and entered unskilled jobs. Some had good health, high levels of literacy, numeracy, on-the-job training, and considerable exposure to work discipline. Other immigrants did not. Quality and quantity are highly correlated prior to World War I. The switch of emigrant source from higher-wage to lower-wage areas of Europe correlated with the rise in immigration rates. It is likely that these two effects reinforced each other in their impact on policy. A variable that combines the *rising* quantity of immigration with the falling quality might do better than the two measures of quantity and quality in competition with each other.

Second, immigration policy might respond to labor market conditions. This likely possibility can be sharpened by distinguishing between short-run and long-run influences. Unemployment, wage growth, or more aggregative indicators should serve to isolate the role of business cycles, trade crises, world price shocks, and other short-run events that

[9] The details of and sources for the variables themselves can be found in Appendix A.

might influence the timing of immigration policy. In addition, the use of lagged dependent variables should help identify just how slowly policy responds even to long-run fundamentals.

We expect the fundamentals to be captured by real unskilled wages--a measure of absolute performance--or the behavior of unskilled wages relative to incomes of the average citizen--a measure of relative performance. The latter offers a measure of inequality that gauges the unskilled worker's economic performance against that of the average, and it is a measure that the politician and the voters could most easily see and understand. Neither measure asserts that immigration was the key force driving the living standards of the working poor in the New World. Both require only that the politicians and voters *believed* that immigration was a powerful influence on the living standards of the working poor. Whether it was the absolute or the relative performance that mattered is an empirical issue.

Third, immigration policy must have been influenced by other policies. In particular, did governments pursue consistently liberal or restrictive policies regarding migration and commodity trade? Or did they pursue policies, intentionally or not, that offset each other? If the goals of such policies were to differentially affect the economic condition of certain groups, we would expect to see consistency across the policy dimensions.

Fourth, what non-market forces remain after controlling for these market forces? After controlling for immigrant quality, did racism have an independent influence? Did differences in ethnicity matter? Did the population have less sympathy for free immigration if new immigrants were not of their own ethnic origin? Informed by increasingly strident social reformers, did voters and politicians become more aware of inequality, thus sparking a change in political response to market events? Did the political response to market events change as the working poor found their political power increasing?

Quantifying Immigration Policy

The first step towards answering these questions is to assess the immigration policies themselves. Despite universal openness to immigration in the 1860s, the doors to the New World were effectively closed by 1930. The policy evolution varied widely over those seven decades. The United States exhibited a steady drift away from free immigration. Brazil remained open much longer, suddenly slamming the door shut in the 1920s. Canada reversed the trend more than once over the period.

We have designed a policy index in order to assess the various hypotheses that might have driven a change in policy--among them, wages of unskilled workers, trends in inequality, the size or quality of immigration flows, the state of the macroeconomy, and ethnic concerns. The index uses a scale of +5 to -5, with a positive score denoting a pro-immigration policy. The methods used to construct the index can be found in Appendix B.

Policies can be gauged by their intent or their impact. Although most models of policy formation do not make the distinction, we recognize that policy has two functions: first, to signal to groups that their interests are being tended to; and, second, to change the *status quo*. The first function does not necessarily depend on the actual change in immigration that followed a change in policy. It is clear that political agents were *trying* to affect the flow of immigrants and to respond to their constituencies, despite often ineffective results.[10] The goal here is to capture this sentiment, or political signal. Still, we shall try to ignore political rhetoric or other noncommittal attempts to win support of various interest groups.

[10] Immigration policy often seems to have responded to conditions that were no longer current, and in many cases policy was not effective in changing the patterns of immigration.

Empirical Tests

Our questions address long-run relationships. Although we look at annual data for the individual countries, most of our analysis uses panel data consisting of five-year averages of the variables. The panel includes observations for Argentina, Australia, Brazil, Canada, and the United States from 1860 to 1930. Five-year averages serve to minimize year-to-year variance and the measurement error inherent in the annual data. Unlike Goldin (1994), who explored the *timing* of policy changes in the United States, we are looking for the underlying fundamentals dictating policy choices. We hope to determine if there was a similar reaction to rising immigrant flows in all countries in the New World and to sort out whether policy was driven in the long run by market conditions rather than ethnic concerns.

The next step was to use annual time-series data to look for patterns in individual countries. The results generally confirmed those found in the panel data. However, the relative impact of each explanatory variable often differs across countries.

The country-specific equations allow us to quantify the importance of market and/or non-market conditions in driving changes in policy. Following the literature on economic growth, we do "policy accounting." Each country had at least one critical period for immigration policy on which we focus our attention. Did Brazil close its doors to immigrants in the 1920s because of rising inequality? Was the literacy test in the United States really the result of changes in the ethnic composition of the immigrants?

Panel Data

The regressions using panel data reveal some consistent effects across time and across countries (see Table 1). The most consistent result is that policy is slow to change. Even with five-year averages, the lagged dependent variable (POLICY, our index of immigration policy) is highly significant and has a large value. Nonetheless, even highly

path-dependent policy is influenced by other factors. After sorting through all the variables in the equations, the most pervasive result is that policy is sensitive to the labor-market performance of native and immigrant unskilled workers, both in relation to others in the country and in relation to expected would-be immigrants.[11]

Political Effects. Surprisingly, the political environment was insignificant for policy change. There is no evidence that different political institutions and franchises affect the degree and direction of policy change in any systematic way. The two measures of political openness--DEMOC, the ten-point index of democratic characteristics constructed by Gurr (1991), and PARCOM, Gurr's measure of competitivenes of political participation--are both significant in explaining the *level* of the policy index, but they are not important in explaining a policy shift once fixed effects are used.[12] The nature of the political system is not unimportant in explaining variation in immigration policy across countries, but it explains little of the changes in policy over time. Perhaps the variables did not prove useful because there was no significant political change during the time period in question.

Immigration Effects. Two variables measure the labor market effects of immigration. IMWAGE, the wages of unskilled workers in the source countries, is a proxy for the quality, or human capital content, of the immigrants. THREAT, the measure of the threat to native labor, includes both quantity and quality effects (see Appendix A). Both variables are consistently significant, but the coefficient for IMWAGE has the wrong sign.

The other two measures of immigration--the percentage of the population that is foreign-born (FORPOP) and the difference in ethnic composition between the current immigration flow and the foreign-born population (GAP)--seem to have no bearing on

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[11] All the of methodology and sources of the variables are in Appendices A and B.

[12] Only the regressions using fixed effects are reported here because the economic data are indexed to 1900. These data cannot be used to explain levels, only the change over time.

Table 1. Results from the Regressions on Panel Data

Pooled LS // Dependent Variable is POLICY		Sample: 1866-70 to 1926-30		
Variable	1	2	3	4
		(t-statistics in parentheses)		
POLICY(-1)	0.744***	0.822***	0.819***	0.809***
	(4.292)	(9.489)	(9.703)	(9.744)
WTOY(-1)	0.019**	0.014**	0.013**	0.015***
	(2.484)	(2.142)	(2.188)	(2.646)
WAGER(-1)	-0.001	0.002	0.003	0.005
	(-0.123)	(0.301)	(0.327)	(0.637)
WGRR	-7.294	-4.356	-4.488	
	(-1.256)	(-0.936)	(-0.987)	
UNEMP2	0.019*	0.012	0.012	0.009
	(1.950)	(1.539)	(1.606)	(1.242)
YPCGRR	-6.844	-4.308	-4.225	
	(-1.475)	(-1.079)	(-1.083)	
XMTOY	0.000	0.006	0.006	0.005
	(-0.025)	(0.923)	(0.935)	(0.800)
D(XMTOY)	0.004			
	(0.586)			
FORPOP(-1)	-2.993	0.649		
	(-0.483)	(0.349)		
GAP(-1)	-1.519	0.126		
	(-0.701)	(0.080)		
D(GAP)	-1.314			
	(-0.774)			
IMWAGE(-1)	-0.030	-0.026	-0.029*	-0.028*
	(-1.385)	(-1.503)	(-1.964)	(-1.896)
THREAT(-1)	-1.362**	-1.053***	-1.029***	-0.847**
	(-2.574)	(-2.819)	(-2.887)	(-2.573)
D(THREAT)	0.065			
	(0.144)			
DEMOC	-0.180			
	(-0.571)			
PARCOM	0.492			
	(0.972)			
Fixed Effects				
AR--C	1.172	-0.060	0.270	-0.338
AU--C	2.132	0.751	1.229	0.713
BR--C	-0.454	-0.907	-0.635	-1.195
CA--C	2.074	0.234	0.636	-0.128
US--C	0.135	-0.755	-0.399	-1.061
Total panel observations	56	64	64	64
R-squared	0.896	0.872	0.871	0.867
Adjusted R-squared	0.837	0.832	0.838	0.839
S.E. of regression	0.949	0.930	0.912	0.911
Durbin-Watson stat	1.539	1.404	1.396	1.421
F-statistic	20.103	32.630	42.362	56.377
Probablity (F-stat)	0.000	0.000	0.000	0.000

Table 1 (continued)

Pooled LS // Dependent Variable is POLICY			Sample: 1866-70 to 1926-30				
Variable	5	6	7	8	9	10	11
			(t-statistics in parentheses)				
POLICY(-1)	0.788***	0.815***	0.805***	0.842***	0.901***	0.808***	0.837***
	(10.371)	(10.970)	(10.984)	(11.472)	(11.596)	(10.488)	(12.118)
WTOY(-1)	0.015**	0.013**	0.015***	0.012**	0.004	0.001	
	(2.599)	(2.286)	(3.016)	(2.169)	(0.594)	(0.178)	
WAGER(-1)						-0.013*	-0.011*
						(-1.894)	(-1.960)
UNEMP2	0.010				-0.225	0.000	
	(1.428)				(-1.026)	(0.061)	
XMTOY	0.005	0.006		0.011*	0.006		
	(0.714)	(0.886)		(1.854)	(1.085)		
IMWAGE(-1)	-0.025*	-0.022	-0.028**				
	(-1.796)	(-1.602)	(-2.310)				
THREAT(-1)	-0.775**	-0.748**	-0.721**	-0.636**			
	(-2.521)	(-2.416)	(-2.343)	(-2.078)			
IMRATE(-1)					-43.660***	-40.214**	-41.434***
					(-2.748)	(-2.551)	(-2.872)
IMWREL(-1)					-0.017***	-0.019***	-0.019***
					(-3.240)	(-3.560)	(-4.969)
Fixed Effects							
AR--C	-0.049	-0.182	0.528	-1.868	0.756	2.722	2.638
AU--C	1.007	0.823	1.571	-1.329	1.050	3.130	3.015
BR--C	-0.684	-0.774	-0.147	-2.342	0.797	3.395	3.192
CA--C	0.216	0.123	0.826	-2.000	0.576	2.838	2.778
US--C	-0.754	-0.772	-0.127	-2.661	-0.345	1.622	1.615
Total panel obs.	64	64	64	64	64	64	66
R-squared	0.866	0.861	0.859	0.854	0.876	0.878	0.875
Adjusted R-squared	0.840	0.837	0.838	0.833	0.853	0.855	0.857
S.E. of regression	0.906	0.914	0.913	0.927	0.870	0.864	0.847
Durbin-Watson stat	1.412	1.324	1.327	1.330	1.473	1.320	1.362
F-statistic	68.337	83.306	111.249	107.170	74.950	76.153	132.673
Prob(F-statistic)	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Note: *** indicates significance at the .01 level; ** the .05 level, * the .1 level.

policy. Contrary to the conventional wisdom, we do not find that immigration restrictions stemmed from a rising gap between the ethnic source of "old" and "new" immigrants, nor from expanding immigrant ghettoes.

Macroeconomic Effects. Measures of current macroeconomic conditions--real wage growth (WGRR), growth in real GDP per capita (YPCGGR), and unemployment (UNEMP2)--are also of little help in accounting for long-run policy changes. Each consistently records the wrong sign, and none is significant. Despite a literature that supports their influence on short-run timing, there is no evidence here that these factors contributed to policy formation in the long run. By averaging the data into five-year periods, all the year-to-year cyclical behavior of these variables has been removed, eliminating the possibility for these short-run effects to emerge. The only effects captured would be more fundamental shifts in long-run economic performance.

Real Wage Effects. Real wages (WAGER) do not show the empirical importance they are often assigned in the literature. In the absence of measures of relative income (equation 11), real wages have the wrong impact on policy. High wages are associated with restrictive policy, low wages with open policy. This perverse sign is not the result of confused causality, since causality tests strongly reject the view that tighter policy was effective in raising wages.[13] When relative wages (WTOY, the ratio of unskilled wages to per capita GDP) are included in the equation, real wages have no significance at all (equations 1-4).

Trade Policy Effects. The measure of openness to trade, XMTOY, seems to conflict with the measure of the human capital content of immigrants, IMWAGE. When both are included in the regression, neither has a significant impact (equation 6). But when either

[13] Argentina is an exception to these causality-test results. These results do not imply that immigration had no impact on wages. Indeed, we know that it did (Taylor and Williamson 1997; Hatton and Williamson 1997). Rather, it implies that policy changes did not have a large enough impact on immigration to matter.

one is alone in the regression, they are significant. However, unlike IMWAGE, openness to trade behaves as one would expect: it is positively correlated with openness to immigration. This result follows from the premise that trade and immigration were substitutes in the New World economies (Collins *et al.*, 1997). Restricting immigration to shore up wages would be ineffective if the cheap labor were imported in the form of goods rather than the people themselves. Conversely, raising tariffs to restrict trade would be ineffective if free immigration were allowed. Thus, immigration policy and trade policy should have moved together in these labor-scarce economies.

Relative Income Effects. Aside from the lagged dependent variable, the most consistently significant variable is WTOY. Recall that WTOY is the ratio of the unskilled wage to income per capita, or of income near the bottom of the distribution to income of the average. Immigrants tended to be unskilled and to receive lower wages. Thus, WTOY captures both the relative position of recent immigrants and those most threatened by immigration--the unskilled native born. Regardless of what else is included in the equation, including wage growth, real wages, and immigrant wages relative to native wages, this measure of unskilled labor's *relative* position stands up as a positive factor influencing policy. High wages paid to the unskilled, relative to average income, correlate well with more open immigration policies.[14]

The significance of the successful variables is fairly stable across specifications. The exceptions are in equations 9-11, where the THREAT variable is decomposed into its component parts. The immigration rate (IMRATE) seems to be driving the results and causing severe multicollinearity problems. It is conventional wisdom that immigration rates correlate highly with immigration policy. However, in other (unreported) specifications of

[14] This effect is likely to be biased downwards since open immigration policy implies more immigrants, driving down unskilled wages and thus lowering WTOY.

the regression equation, the immigration rate did not have the hypothesized effect. Relative immigrant wages (IMWREL) are highly significant, but have the wrong sign. Furthermore, real wages also have the wrong sign. Although equations 9-11 offer a good fit to the data, they make little theoretical sense. They are therefore purged from the analysis.

The pattern that has emerged from the New World economies taken together is that the size and quality of the immigrant flows did not have any predictable impact on long-run policy change, except when the flows posed a threat to native labor. It was not a pattern of racism or xenophobia. Rather, labor market effects mattered, especially income inequality.

Individual Country Results

The regressions using annual time series for individual countries produce interesting results. Table 2 presents our favorite specifications.[15] In general, the measure of relative income (WTOY) continues to be the common source of change in immigration policy (here called POLISM). The exception is Australia, where the coefficient is significant but of the opposite sign. However, empirical results for Australia discussed above suggest that immigration seems to *raise* wages rather than depress them. If so, Australian policy should have responded to rising inequality by opening the gates to immigration! We place little weight on this argument.[16]

Australia and Argentina seem to have been better than other New World countries in coordinating trade and immigration policy. For them, openness to trade was significant and positively related to pro-immigrant policy. The data from these two countries are probably

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[15] In these regressions, we have exponentially smoothed the dependent variable.

[16] It turns out that Australia is unusual all around. Indeed, it was the only country in which immigration policy responded to current economic conditions in an expected way: opening the doors when growth was good and shutting the doors when unemployment was high. The other countries in the sample showed no correlation between current economic conditions and policy.

Table 2. Results from the Regressions on Annual Time Series Data

LS // Dependent Variable is POLISM Sample: 1861-1930
(t-statistics in parentheses)

Variable	Argentina	Australia	Brazil	Canada	United States
C	-1.200**	0.117	-1.130**	-2.922**	-0.708**
	(-2.502)	(0.136)	(-2.625)	(-2.614)	(-2.494)
POLISM(-1)	0.712***	0.678***	0.944***	0.890***	0.953***
	(11.277)	(8.737)	(22.751)	(17.493)	(30.767)
WTOY(-2)	0.013***	-0.021**	0.005***		
	(2.700)	(-2.479)	(2.785)		
WTOY(-4)				0.010**	0.005**
				(2.014)	(2.189)
WAGER(-2)	-0.011**		0.007*		
	(-2.245)		(1.719)		
WGRR					1.190
					(1.516)
YPCGRR		3.555***			
		(3.198)			
UNEMP2		-0.035***			
		(-3.893)			
XMTOY	0.011***	0.011**			
	(3.761)	(2.255)			
IMWAGE(-2)		0.013		0.026**	
		(1.627)		(2.444)	
THREAT(-2)				-0.200	
				(-1.659)	
No. of obs.:	54	70	68	57	70
R-squared	0.968	0.808	0.923	0.911	0.968
Adj. R-squared	0.965	0.790	0.919	0.904	0.967
Durbin-Watson	1.444	1.810	1.545	2.096	1.617
F-statistic	370.340	44.163	255.251	133.545	668.943
Prob(F-stat)	0.000	0.000	0.000	0.000	0.000

driving our results from the panel data. The relationship was not significant for the other countries.

The various measures of the immigrant flow do not hold up well for the individual countries. We see a significant effect of the human capital proxy at work in Canada, but only weakly present in Australia and not at all in the other countries. The other measures of immigrant flows seem to be responding to policy, rather than the other way around. Some regressions in Table 3 illustrate these endogeneity problems. In the United States, for example, the positive relationship between GAP and POLISM suggests that either the American public was xenophilic or United States policy was effective in selecting flows of immigrants that more closely matched the current ethnic make-up of the country. Causality tests suggest the latter was the case, although not with a high degree of confidence.

The THREAT variable exhibits similar behavior for Australia, Brazil, and the United States. Relatively open policy was correlated with high rates of immigration or low relative immigrant wages, or both. The Brazilian data allow us to reject the idea that this correlation stemmed from a successful policy in reducing the threat, although we could not reject this idea for the United States and Australia. In the pooled regressions, the use of immigrant flows from five years prior minimized these causality problems. There, the relationship was negative; so there is no need to worry about overestimating the impact of the threat to native labor.

How Big are the Effects?

Using the results from Table 2, the next question is how much each variable contributed to closing the doors to immigrants. For each country, we identified a period of major change towards more restrictive immigration policy. How much of the change was

Table 3. Results from the Regressions on Annual Time-Series Data Illustrating Endogeneity Problems

	BRAZIL 1861-1928	AUSTRALIA 1861-1930	UNITED STATES 1861-1930
C	0.068	-1.691	1.653***
	(0.543)	(-1.563)	(5.911)
POLISM(-1)	0.931***	0.845***	0.584***
	(22.560)	(11.012)	(9.129)
WAGER(-2)			-0.027***
			(-6.729)
UNEMP2	0.002		
	(1.082)		
YPCGRR		2.135*	
		(1.844)	
FORPOP		1.168	
		(1.168)	
GAP			1.241**
			(2.497)
IMWAGE		0.016	
		(1.569)	
THREAT	1.643***	0.668**	0.386***
	(3.880)	(2.469)	(2.981)
R-squared	0.917	0.756	0.980
Adjusted R-squared	0.913	0.737	0.979
Durbin-Watson stat	1.731	1.732	1.473
F-statistic	236.009	39.588	792.895
Prob(F-statistic)	0.000	0.000	0.000

due to changes in inequality, trade policy, or immigrant flows?[17]

Between 1865 and 1885, the immigration policy index for the United States dropped by 2 points (Table 4).[18] Roughly two-thirds of that drop can be attributed to falling relative incomes of the unskilled. On the other hand, Goldin (1994) is not wrong when she attributes the passage of the literacy test to other (non-market) factors. The 2.5-point drop from 1885 to 1917 was due only in small part to rising inequality. Furthermore, the residual is very large during this period, confirming the views of American historians who stress non-market forces.

Canada offers the strongest argument that markets mattered. During the Prairie Boom from 1899 to 1919, the policy index dropped 6 points. Nearly 50 percent of this drop can be attributed to rising inequality over those two decades, and another 33 percent to increased threat from wages abroad. We estimate that 10 percent of the shift was due to falling human capital content of the immigrants. The twentieth-century response to this drop in quality was a change in Canadian policy to allow for very effective manipulation of immigrant "quality."

In Argentina, the change in openness to traded goods more than explains the change in openness to immigrants. That is, given the estimated relationship between trade and immigration policy in Argentina, the collapse in trade flows accounts for more than the observed retreat from a pro-immigration policy. Other factors supported this retreat, including increasing inequality. What remains a puzzle are the offseting variables (the residual) that kept immigration policy from becoming even more restrictive.

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[17] We do not measure the impact of *past* performance on the lagged dependent variable, although we do multiply through the changes in the explanatory variables as they play out slowly *within* the period.

[18] Appendix E details the methodology of the calculations.

Table 4. Decomposing the Sources of Change in Immigration Policy

	Argentina		Australia		Brazil		Canada		United States			
	1888-1898		1926-1930		1917-1927		1899-1919		1865-1885		1885-1917	
Policy	4.5 to 0		2.5 to -2		4.5 to -2		1.5 to -4.5		1 to -1		-1 to -3.5	
Total Change	-4.5	100%	-4.5	100%	-6.5	100%	-6	100%	-2	100%	-2.5	100%
Attributable to:												
WTOY(-2)	-0.627	13.9%	-0.102	2.3%	-1.629	25.1%						
WTOY(-4)							-2.941	49.0%	-1.267	63.4%	-0.347	13.9%
WAGER(-2)	-0.366	8.1%			-2.250	34.6%						
YPCGRR			-0.430	9.6%								
UNEMP2			-0.713	15.8%								
WGRR									-0.588	29.4%	0.000	0.0%
XMTOY	-4.848	107.7%	-0.200	4.4%								
IMWAGE(2)			+0.084	-1.9%			-0.595	9.9%				
THREAT(-2)							-1.906	31.8%				
RESIDUAL	+1.341	-29.8%	-3.139	69.8%	-2.621	40.3%	-0.558	9.3%	-0.145	7.3%	-2.153	86.1%

When the Brazilian door slammed shut in the 1920s, about one-fourth of the 6.5-point drop in the policy index was due to rising inequality. About one-third was due to the drop in real wages. Although the residual is large, market forces still account for 60 percent of the policy switch.

For Australia, the estimated equations do not explain nearly as much of the change during the late 1920s. The residual is almost 70 percent, which is similar to the results for the United States from 1885 through World War I.

Conclusions

These results point to long-term influences driving immigration policy that are very different from the short-term influences about which so much has been written. There is no compelling evidence that xenophobia or racism was at work in these economies, once underlying economic variables are given their due. Real wages of the unskilled did not matter all that much by themselves. Nor did economic growth or unemployment matter. Over the long haul, these countries tried to maintain the *relative* economic position of the unskilled worker, compared with the skilled worker or the industrialist. Labor became relatively more abundant when immigrants poured in, and governments sought to stop the relative decline in their wages and in the wages of the native unskilled with whom they competed. The greater the perceived threat to these wages from more immigrants or lower-quality immigrants, the more restrictive policy became. Governments responded in the same way to rising land values in relation to unskilled labor, suggesting that Foreman-Peck was right to argue that land ownership mattered, too.[19]

The results here may offer some predictions for the outcome of the contemporary debates about immigration. The parallels are clear. Inequality has been on the rise in the

[19] The results for these regressions are not reported here.

OECD economies since the early 1970s, especially the gap between unskilled and skilled workers, just as it was in the New World economies in the late-nineteenth century. We should therefore not be surprised by the renewed interest, both in the United States and Europe, in reducing the flow of immigration. Labor-scarce economies have been sensitive in the past to trends of greater inequality in their midst, using restrictive immigration policy to offset those trends. If the story repeats itself, policies will become increasingly anti-immigrant in the future, at least as long as unskilled workers lag behind other economic groups.

References

Alesina, Alberto, and Dani Rodrik. 1994. "Distributive Politics and Economic Growth," *Quarterly Journal of Economics*, 109, 2 (May).

Arrow, Kenneth J. 1963. *Social Choice and Individual Values.* Second edition. New Haven, CT: Yale University Press.

Benhabib, Jess. Forthcoming. "On the Political Economy of Immigration," *European Economic Review.*

Black, Duncan. 1948. "On the Rationale of Group Decision Making," *Journal of Political Economy*, 56 (February).

Borjas, George. 1994. "The Economics of Immigration," *Journal of Economic Literature*, 32, 4 (December).

Buchanan, James M., and Gordon Tullock. 1962. *The Calculus of Consent.* Ann Arbor, MI: University of Michigan Press.

Cheng, Leonard K., and Kar-yiu Wong. 1990. "On the Strategic Choice Between Capital and Labor Mobility," *Journal of International Economics*, 28.

Collins, Bill, Kevin H. O'Rourke, and Jeffrey G. Williamson. 1996. "Trade and Factor Mobility: Complements or Substitutes in History?" Paper to be presented at the Centre for Policy Research, *Conference on Trade and Factor Mobility*, Venice (January 23-26, 1997. Cambridge, MA: Department of Economics, Harvard University; typescript.

Flam, Henry, and M. June Flanders. 1991. *Heckscher-Ohlin Trade Theory.* Cambridge, MA: MIT Press.

Foreman-Peck, James. 1992. "A Political Economy Model of International Migration, 1815-1914," *The Manchester School*, 60, 4 (December).

Freeman, Gary P. 1992. "Migration Policy and Politics in the Receiving States," *International Migration Review*, 26, 4.

Freeman, Richard. 1995. "Are Your Wages Set in Beijing?" *Journal of Economic Perspectives*, 9, 3 (Summer).

Goldin, Claudia. 1994. "The Political Economy of Immigration Restriction in the U.S., 1890 to 1921." In Claudia Goldin and Gary Libecap, eds., *The Regulated Economy: A Historical Approach to Political Economy* (Chicago, IL: University of Chicago Press).

Green, Alan G. 1994. "International Migration and the Evolution of Prairie Labor Markets in Canada, 1900-1930." In Timothy J. Hatton and Jeffrey G. Williamson, eds., *Migration and the International Labor Market, 1850-1939* (London: Routledge).

Gurr, Ted R. 1990. *Polity II: Political Structures and Regime Change, 1800-1986.* Data set #9263. Ann Arbor, MI: Inter-university Consortium for Political and Social Research, University of Michigan.

_____. 1995. "A Comparison of Canadian and US Immigration Policy in the Twentieth Century." In Don J. DeVoretz, ed., *Diminishing Returns: The Economics of Canada's Recent Immigration Policy* (The Laurier Press).

Hatton, Timothy J., and Jeffrey G. Williamson, eds. 1994a. *Migration and the International Labor Market, 1850-1939.* London: Routledge.

_____. 1994b. "Late-Comers to Mass Emigration: The Latin Experience." In Timothy J. Hatton and Jeffrey G. Williamson, eds., *Migration and the International Labor Market, 1850-1939* (London: Routledge).

_____. 1995. "The Impact of Immigration on American Labor Markets Prior to the Quotas." *NBER Working Paper No. 5185.* Cambridge, MA: National Bureau of Economic Research; July.

_____. 1997. *The Age of Mass Migration.* New York: Oxford University Press.

Hillman, Arye L. 1989. *The Political Economy of Protection.* New York: Harwood Academic Publishers.

Krueger, Anne O. 1974. "The Political Economy of the Rent Seeking Society," *American Economic Review*, 64, 3 (June).

Lewis, W. Arthur. 1978. *The Evolution of the International Economic Order.* Princeton, NJ: Princeton University Press.

Magee, Stephen P., William A. Brock, and Leslie Young. 1989. *Black Hole Tariffs and Endogenous Policy Theory.* New York: Cambridge University Press.

Marvel, Howard P., and Edward J. Ray. 1983. "The Kennedy Round: Evidence on the Regulation of International Trade in the United States," *American Economic Review*, 73, 1 (March).

Mayer, Wolfgang. 1984. "Endogenous Tariff Formation," *American Economic Review*, 74, 5 (December).

Perotti, Roberto. 1992. "Income Distribution, Politics, and Growth," *American Economic Review*, 82, 2 (May).

_____. 1993. "Political Equilibrium, Income Distribution, and Growth," *Review of Economic Studies*, 60 (September).

_____. 1996. "Inequality and Economic Growth: What the Data Say," *Quarterly Journal of Economics* (November).

Persson, Torsten, and Guido Tabellini. 1994. *Monetary and Fiscal Policy, Volume 2: Politics*. Cambridge, MA: MIT Press.

Pope, David, and Glenn Withers. 1994. "Wage Effects of Immigration in Late-Nineteenth-Century Australia." In Timothy J. Hatton and Jeffrey G. Williamson, eds., *Migration and the International Labor Market, 1850-1939* (London: Routledge).

Shughart, William, Robert Tollison, and Mwangi Kimenyi. 1986. "The Political Economy of Immigration Restrictions," *Yale Journal on Regulation*, 51, 4.

Stolper, Wolfgang, and Paul A. Samuelson. 1941. "Protection and Real Wages," *Review of Economic Studies*, 9.

Taylor, Alan M. 1994. "Mass Migration to Distant Southern Shores." In Timothy J. Hatton and Jeffrey G. Williamson, eds., *Migration and the International Labor Market, 1850-1939*. London: Routledge).

Taylor, Alan M., and Jeffrey G. Williamson. 1997. "Convergence in the Age of Mass Migration," *European Review of Economic History*.

Timmer, Ashley S. 1996. "Using Politics to Keep Up With the Joneses: United States Immigration Policy and Relative Incomes." Paper presented to the Joint Harvard-M.I.T. Research Training Group in Positive Political Economy. Cambridge, MA: Department of Economics, Harvard University (April); typescript.

Timmer, Ashley S., and Jeffrey G. Williamson. 1995. "The Political Economy of Migration Policies." Cambridge, MA: Department of Economics, Harvard University (September); typescript.

Tullock, Gordon. 1967. "The Welfare Costs of Tariffs, Monopolies and Theft," *Western Economic Journal*, 5.

Verdier, Thierry. 1994. "Models of Political Economy of Growth: A Short Survey," *European Economic Review*, 38.

Williamson, Jeffrey G. 1974. "Migration to the New World: Long Term Influences and Impact," *Explorations in Economic History*, 11, 4 (Summer).

_____. 1990. *Coping with City Growth During the British Industrial Revolution.* Cambridge: Cambridge University Press.

_____. 1995. "The Evolution of Global Labor Markets Since 1830: Background Evidence and Hypotheses," *Explorations in Economic History* 32, 2 (April).

_____. 1996a. "Globalization, Convergence and History," *Journal of Economic History* 56, 2 (June).

_____. 1996b. "Globalization and Inequality Then and Now." *NBER Working Paper No. 5491.* Cambridge, MA: National Bureau of Economic Research; March.

Wood, Adrian. 1994. *North-South Trade, Employment and Inequality: Changing Fortunes in a Skill-Driven World.* Oxford: Clarendon Press.

Wong, Kar-Yiu. 1983. "On Choosing Among Trade in Goods and International Capital and Labor Mobility: A Theoretical Analysis," *Journal of International Economics*, 14.

Appendix A: Sources and Methods--Independent Variables

Economic Variables

***Population* (POP)**: Reported as actual estimated population.

Argentina **1865-1869** from B.R. Mitchell, *International Historical Statistics: The Americas and Australasia* (Book Tower, Detroit, 1983).
1870-1915 from Vincente Vazquez-Presedo, *Estadisticas Historica Argentinas*, 2 vols. (Buenos Aires, Ediciones Macchi,1971-6), pp.15-6.
1916-1930 from Ministerio de Hacienda, Direccion General de Estadistica de la Nacion, *La Poblacion y el Movimento Demografico de la Republica Argentina* (Buenos Aires, 1938).

Australia **1850-1940** from Mitchell, op. cit.

Brazil **1850-1940** from Mitchell, op. cit.

Canada **1851-1924** from Mitchell, op. cit.
1925-1930 from Dominion Bureau of Statistics, *Canada Year Book* (General Statistics Branch, Ottawa, various years).

United States **1850-1940** from Mitchell, op. cit.

***Nominal GDP* (GDPN)**: All series have been converted to indices, with 1900=100.

Australia **1850-1860** from Wray Vamplew, ed., *Australian Historical Statistics* (Fairfax, Syme, and Weldon Associates, New South Wales, 1987).
1861-1930 from N. G. Butlin, *Australian Domestic Product, Investment, and Foreign Borrowing: 1861-1938/39* (Cambridge University Press, London, 1962).

Argentina **1875-1930** calculated from Real GDP estimates from Roberto Cortes Conde, "Estimaciones del PBI en la Argentina 1875-1935," Ciclo de Seminarios 1994, Departmento de Economia, Universidad de San Andres, 1994. Series inflated to nominal values using cost-of-living estimates underlying Jeffrey G. Williamson, "The Evolution of Global Labor Markets Since 1830: Background Evidence and Hypotheses," *Explorations in Economic History* 32 (April 1995).

Brazil **1861-1930** from Mitchell, op. cit.

Canada Series for Canada is for Gross National Product.
1867-1870, 1926-30 from Mitchell, op. cit. 1868 and 1869 are linearly interpolated from 1867 and 1870 observations.
1870-1925 from M. C. Urquhart, "New Estimates of Gross National Product, Canada 1870-1926: Some Implications for Canadian Development," in S. Engerman and R. Gallman, eds., *Long-term Factors in American Economic Growth* (National Bureau of Economic Research, New York, 1986).
Series are rescaled to match in overlapping years.

United States **1850-1940** from Mitchell, op. cit.

Real GDP (**GDPR**): All series have been converted to indices, with 1900=100.

Australia **1851-1930** deflated from nominal series above, using the GDP Price Deflator Index from Vamplew, op. cit., p. 219.
Argentina **1875-1930** from Cortes Conde, op. cit.
Brazil **1861-1930** from Mitchell, op. cit.
Canada **1867-1930** deflated from nominal series above, using the Wholesale Price Index (excluding gold) from M.C. Urquhart and K.A.H. Buckley, eds., *Historical Statistics of Canada* (Macmillan Company of Canada, Ltd., Toronto, 1965), pp. 293-4.
United States **1850-1940** from Mitchell, op. cit.

Nominal Wages (**WAGEN**): All series have been converted to indices, with 1900=100. Unless otherwise noted, the series are for unskilled workers.

Australia **1850-1900** from Ahmed Fahour and Glenn Withers, "Australian Wages, 1850-1900," (mimeo, 1993), Table 6. Data on wages are from the statistical registers of the states, weighted by population and occupation, including Domestic Service, Agriculture, Building, General Labor, and Manufacturing.
1901-1905 from the series on real wages from Williamson (1995), op. cit., converted to nominal wages using the Retail Price Index (combined commodity groups) in Vamplew, op. cit., p. 213.
1906-1913 from Commonwealth of Australia, *Yearbook* (Commonwealth Bureau of Census and Statistics, Melbourne, various years). Series is an index of weekly wages in the building trades for all of Australia.
1914-1930 from Williamson (1995), op. cit.
Series are rescaled to match in overlapping years.
Argentina **1864-1930** from Williamson (1995), op. cit.
Brazil **1850-1930** from Williamson (1995), op. cit.
Canada **1870-1930** from Williamson (1995), op. cit.
United States **1850-1930** from Williamson (1995), op. cit.

Real Wages (**WAGER**): All series have been converted to indices, with 1900=100. Unless otherwise noted, the series are for unskilled workers.

Australia **1854-1930** from Williamson (1995), op. cit.
Argentina **1864-1930** from Williamson (1995), op. cit.
Brazil **1850-1930** from Williamson (1995), op. cit.
Canada **1870-1930** from Williamson (1995), op. cit.
United States **1850-1930** from Williamson (1995), op. cit.

Land Values (**LANDV**): Nominal estimates. Missing years are estimated by linear interpolation. Specific sources as noted.

Australia	**1870-1913** from ibid.
Argentina	**1883-1889, 1891-1899, 1901-1913** from K. O'Rourke, A. Taylor and J. G. Williamson, "Factor Price Convergence in the Late Nineteenth Century," *International Economic Review* 37 (August 1996).
Canada	**1901, 1911, 1921, 1931, 1941** from ibid.
United States	**1850, 1960, 1970, 1880, 1890, 1910-1930** from ibid.

Export (X) and Import (M) Values: Current-dollar estimates of value of merchandise exports and imports.

Australia	**1850-1940** from Mitchell, op. cit.
Argentina	**1864-1940** from Mitchell, op. cit. Mitchell switches from paper currency to gold currency. Overlapping series are rescaled to match.
Brazil	**1850-1940** from Mitchell, op. cit.
Canada	**1867-1940** from Mitchell, op. cit.
United States	**1850-1940** from Mitchell, op. cit.

Growth in Real Wages (**WGRR**): Calculated as $(WAGER_{t+1}-WAGER_t)/(WAGER_t)$

Wages Relative to Income (**WTOY**): Calculated as WAGEN/GDPN, indexed to 1900=100.

Wages Relative to Land Values (**WTOR**): WAGEN/LANDV, indexed to 1901=100.

Per-capita Growth in Real GDP (**YPCGRR**):
Calculated as $(GDPR_{t+1}/POP_{t+1}-GDPR_t/POP_t)/(GDPR_t/POP_t)$

Unemployment (**UNEMP**): Estimated by regressing GDPN on time and time squared, and taking the negative of the residuals.

Trade Share of GDP (**XMTOY**): Calculated as the total nominal value of exports plus imports, divided by nominal GDP.

Immigration Variables

Most of the data were assembled from the following:

Imre Ferenczi and Walter Willcox, *International Migrations: Volume I--Statistics*, National Bureau of Economic Research, New York, 1929.
_____, *International Migrations: Volume II--Interpretations*, National Bureau of Economic Research, New York, 1930.

The following basic regional groupings were made:

Southern Europe:	Greece, Italy, Portugal, Spain
Northern Europe:	Belgium, Denmark, Finland, France, Germany, Netherlands, Norway, Sweden, Switzerland
United Kingdom:	England, Ireland, Scotland, Wales
Eastern Europe:	Albania, Austria, Bulgaria, Czechoslovakia, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Russia, Turkey, Yugoslavia
Asia:	China, Hong Kong, India, Japan, and others in present-day East Asia, South Asia, Southeast Asia, and the Pacific Islands

Immigration Rate **(IMRATE)**:

The immigration rate was calculated as total immigration divided by total population. Total immigration data was taken from the following sources:

Australia **1850-1877:** Total immigration was estimated from Robin Haines and Ralph Shlomowitz, "Nineteenth Century Immigration from the United Kingdom to Australia: An Estimate of the Percentage who were Government-Assisted," (Working Paper 45 in Economic History, Flinders University of South Australia, September 1990); Immigration from other than the United Kingdom: New South Wales Chinese Immigration and Emigration, 1859-1919, Ferenczi and Willcox (1929), op. cit., p.966; Queensland Arrivals by Country of Last Residence, 1870-1924, p.973; South Australia Distribution of Arrivals by Sex, Age, and Country of Last Residence, 1851-1924, pp.981-82; Victoria Arrivals by Sea, Classified by Country of Last Residence, 1865-1916, p.991; Victoria Colored Immigration and Emigration, 1861, 1866, 1873-75, 1886-1923, Ferenczi and Willcox (1929), op. cit., p.995.
1878-1899: For all Australian states other than New South Wales, the same sources were used as for 1850-1877. No information is available on non-assisted immigration from the United Kingdom to New South Wales, so it is estimated as follows: Total emigration from Great Britain to Australia and New Zealand (Passenger Citizens Outward to Extra-European Countries, by Country of Destination, 1853-1924, Ferenczi and Willcox (1929), op. cit. pp. 636-637). Subtract out the number of immigrants to New Zealand from the United Kingdom (Distribution of Immigrants, by Sex and Country of Origin,

1853-1919, Ferenczi and Willcox (1929), op. cit., p.1002-03). Subtract out the total immigration to the other Australian states from the United Kingdom, as cited above. For those years where the number of assisted immigrants was larger than this estimate, the number assisted was used.
1900 was estimated using the same sources as for 1850-1877.
1901 is the sum of immigration to New South Wales, Victoria, Queensland, and South Australia, from Ferenczi and Willcox (1929) tables cited above.
1902-1924: Distribution of Arrivals by Nationality, 1902-24, Ferenczi and Willcox (1929), op. cit., pp. 952-954.
1925-1930: Nationality of Persons Admitted, Commonwealth of Australia, *Official Yearbook* (Commonwealth Bureau of Census and Statistics, Melbourne, various years).

Argentina

1857-1924: Distribution, by Nationality, of Immigrant and Emigrant Aliens (Second and Third Class Passengers), by sea, 1857-1924; Ferenczi and Willcox (1929), op. cit., pp. 543-546.
1925-1930: Municipalidad de Buenos Aires, *Revista de Estadistica Municipal de la Civdad de Buenos Aires* (Direccion General de Estadistica Municipal, Buenos Aires, various years.) This series is the same used by Ferenczi and Willcox (1929).

Brazil

1850-1924: Distribution of Immigrants Admitted by Nationality, 1820-1907; and Distribution of Immigrants Admitted by Nationality, 1908-1924; Ferenczi and Willcox (1929), op. cit., pp.549-552.
1925-26 from Ferenczi and Willcox (1930), op. cit.
1927-28 from Republica dos Estados Unidos do Brasil, *Annuario de Estatistica Demographo-Sanitaria 1927-1928* (Departamento Nacional de Saude Publica, Rio de Janeiro, 1934).

Canada

1850-1924: Immigration (Cabin and Other Passengers) through the Ports of Quebec and Montreal by Country of Origin 1816-1880; Immigration to Canada by Countries of Last Residence, 1881-1900; Distribution of Immigrants to Canada by Nationality, July 1, 1900, to March 31, 1920; Distribution of Immigrants by Nationality, 1920-1924; Ferenczi and Willcox (1929), op. cit. pp. 360-367.
1925-1930: Dominion Bureau of Statistics, *Canada Yearbook* (General Statistics Branch, Ottawa, various years).

US

1850-1924: Distribution of Alien Passengers Admitted, by Nationality 1820-1868; Distribution of Immigrant Aliens Admitted, by Country of Origin or Nationality (Fiscal Year ended June 30) 1869-1898; Admission of Immigrant Aliens, by Country of Last Residence (Fiscal Year ended June 30) 1899-1924, Ferenczi and Willcox (1929), op. cit., pp.377-93.
1925-1930: US Department of Commerce, *Historical Statistics of the United States* (Bureau of the Census, Washington, D.C., 1960), p.

Average Wages of Immigrants at Origin **(IMWAGE)**

IMWAGE measures the average quality of the immigrant, at least as implied by the unskilled wages prevailing in sending countries. For each country, immigration flows were grouped into regions of origin, and the percentage of immigration from each region was calculated. For each region, an annual series of wages was constructed using Williamson's (1995) internationally-comparable series, which are purchasing-power-parity adjusted:

United Kingdom uses the wage series for Great Britain.
Northern Europe uses the series for the Netherlands.
Southern Europe uses the wages for Portugal from 1850 to 1870. From 1870 to 1930, Italian wages were used, but scaled such that the 1870 level of purchasing power matched that of Portugal the same year (a correction of less than 10%). (Neither series was complete from 1850 to 1930).
Eastern Europe and "Other" wages were estimated to be two-thirds of those in Southern Europe.
Asian wages were estimated to be half the level of Southern Europe.

The variable simply calculates a weighted-average of these wages, using the percentage of immigration from each region as the weight.

The following groupings were used:

Australia	United Kingdom, Northern Europe, Southern Europe, Eastern Europe, Asia, and Other
Argentina	United Kingdom, Northern Europe, Southern Europe, Eastern Europe, and Other
Brazil	Northern Europe (includes in this case United Kingdom), Southern Europe, Eastern Europe, and Other
Canada	United Kingdom, Northern Europe, United States (assigned UK wages), Eastern Europe, and Other
United States	United Kingdom, Northern Europe, Southern Europe, Eastern Europe, Asia, and Other

Immigrant Wages Relative to Destination **(IMWREL)**

Like IMWAGE, this variable also captures immigrant quality, but in this case relative to the receiving region. It was calculated in much the same way as IMWAGE, except that, in addition, it measures wages in regions of emigration relative to wages in the country of destination.

Wage Threat from Immigration (THREAT)

This variable was calculated to measure the extent which immigration reflected "unfair competition from cheap foreign labor," that is, a threat to unskilled resident labor. Calculated to interact immigration rates with relative immigrant quality: THREAT = (100 - IMWREL)*IMRATE. Low IMWREL and high IMRATE implies big threat and large positive THREAT.

Percent Foreign Population (FORPOP)

For most countries, the foreign-born population is counted every ten years in census data. Using immigration data cited above, and in some cases emigration data, the between-census years are estimated. These estimates are divided by the total population estimates to calculate the percent who are foreign. The following sources and methods were used:

Australia

Data: Immigration data are from sources cited above. Foreign-born population data for **1861, 1871, 1881, 1891, 1901, 1911, 1921,** and **1933** are from Vamplew, *Australian Historical Statistics*, op. cit.

Method: Population groupings were made as follows: United Kingdom, Northern Europe, Southern Europe, Eastern Europe, Asia, and Other.
1850-1860 worked backward from 1861 observations for the United Kingdom and Asia, subtracting out immigration and also the annual death/emigration estimates calculated for 1861-1870 (see below). Other groups (Eastern Europe, Northern Europe, Southern Europe, and Other) were extrapolated linearly, using the same trend as for 1861-1871.
1861-1901: Estimates for the United Kingdom and Asia for non-census years were calculated exactly as for Canada--estimating decade totals of emigration and deaths and correcting annually. Northern Europe, Southern Europe, Eastern Europe, and Asia were interpolated linearly between census observations.
1901-1933: Estimates for non-census years were calculated exactly as for Canada for all groups.

Argentina

Data: Census data are available for 1869, 1895, and 1915. **1869**: *Primer Censo de la Republica Argentina, 1869* (Imprenta del Porvenir, Buenos Aires, 1872). **1895**: *Segundo Censo de la Republica Argentina, 1895* (Taller Tipografico de la Pentenciarra Nacional, Buenos Aires, 1898). **1915**: *Extracto Estadistico de la Republica Argentina, 1915* (Compania Sud Americana de Billetes de Banco, 1916).
Immigration data are from sources cited above.
Emigration data from **1867-1924**: Distribution, by Nationality of Immigrant and Emigrant Aliens (2nd and 3rd Class Passengers), By Sea 1857-1924. Ferenczi and Willcox, pp.543-46. (From 1857-1880, immigration by those

whose nationality was not specified is cited only by decade. Annual estimates were made by assuming one-tenth of the decade total departed each year.)

Method: Population and migration data were grouped as follows: Spanish, Italian, Northern European, United Kingdom, Eastern European, or Other.

1850-1869 individual group populations were estimated by working backwards from 1869. For example, estimated Spanish population in 1868 was the 1869 population less 1868 Spanish immigration plus 1868 Spanish emigration.

1870-1894 estimates were worked forward from 1869 data, adding immigrants and subtracting emigrants each year. Thus, the 1870 Spanish population was estimated as the 1869 population, plus arrivals from Spain in 1869 less Spanish departures in 1869. Following this procedure to 1895, the estimate could be compared to the census count for 1895. The total reached for 1895 was larger than the census estimate (due to deaths). The difference between our estimate and the census estimate was taken as the total of deaths over the period. These deaths were subtracted out from our preliminary estimates, 1/16 of the total each year (for each of the 16 years). Each population group was calculated in this manner.

1896-1915 calculated exactly as 1870-1894.

1916-1930 calculated from 1915 benchmark, using the estimate of deaths per year calculated for 1896-1915.

Brazil

Data: Census data on individual populations (non-citizen) are available only for **1920**. Total non-citizen data are available for 1872, 1890, and 1900. All numbers are in *Recensemento do Brasil, 1920: Volume IV--Populacao* (Directorra Geral de Estatistica, Rio de Janeiro, 1926). Immigration data are from above sources. No emigration data are available.

Method: Population groups were as follows: Northern Europe/United Kingdom, Spain, Portugal, Italy, Eastern Europe, and Other.

Because there is only a single benchmark, and no emigration data, emigration rates had to be estimated for each population group. These rates were estimated separately for the periods 1850 to 1890 and 1891 to 1928. We incorporate these estimates by scaling down the immigration flows proportionately.

We also needed to estimate the number of individuals who did not emigrate, but ceased to be counted in the number of foreign citizens: those who died, retired to their birth country, or became naturalized citizens of Brazil. For this, we used a moving average of immigration twenty-years prior, and subtracted out one-third of that average.

1850: A foreign population for 1850 was estimated for each group by summing all immigration from 1820 to 1850. This total looked to be the right order of magnitude, given the total foreign population in Rio de Janeiro of 1849, cited in the 1890 *Recensemento do Districto Federal 1890* (Republica des Estados Unidos do Brasil, Rio de Janeiro, 1895).

1851-1869 added annually to the foreign population the annual immigration of each group, scaled by the following factors: Northern Europe, Spain, and Portugal 0.75; Italy and Eastern Europe 0.7; Other 0.8.
1870-1890 continue the calculations for 1851-1969, but subtract out one-third of a three-year moving average of immigration 20 years prior. The total estimated foreign population for 1890 matches that cited in the census.
1891-1920 continue to subtract out one-third of the three-year moving average immigration 20 years prior, but new scaling factors are used for current immigration: Northern Europe 0.615; Spain 0.555; Portugal 0.517; Italy 0.660; Eastern Europe 0.588; Other 0.824. The 1920 numbers match exactly those of the census.
1921-1928 continues the calculations as for 1891-1920.

Canada

Data: Immigration data are from sources cited above. Foreign-born population of **1851** from *Census of the Canadas 1851-52* (John Lovelell, Quebec, 1853). Data on birthplaces of population for **1871, 1881, 1891, 1901, 1911, 1921, and 1931** are from Urquhart and Buckley, *Historical Statistics of Canada*, op. cit.

Method: Population groupings were made as follows: United Kingdom, Northern Europe, United States, Eastern Europe, and Other.
1851-1931: For each period between census estimates, the foreign-born population of each group was estimated as follows:
For example, take the British population from 1851 to 1861. Start with the 1851 estimate, and preliminarily estimate 1852 by adding immigration from the UK for 1851. Estimate 1853 by adding 1852 immigration to 1852 population estimate. Continue until a preliminary estimate for 1861 can be compared to the census count. The census count will be lower, since it includes deaths and emigration. Take the difference between the census count and our estimate as the decade-long total of emigration and deaths. Correct the 1852-1860 estimates by subtracting out one-tenth of this total each year.

United States

Data: Immigration data are from sources cited above. Foreign-born population data for **1850, 1860, 1870, 1880, 1890, 1900, 1910, 1920**, and **1930** are from Bureau of the Census, *Historical Statistics of the United States*, op. cit., p. 66.

Method: Population groupings were made as follows: United Kingdom, Northern Europe, Southern Europe, Eastern Europe, Asia, and Other.
1850-1930 between-year estimates were calculated in the same manner as for Canada.

Difference in Regional Stocks and Flows (GAP)

Using the annual composition of immigration (grouped as in FORPOP) and the annual composition of the foreign population (as estimated for FORPOP), an index was constructed to measure a shift in the composition of immigration relative to the current foreign-born population. For each year and for each group the difference between the percentage of immigrants and the percentage of foreign born was squared, and all groups except "other" were then summed. The index has a minimum value of zero, if the immigration flow looks just like the current foreign population. The theoretical maximum value would be 1.

Political Variables

All of these variables are from Ted Robert Gurr, *Polity II: Political Structures and Regime Change, 1800-1986*, Inter-university Consortium for Political and Social Research, data set # 9263 (ICPSR, Ann Arbor, 1990). Observations are annual for the following years:

Australia	1901-1930
Argentina	1850-1930
Brazil	1850-1930
Canada	1867-1930
US	1850-1930

Institutionalized Democracy **(DEMOC)**

"...Our operational indicator of democracy is derived from codings of the competitiveness of political participation..., the openness and competitiveness of executive recruitment..., and constraints on the chief executive...

"The Democracy indicator is an additive ten-point scale, constructed using these weights.

" Authority Coding	Scale Weight
Competitiveness of Political Participation	
Competitive	+3
Transitional	+2
Factional	+1
Competitiveness of Executive Recruitment	
Election	+2
Transitional	+1
Openness of Executive Recruitment (only if Competitiveness is Election or Transitional)	
Dual: election	+1
Election	+1
Constraint on Chief Executive	
Executive parity or subordination	+4
6 (intermediate category)	+3
Substantial limitations	+2
5 (intermediate category)	+1 "

(Gurr, pp. 38-9).

Institutionalized Autocracy **(AUTOC)**

"A ten-point Autocracy scale is constructed additively. Our operational indicator of autocracy is derived from codings of the competitiveness of political participation..., the regulation of participation..., the openness and competitiveness of executive recruitment..., and constraints on the chief executive....

" Authority Coding	Scale Weight
Competitiveness of Participation	
Suppressed	+2
Restricted	+1
Regulation of Participation	
Restricted	+2
Factional/Restricted	+1
Competitiveness of Executive Recruitment	
Selection	+2
Openness of Executive Recruitment (only if Competitiveness is coded Selection)	
Closed	+1
Dual:designation	+1
Constraint on Chief Executive	
Unlimited authority	+3
2 (intermediate category)	+2
Slight to moderate limitations	+1 "

(Gurr, pp. 37-8).

Competitiveness of Political Participation **(PARCOM)**

"The competitiveness of participation refers to the extent to which alternative preferences for policy and leadership can be pursued in the political arena.... Competitiveness is coded on a five-category scale:

(1) Suppressed Competition: No significant oppositional activity is permitted outside the ranks of the regime and ruling party....

(2) Restricted/Transitional Competition: Some organized, political competition occurs outside government, without serious factionalism; but the regime systematically and sharply limits its form, extent, or both in ways that exclude substantial groups (20% or more of the male adult population) from participation....

(3) Factional Competition: Polities with factional or factional/restricted patterns of competition.

(4) Transitional Competition: Any transitional arrangements from Restricted, or Factional patterns to fully Competitive patterns, or vice versa....

(5) Competitive Competition: There are relatively stable and enduring political groups which regularly compete for political influence at the national level. Competition among them seldom causes widespread violence or disruption. Very small parties or political groups may be restricted in the "Competitive" pattern (Gurr, pp.18-9)."

Appendix B: Methodology--Dependent Variable

Our dependent variable is an index of immigration policy, ranging from +5 to -5. A positive score indicates a set of policies strongly pro-immigration; a negative score reflects policies strongly anti-immigration. A zero score reflects either a completely laissez-faire immigration policy -- open doors but with no encouragement or discouragement, or reflects a mixture where pro-immigration offset anti-immigration policies.

The goal in coding a policy position for each country for each year was to capture political sentiment, rather than policy effectiveness or even unintended results. For example, in 1862 Argentina authorized funding to help settle immigrants through a state-sponsored agency. Even though the vast majority of immigrants had no contact with the agency and even though the agency never exhausted its budget, we still coded the legislation as a political shift more favorable to immigration. We limited ourselves throughout to actual policy and funding changes. Rhetoric, voting percentages, and bills that failed to become law were not considered.

We focus on intent rather than than outcome since we are trying to assess the impact of various economic and immigration variables on the choices politicians make. These choices send signals back to their constituents about whether in fact elected politicians are implementing their constituents' interests. A policy that bans indentured-labor contracts is a political message, even if there is no significant use of indentured labor. Also, it became clear that outcomes were very poor measures of policy when we observed similar outcomes emerging from policies motivated by opposite intent. Throughout the 19th century, the United States enacted a series of *Passenger Acts* which required certain health and safety conditions aboard passenger ships, including a specified ratio of deck space per passenger. The intent was to improve immigrant travel conditions, even though the effect may have been to raise the cost of passage and thus to reduce the number of poor immigrants. Australia, who limited Chinese ships to one passenger per ten tons of cargo, supplies a very different example. In this case, the intent (and effect) of the legislation was to make Chinese workers' travel to Australia prohibitively expensive, and thus it was coded as an anti-immigrant policy.

Since we were trying to capture political sentiment, coding often came down to judgment calls. However, we tried to be consistent across countries and over time, and the following algorithm was the basis for our scoring:

5 Active worker recruitment abroad with advertising and labor offices, free land or subsidized land purchase, subsidized or assisted passage, temporary lodging, free transport inland from port of arrival, easy naturalization, legal property ownership.

4 Free or subsidized land, immigration treaties or contracts with shipping companies, lodging, worker recruitment, easy naturalization.

3 Overseas immigration offices, debarkation coordination, land designated for settlement, easy naturalization, legal property ownership.

2 Overseas immigration offices, debarkation coordination, easy naturalization, legal property ownership.

1 Modest advertising, easy naturalization, legal property ownership.

0 Open doors, no encouragement, no discouragement. Or, a balance of pro-immigration and anti-immigrant policies.

-1 Regulations on shipping companies and/or contracts for assisted passage.

-2 Class restrictions on immigration (no paupers, potential wards of the state, criminals) or selective source country bans (i.e., no Asians).

-3 The above restrictions plus laws for registration, deportations provisions, laws restricting property ownership, non-enforced selectivity laws (like literacy tests).

-4 Restrictive quotas, enforced literacy tests, or other measures designed to reduce immigration volume significantly.

-5 Closed (or only slightly ajar) doors, enforced.

Several complications repeatedly arose in coding policy. Canada, Australia, and the United States all enacted legislation against Asian immigration, even while encouraging (or at least not discouraging) immigration from Europe. All countries had at some point a set of policies that sent a mixed message to both potential immigrants and constituents. Whenever there was a mix of pro-immigration and anti-immigration policies, we simply added up the positive and negative attributes to get an overall code. Since a country-source ban on immigration was generally coded -2, and subsidy and recruitment programs were generally coded +3, Canada received a net code of +1 around the turn of the century. Similarly, in the early 20th century, Australia recruited and subsidized immigration but also required a dictation test on demand, and we coded this mix a 0 for several years. Because of the judgment calls, the mix of policies, and the range of policy tools, we allowed half-steps in the coding.

The following chart illustrates the coding process in terms of a United States immigration policy timeline. Sometimes, the timing of a change in coding is obvious, such as a drop of 1.5 points in 1917 when Congress finally passed the literacy test. Other times, a series of small policy changes over several years results in a change in code for a seemingly minor policy change. 1907 is a half-step down in coding, following 20 years of accumulating anti-immigrant steps that resulted in no change in coding. The precipitating event was a financial test for immigrants coupled with a doubling of the head tax. There were many policy changes in addition to those noted in the timeline; only those years when the coding changed are shown.

United States Immigration Policy Scores

Score	Year	Change in Policy
0	1860	Passenger Acts
1	1864	$20,000 budgeted for Recruiting Office/ Legalization of Indenture Contracts
0	1868	Repeal of the Indenture Contract Law
-0.5	1875	Establishment of "excludable" classes/ Indentured-labor contracts are made a felony
-1	1882	Chinese immigration banned for ten years/ Deportation established/Head tax of $0.50 imposed
-1.5	1887	Anti-contract laws strengthened/ Certain non-citizen ownership of property restrcited
-2	1907	Financial test established/Head tax raised to $4/ More excludable classes established
-3.5	1917	Literacy test established/Head tax raised to $8/ Asian citizenship and immigration effectively banned.
-4	1919	President given temporary power to restrict immigration
-3.5	1920	Presidential powers expired
-4.5	1921	Temporary quotas established: 3% of U.S. population in 1910
-5	1929	Permanent quotas established: 150,000 total

Appendix C: Timelines of Immigration Policies

Argentine Immigration Policy, 1860-1930[1]

Pre-1860 • Constitution established in 1853 recognizes land grants to facilitate immigrant settlements. From 1853-1862, there were two effectively autonomous states pursuing different immigration policies. The state of Buenos Aires was allowing businesses and other private interests to attract immigrants to the city of Buenos Aires, but government involvement was limited to some help for private agencies. The Argentine Confederation was pursuing government-fostered colonization and "artificial immigration," directing immigrants to places of settlement. Some government money was authorized to feed and house poor immigrants for up to 4 days, although the funds were channeled through a private association.

1862 • Buenos Aires authorizes 12,000$m/n per year to help settle immigrants through the agency in the city. At that time, only about 11% of immigrants went through the agency, and not all the funds were used.

1864 • The Argentine Confederation establishes a service agency at Rosario, to help direct immigration into the interior. Like the B.A. agency, it is run by private interests, in this case, the railroads.

1867 • The railroad shuts down.

1868 • The Rosario agency disbands.

1869 • The two agencies are unified into one, central commission.

1876 • The first national immigration legislation is passed, without funding for the time being. Measures include free housing and food for up to 5 days upon arrival, and the establishment of placement offices to settle immigrants. The government would advance funds to pay passage, on favorable terms. The Act also establishes health standards on ships, but without any fines for violators. To assist in colonization, the legislation sets up 20% rebates for capital investment, free transport to the colonization site, 200 $fuertes per family for settlement, and free land in publicly-owned regions (many not yet fully under the control of the government.) The Immigration Service is established to coordinate activities, but is given no funding or personnel.
Restrictions on immigration include those who are diseased, lunatics, the infirm, and individuals over 60 years old.

1877 • The legislature approves the funding for the 1876 Act.

1878 • 150,456 $fuertes budgeted.

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[1] Through 1914: Castro, Donald S., *The Development and Politics of Argentine Immigration Policy, 1852-1914: To Govern is to Populate*, (Mellen Research University Press, San Francisco, 1991).

1879	• 187,716 $fuertes budgeted, plus 260,000 $f for supplementary work by the Immigration Service.
1882	• The land laws are reworked, authorizing minimum and maximum parcels to be sold at auction. Bids were payable over five years. In practice, the minimum size was too large for most immigrants to afford. • The government signs some contracts with private firms to get laborers to finish the railroad.
1883	• The legislature authorizes the establishment of nine new colonies, and budgets 250,000$f to subsidize immigration.
1884	• Responsibility for the colonies is given to local authorities.
1886	• The legislature budgets 30,000 $f for advertising to encourage European emigration to Argentina.
1887	• 740,000 $f is authorized to subsidize passages 100% of the fare. Technically, the subsidies were meant to be loans, but none was ever repaid.
1888-1889	• Over two years, 78,962 passages were paid for by the government.
1889	• 6,000,000 $m/n (paper) is budgeted for subsidized passages.
1890	• Many of the regional offices are shut down.
1891	• Legislature declares an official end to the era of "artificial emigration."
1892	• Subsidy program ends.
1894	• Police are given the power to expel immigrants for illegal acts, including gambling.
1898	• Immigration Service is relocated to the Department of Agriculture, and given the primary responsibility to coordinate itinerant farm laborers.
1902	• Legislature authorizes the expulsion of political undesirables (anarchists, etc.). Used mostly to deport labor organizers and others critical of the government.
1910	• Social Defense Law strengthens the 1902 Act, and makes it a crime to bring to Argentina a "dangerous" immigrant.[2]
1913	• Legislature bans the entry of those with symptoms of tuberculosis, leprosy, or trachoma.[3]

[2] Solberg, Carl, *Immigration and Nationalism: Argentina and Chile, 1890-1914*, (University of Texas Press, Austin, 1970)

[3] International Labour Office, *Emigration and Immigration: Legislation and Treaties*, (International Labour Office, Geneva, 1922).

1916 • New immigration legislation adds to the list of excluded classes: the blind, deaf and dumb, paralytics, disabled, idiots, epileptics, and the mentally ill. Also bans beggars and unaccompanied women with small children. Immigrants are required to bring with them a certificate that they have not been prosecuted for any crimes against the public order (anarchism and other anti-government activities) or for grave crimes, within the past five years.

1919 • Act amends the 1916 legislation to allow for other forms of documentation to prove non-criminal status.

1921 • Legislature requires foreigners to take their documentation to the Argentine consul at point of origin to have an official record drawn up, prior to embarkation.

1923 • New law reestablishes the existing bans and regulations, and adds those likely to become public charges and unaccompanied children under 15.[4]

[4] Valet, M., *Les Restrictions à l'Immigration*, (Librairie du Recueil Sirey, Paris, 1930).

Australian Immigration Policy, 1860-1930[5]

Pre-1860 By 1860, Victoria and South Australia had restricted Chinese immigration by imposing a head tax of £10, and limiting passengers to 1 per 10 tons of carrying burden. Throughout this time, all of the states were to various degrees "assisting" immigrants, by subsidizing transport and/or supporting them upon arrival. (From 1901-1905, until the Federal role was straightened out, there was no such assistance. It returned in 1905 with a joint state/federal role, but it is unclear which legislation authorizes this.)

1861
- New South Wales imposes the restrictions on Chinese immigration, while South Australia repeals their restrictions.

1865
- Victoria repeals the anti-Chinese legislation.

1867
- New South Wales repeals the restrictions.

1875
- In response to a new Chinese influx, Queensland enacts the same restrictions on immigration.

1882-1887
- Over the five years, the states successively reimpose the £10 tax and passenger restrictions.

1887
- All of Australia is restricting Chinese immigration.

1901
- The Dictation Test is legislated, along with the basic immigration legislation for the federal Australia. The act authorizes a test to be administered at the discretion of immigration agents, 50 words in a European language to be written by the prospective immigrant. The act also bans paupers, idiots, criminals, prostitutes, and the diseased.
- Pacific Islanders Labourers Bill is passed, regulating immigration with a goal to end all immigration by 1904, and to deport remaining workers by 1906.
- Legislation bans indenture contracts.

1903
- Naturalization laws established, following England's.

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[5] Pre-1860 to 1905: Charteris, A.H. "Australian Immigration Policy," in *International Conciliation: Documents for the Year 1927*, (Carnegie Endowment for International Peace, Worcester Ma., 1927)
1901, 1903, 1905, 1906, 1920, 1925: Sawer, Geoffrey, *Australian Federal Politics and Law: 1901-1929*, (Cambridge University Press, New York, 1956).
1907-1914, 1925-1926: Pope, David, "Assisted Immigration and Federal-State Relations: 1901-30," *Australian Journal of History and Politics*, No. 1, 1982.
1930: Drummond, Ian M., *Imperial Economic Policy: 1917-1939*, (George Allen and Unwin, London, 1974).

1905
- Dictation Test legislation is amended, with pressure from the Japanese, to be allowed in any prescribed language. No prescriptions were made, however.
- New South Wales begins plan to assist immigration.
- Contract Immigrants Act allows for contract labor of British citizens, and some alien contract labor for specialized work.
- Legislature authorizes Foreign Minister to work out bilateral agreements to exempt certain immigrants from the dictation test.
- Apparently, something was worked out with the states to allow them to assist immigrants again.

1906
- Pacific Islanders bill amended to allow those who owned land, or had been resident for more than 20 years, to remain in Australia.

1907
- £5,000 authorized to advertise Australia's resources. £1,208 actually spent.

1908
- £20,000/year budgeted for advertising until 1913.

1910
- £8,000 spent on advertising.

1911
- £15,600 spent on advertising.

1912
- £20,000 spent on advertising.
- Immigration Act amended to add to health restrictions and to establish medical exams prior to debarkation.

1913
- £20,000 spent on advertising.

1914
- £50,000 spent on advertising.

1920
- Immigration Act amended, establishing the right to bar anarchists; Germans, Austrians, Bulgarians, Hungarians, and Turks (for a period of five years); and non-holders of passports.
- Joint Scheme to encourage immigration formalizes the federal role in promoting immigration, giving the federal government responsibility for promotion and recruiting, and the states responsibility for getting them settled.
- Alien Naturalization Law is realigned with Britain.
- Alien Registration Act; Passports Act provide that all aliens over the age of 16 had to register their place of residence and be thumbprinted; they are forbidden to leave Australia without a passport.

1924
- Immigration Act amended to require £40 landing money or the financial guarantees of a resident, and the extend the list of excludables.

1925
- Legislature authorizes free passage for all domestics, through 1929.
- Spent £301,862 for assisted passage of 31,000 immigrants.
- 10-year migration agreement is signed with Britain, with Australia to pay 31% of interest on loans to settlers, England to pay 42%, and the balance to be paid by the states.
- Foreign-born children of nationals are granted citizenship.
- Governor-general is given the authorization to prohibit or numerically restrict immigration "of any specified nationality, race, class, or occupation."

1926 • Migration Commission is established, to handle the 10-year agreement with Britain.

1930 • Agreement with England is cancelled.
• Subsidies per person are reduced, to limit the number of immigrants.

Brazilian Immigration Policy, 1860-1930[6]

Pre-1860 — 1822 marks independence for Brazil, and the first legislation concerning immigration came in 1830, when provincial governments were given the authority to promote colonization. In 1842, a law established that foreigners could only purchase land by *voie d'acquisition*, a law that was strengthened in 1850 to require purchase by *voie d'achat*, all with the intent of delaying land ownership for recent arrivals. The laws were passed at the encouragement of plantation owners who felt that most arrivals would be forced for a period of time to be agricultural workers. In 1852 the slave trade was halted. In 1854, land ownership was allowed without restriction, undoing the laws of 1842 and 1850. Nothing of substance was accomplished in the 1860s.

1871 — • The provincial president authorizes funding for an association of financiers and planters to aid colonization and immigration. Association contracts for 15,000 immigrant workers over the next three years.

1872 — • 300,000 milreis budgeted to assist business in obtaining immigrant workers.

1874 — • 42,448 milreis spent from 1871 to 1874 on subsidies, for only 480 workers. Contract reissued for five years (still 15,000 workers).

1875-1879 — • 10,455 workers arrive over the five years.

1881 — • Law authorizes the construction of an immigrant receiving station. 46,000 milreis spent on subsidized immigration.

1882 — • 68,000 milreis spent on immigration subsidies.

1883 — • Funds budgeted to remodel an existing building for the station. 110,000 milreis spent on immigration subsidies.

1884 — • Legislature authorizes direct subsidies for the passage of agricultural workers. 374,000 milreis spent.

1885 — • 100,000 milreis authorized for building a new receiving station. 266,000 milreis spent on subsidized passage.

1886 — • A new private association is established to aid in immigration. The government spends 1,132,000 on subsidized passages, and authorizes 12,000 for a promotional campaign.

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[6] Pre-1860 to 1870: Leff, Nathaniel H., *Underdevelopment and Development in Brazil, Volume 1: Economic Structure and Change, 1822-1947*, (George Allen and Unwin, London, 1982).
1871-1895: Holloway, Thomas H., "Immigration and Abolition: From Slave to Free Labor," in Dauril Alden and Warren Dean, eds., *Essays Concerning the Socioeconomic History of Brazil and Portuguese India*, (University Presses of Florida, Gainesville, 1977).
1900-1911: Balhana, Altiva Pilatti, Brasil Pinheiro Machado, and Cecilia Maria Westphalen, "L'Immigration au Brésil de la Fin du XVIIIe Siècle à Nos Jours," in Commission Internationale d'Histoire des Mouvements Sociaux et des Structures Sociales, *Les Migrations Internationales de la Fin du XVIIIe Siècle à Nos Jours*, (Editions du Centre National de la Recherche Scientifique, Paris, 1980).
1911-1920: ILO; 1920-1930: M. Valet, op. cit.

1887 • The promotion society gets an administrative structure. The government sets up a branch office in Genoa to facilitate the process. 3,205,000 milreis are spent on subsidized passages, which are approximately 70-90% of the total fare.

1888 • Slavery is abolished.
• 2,908,000 milreis are spent on subsidized passages.

1889 • Military coup d'etat. Only 159,000 spent on transport.

1890 • 893,000 milreis spent on transport subsidies.

1891 • New constitution established, with no change in authority for the immigration promotion groups. 1,055,000 milreis spent on assisted passage.

1894 • Department of Agriculture begins making contracts with shipping companies to bring agricultural workers to Brazil.

1895 • The quasi-governmental promotion groups are shut down, and their work is taken over by the department of agriculture.

1906 • The ministry of agriculture is authorized to work directly with steamship and railroad companies to coordinate immigration.

1911 • First restrictions on immigration. The following classes are banned: those over 60, diseased, criminals or those engaged in illegal professions, anarchists, mendicants, vagabonds, the insane, and disabled.
• Law authorizes a free, third-class journey for agricultural workers and their families. Free board and lodging for 8 days and transportation to their settlement. Land to be sold in blocks of 25 hectares in a 5-year installment plan. Each immigrant family could buy one plot only, until they had paid for it, then they were free to buy more.

1913 • Health regulations for ships are established, but give precedence to regulations at the point of origin, if at least as favorable to the immigrant.

1921 • More restrictions are added, including prostitution, the mutilated, crippled, blind, mentally ill, and diseased, unless they can prove they can support themselves. Grounds for expulsion or denial of entry were established, including all of the above restrictions, and: having been expelled from another country, charged with any offense against the public order in another country or advocating the overthrow of any government, and a general list of criminal offenses including murder, counterfeiting, and robbery.

1924 • Pernambouc state bans the establishment of non-agricultural immigrants.
• Federal law requires visas issued by the Brazilian consul prior to embarkation, as well as photo-identity cards with fingerprints and other identifying characteristics noted.

1925 • Federal law establishes the right of the director of the immigration service to suspend or temporarily limit the number of arrivals, and requires the shipping companies to get authorization prior to leaving port.

Canadian Immigration Policy, 1860-1930[7]

Pre-1860	Canadian Immigration Service is established in 1828, mostly to handle the enforcement of the British Passenger Acts, regulating ship health and safety standards. In 1832, Canada establishes health regulations of its own. In 1854, the parliament authorized small sums of money to be spent in England and Europe, advertising the attractions of emigration to Canada. In 1859, an office is established in Liverpool to promote English emigration to Canada.
1860	• Office for emigration promotion opens in Germany.
1867	• Constitution Act officially cedes responsibility for immigration to the Canadian parliament.
1868	• Parliament grants the provinces the autonomy to do their own recruiting of immigrants. • Ottawa opens a London office and a Europe office.
1869	• First Act on immigration is passed by the parliament, with no restrictions. Act gives the Cabinet the authority to work out the details.
1870	• $30 per adult is granted in travel funds, and exemption from military service, for Mennonites who agree to build settlements.
1872	• Parliament prohibits the immigration of criminals and "vicious classes." • Dominion Lands Act, in the model of the Homestead Act of the U.S., grants 160 free acres in return for a $10 registration fee and a commitment to build a home on the property and cultivate the land.
1874	• Parliament amends the Land Act to authorize the sale of partially settled land, in blocks at reduced prices, to colonization companies, to try to encourage more settlement.
1877	• Parliament abandons 1874 plan after most colonization attempts are failures.
1881	• Parliament again tries to use colonization companies to recruit immigrants, without much success.
1882	• More blocks of land are authorized for sale.
1885	• Parliament passes an Act to "restrict and regulate Chinese immigration," by assessing a $50/head tax on Chinese immigrants.
1889	• Parliament restricts (but does not prohibit) the return of aliens to Canada.

[7] Knowles, Valerie, *Strangers at our Gates: Canadian Immigration and Immigration Policy, 1540-1990*, (Dundurn Press, Toronto, 1992).

1896 • Dominion Land Boards are centralized to reduce red tape in getting immigrants settled.

1897 • Alien Labor Act prevents immigrants from entering Canada under contract for labor services.

1898 • More red tape is abolished in the settlement program. Meanwhile, the Immigration Branch uses its authority for the first time to return a railroad car of Italian workers entering from the U.S.

1899 • Commission embarks on a new campaign to attract immigrants, including getting articles into newspapers, giving tours of Canada to journalists, and advertising at world fairs. The agency is expanded to start recruiting from the U.S. (The goal is to find agriculturalists.)

• Canada sets up the secret North Atlantic Trading Company, to give bonuses to European shipping agents for directing immigrants to Canada, or for bringing them.

1900 • Tax on Chinese immigration is raised to $100/head.

1903 • An office is set up in London, separate from the Immigration Commission, to recruit immigrants.

• Head tax on Chinese immigrants is raised to $500/head.

1906 • North Atlantic Trading Company is abandoned.

•Immigration Act reworks the preexisting laws, to establish bans on a range of classes: prostitutes, the mentally retarded, epileptics, the insane, diseased, infirm, or disabled, and criminals. The immigration service is enhanced to begin policing the border between the U.S. and Canada. First deportation provisions are established for impoverished or diseased immigrants.

1907 • Parliament authorizes new bonuses for European agents bringing farm labor to Canada. 100 agents are adopted in Britain, to be given $2 per recruit.

• Canada reaches a bilateral agreement with Japan to limit emigration to Canada to 400 Japanese per year.

1908 • To limit Japanese immigration via Hawaii, and Indian immigration, Canada establishes the "continuous journey" regulation, stating that no one will be admitted unless the country from where their ship left is their country of origin. At the time, no ships travelled directly from India to Canada.

• Agreement with Japan reduces the number of immigrants to 150 per year.[8]

1910 • Act Respecting Immigration gives the Cabinet unlimited discretionary powers to regulate volume, ethnicity, and occupational makeup of immigration flows. Act allows the Immigration Branch to prohibit entry of undesirable races and to deport those engaged in undesirable political activity. A $200/immigrant tax is imposed on all Asian immigrants, and a $25 tax

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[8] Hertzman, Lewis, "L'Immigration au Canada avant et après la Confédération," (in English) in Commission Internationale d'Histoire... op. cit.

(seasonally variable) on all immigrants. This begins the period of overt ethnic preferences in immigration policy.

1914 • War Act authorizes the deportation of those perceived to be foreign agents, and bans immigration from Germany and allied countries.

1917 • Wartime Elections Act disenfranchises the foreign born and foreign-language speakers.
• Chinese Clergymen and students are exempted from the head tax.

1918 • Parliament makes it illegal to print or own any document in an "enemy" language.
• Immigration Branch is elevated to departmental status.

1919 • Literacy test is established, barring those who were over 15 years old who could not read any language. Also, bars those with "peculiar customs, habits, or modes of living."
• New reasons for deportation are established, including: "constitutional psychopathic inferiority," and chronic alcoholism. Political dissention is added as a deportable act, notably anarchism and Bolshevism. (Many in fact were deported, mostly labor organizers.)

1922 • Britain works with her dominions in the Empire Settlement Act, a joint effort to get people out of Britain to the colonies. Canada signs on to bring 3000 families, with the British government paying for farm machinery, and Canada paying for agricultural extension and farm supplies, and helping to settle them.

1923 • Chinese Immigration Act bans all Chinese immigration, with the exception of students, merchants, and diplomats.
• Parliament repeals ban on immigration from Germany and her allies.

1925 • Canada and Britain agree to share the costs of reducing passenger fares from England to Canada, in cooperation with the shipping companies.
• Ottawa, in contradiction of federal directives, gives authority to the private railroad companies to take over recruiting farm labor, including recruiting from "non-preferred" countries of Eastern Europe. This results in a surge of labor, not necessarily agricultural, into Canada.

1930 • Canada bans all immigration from Europe, except for those with enough money to establish and maintain themselves on farms, or wives and children of Canadian residents.
• Agreement with Ottawa railroad companies is cancelled.

United States Immigration Policy, 1860-1930[9]

Pre-1860 Prior to 1840, most policy was set by individual states. Some were restricting the entrance of paupers and criminals, or imposed head taxes to pay for immigrant services. Naturalization was allowed after five years. From 1847-1849, the first effective legislation regulating passenger ships was enacted, requiring 14 square feet of clear deck space per passenger and adequate ventilation and food supplies. In 1849, the Supreme Court ruled that the state policies of head taxes and bonding were unconstitutional, leaving no funds to pay for lodging and health services provided to immigrants. In 1855, all the individual passenger acts were consolidated and recodified to strengthen the health and safety regulations. Also in 1855, wives and foreign-born children of citizens were granted automatic citizenship.

1860 • Passenger Acts are amended to protect female passengers from "seduction by ship personnel."

1862 • "Coolie" trade by U.S. vessels is banned. (Also, the Homestead Act)

1864 • Commission of Immigration office is established with a budget of $20,000/year for publishing and distributing recruiting literature.
• Congress legalizes indentured labor contracts of less than one year for payment of passage.

1865 • Congress fine-tunes the steamship regulations

1866 • Congress issues a formal protest to European governments against the deportation of criminals to the U.S.

1868 • Congress repeals the labor-contract provision of the 1864 act.

1869 • Strengthening of laws against the coolie trade, notably making it illegal to transport individuals under fraudulent claims to induce emigration.

1870 • Under concern that there were insufficient safeguards in the naturalization process, Congress tightens the regulations and puts checks into place. The act extends the right of naturalization to those of African descent.

1871 • Recognizing deficiencies in the old law, Congress reworks the passenger acts, without substantive change.

1875 • Immigration Act establishes the notion of "excludable" classes. Act prohibits the importation of Chinese women for "immoral purposes" (prostitution) and bringing anyone without their consent; makes contracting to supply coolie labor a felony; designates criminals as an excludable class, but specifically not to mean political offenses or those who received pardons in return for leaving their country of origin.

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[9] Source: Hutchinson, E.P., *Legislative History of American Immigration Policy, 1798-1965*, (University of Pennsylvania Press, Philadelphia, 1981).

1876 • Congress requires a "declaration of intent" prior to naturalization (i.e., filling out the paperwork.)

1880 • U.S. negotiates a treaty with China, recognizing the right of the U.S. to regulate, limit or suspend Chinese immigration, but *not* the right to prohibit it.

1882 • Passenger Acts are completely redone, detailing the required deck space, food portions, water, and ventilation.
• New classes are added to the list of excludables: paupers, convicts, persons suffering from "mental alienation," lunatics, and idiots.
• A head tax of $.50/immigrant is imposed to defray the costs of administration.
• Congress establishes the first legal existence of deportation, by legislating that convicts will be returned to their country of origin.
• Chinese immigration is suspended for 10 years, with a provision to deport illegal chinese residents. Congress instructs the courts that they are to disallow citizenship for the Chinese.

1884 • Congress amends the Chinese immigration suspension law to require evidence from legal entrants of belonging to an excepted group (merchants and travellers). Congress clarifies that the law applies to all Chinese, regardless of country of origin.
• Carriers between the U.S. and Mexico or Canada are exempted from the head tax, while the tax is imposed on those who come by land as well as by ship.

1885 • Alien Contract Labor Act makes it illegal to prepay an individual's voyage in return for labor services; voids all existing contracts made prior to immigration; establishes penalties for violators. The Act exempts diplomats or other foreigners temporarily in the U.S. who bring over staff, specialty labor, domestic servants, and certain professional groups.

1887 • Contract Labor Law clarifies the enforcement mechanism of the 1885 Act, and provides that prohibited workers would be sent back.
• Congress passes a law banning any non-citizen from owning real estate, or more than 20% foreign-held ownership of a corporation, unless the individuals had properly declared their intent to become citizens (i.e., filled out the paperwork.)

1888 • Chinese Exclusion Act suspends all Chinese immigration for 20 years (with the usual student/diplomatic exemptions) and establishes the rules of deportation and fines for violators. For the first time, the law allows for the imprisonment of those in the U.S. unlawfully. (The suspension part of the Act was later found null after failure to ratify the treaty, although the 1882 ban remains in effect.)

- Congress makes it illegal for Chinese residents to return to the U.S. if they leave (even if here legally), and stops issuing identity certificates, which had functioned as passports.
- Alien land-ownership laws are amended to allow governments to set up their attachés in Washington.
- Congress authorizes funds for finding and deporting illegal contract labor.

1891
- Immigration Act adds new groups to the list of excludable classes: those "likely to become public charges," polygamists, those suffering from contagious and dangerous diseases, and anyone "assisted" in passage. The Act bans all advertizing for the purpose of encouraging immigration, except by offices of the states. Also, the Act extends the exemptions from the contract labor law to include professors, professionals, and ministers, while adding to those prohibited contracts with family or friends.

1892
- Chinese Exclusion Act extends the ban for another 10 years, requires legal Chinese to file for a residency certificate within one year, and provides for the deportation of those who do not have their certificates within that year, unless "at least one credible white witness" can attest to their difficulty in obtaining the certificate.

1893
- Quarantine act allows the President to restrict or suspend immigration in response to contagious disease threats in foreign countries.
- Congress reworks some of the red tape to help enforce existing laws.
- Chinese Exclusion Act is amended to strengthen its enforcement, and to allow any non-chinese witness in place of the white witness.

1895
- Head tax is raised to $1/immigrant

1898
- Congress sets up a commission to look at the effects of immigration on labor and industry, to report back to Congress with advice for handling immigration.

1902
- Chinese Exclusion Act extends the ban for another 10 years. Essentially, it is the 1892 law reissued.

1903
- Immigration Act raises the head tax to $2. Also adds to the list of excludable classes: professional beggars, epileptics, the insane, prostitutes, and anarchists or others endorsing the overthrow of foreign governments. (The first time that political inclinations are addressed.) The Act also extends the period of deportability to two years from admission.

1904
- Immigrants from Newfoundland are exempted from the head tax.
- Congress extends the ban on Chinese immigration to all U.S. islands and territories.

1907
- Immigration Act rises the head tax to $4, except for arrivals from Mexico, Canada, Newfoundland, and Cuba. Also restricts entry of those who were granted a passport for a different destination. Act adds more classes to the list

of excludables: Unaccompanied minors, "induced" immigrants, and the disabled. Act establishes a financial test, so that each individual must have $25, or $50 per family, the first such requirement on immigrants.
- Congress sets up another commission to study immigration.

1909
- Canada and Mexico are exempted from having to manifest their alien arrivals.

1910
- White Slave Traffic Act expands deportation statutes and laws on prostitution offenses to include any alien (i.e., any foreign men involved can be prosecuted as well as the women), and to extend the period of deportability indefinitely.

1917
- Immigration Act establishes a literacy test for immigrants, to be given in any language. Failure to demonstrate literacy will be grounds for denial of admission, although certain groups are exempted. Act adds to the classes of excludables those of "constitutional psychopathic inferiority," a jargon phrase that was also used in Canadian legislation. It is interpreted to mean those that will fail to assimilate. The Act also defines a zone in Asia (actually most of Asia) from which individuals would be ineligible for citizenship through naturalization. Immigration is banned for those who would not be eligible for citizenship through naturalization. Thus, all immigration of Asians is effectively banned. The Act also doubles the head tax to $8.

1918
- Congress strengthens the ban on anarchists and other political troublemakers, and also agrees to readmit certain aliens who served in the military for the U.S. or her allies during the war.

1919
- Congress gives the President temporary powers to make any necessary rules/prohibitions on alien entry in order to protect the public safety. (Power expired on March 4, 1921)

1920
- Congress passes a five-year window of opportunity to allow those that cannot read admission to the U.S., if they are going to marry someone who fought in the war, even if he is an alien. (War brides).
- Congress passes some rules to handle alien activists. It allows the deportation of those "interned as dangerous but *not actually convicted of any crime.*" It also extends the definition of anarchist (grounds for deportation) to include those associated with anti-government groups, publications, or organizations affiliated with the publications.

1921
- Quotas are established to restrict the quantity of immigration from any one country to 3% of its population in the U.S. in 1910, for one year. The ban on all Asian immigration remains in effect, while all immigration from the Western Hemisphere is free from restriction. To keep Canada and Mexico from being through-ways to the U.S., immigrants from the Western Hemisphere have to have been in those countries for one year before qualifying for quota-free admission.

This law, originally a temporary measure, expired in 1922.

1922 • Act extends the 1921 Act until 1924, and extends the Western-Hemisphere residency period to five years. Establishes a $200 fine for bringing an illegal immigrant, and allows certain aliens brought in over quota to remain.

1924 • 1921 Act is amended to use quotas of 2% of the population, using 1890 as the base year (thus further restricting the "new" immigrants.) Establishes that as of July 1927, the quota will be 150,000 total, in the same proportion as the "national origin" of the U.S. population in 1920, excluding from the count immigrants brought against their will. (I.e., former slaves do not count for Africa's quota.) Act establishes that wives and children under 18 have non-quota status, as do *natives* of the Western Hemisphere, ministers, professors, and students. Quota preference is given to children of citizens under 21, parents, spouses, and those trained in agriculture.

1926 • Congress admits wives and children under 18, and professors, who were in the U.S. prior to 1924.
• The use of a "national origins" system is postponed until 1928.

1928 • "National origins" system is postponed until 1929.
• Women who were citizens of the U.S., but gave it up by marrying a foreigner, are admitted if they are unmarried.
• Establishes that one-half of the quotas will be reserved for the preferred classes -- wives and children, parents, agricultural workers.
• Clarifies that American Indians may travel freely across borders without immigration restrictions, as long as they are not part of a tribe by adoption.

1929 • Deportations Act makes it a felony to return to the U.S. if deported and a felony or misdemeanor to enter the U.S. at an unauthorized point. Also establishes that those punishable will first be imprisoned, then deported after serving their sentence.
• National Origins Act takes effect July 1.

Appendix D -- Descriptive Statistics and Correlations

A. Descriptive Statistics for 5-year averages, by variable

	ARPOLICY	AUPOLICY	BRPOLICY	CAPOLICY	USPOLICY
Mean	0.680	1.473	2.147	0.240	-1.533
Maximum	3.900	2.600	4.500	2.000	0.400
Minimum	-2.500	-0.600	-2.000	-4.000	-4.700
Std. Dev.	2.098	0.961	2.101	1.764	1.596
Observations	15	15	15	15	15

	ARWAGER	AUWAGER	BRWAGER	CAWAGER	USWAGER
Mean	75.212	90.870	92.777	105.105	94.283
Maximum	118.611	109.017	132.196	136.260	147.447
Minimum	41.419	72.785	57.660	63.177	56.079
Std. Dev.	23.162	10.780	24.689	25.914	27.741
Observations	14	16	16	13	16

	USWGRR	CAWGRR	BRWGRR	AUWGRR	ARWGRR
Mean	0.012	0.016	0.018	0.006	0.028
Maximum	0.059	0.045	0.054	0.072	0.120
Minimum	-0.028	-0.028	-0.024	-0.041	-0.045
Std. Dev.	0.022	0.022	0.028	0.033	0.044
Observations	16	13	16	16	14

	ARWTOY	AUWTOY	BRWTOY	CAWTOY	USWTOY
Mean	71.789	77.101	117.175	109.257	111.182
Maximum	96.881	104.606	184.831	142.717	143.690
Minimum	44.505	44.147	47.278	76.747	76.905
Std. Dev.	16.809	15.897	45.413	20.213	20.138
Observations	12	16	14	13	16

	USYPCGRR	CAYPCGRR	BRYPCGRR	AUYPCGRR	ARYPCGRR
Mean	0.016	0.026	0.014	0.001	0.022
Maximum	0.065	0.064	0.084	0.038	0.094
Minimum	-0.032	-0.023	-0.048	-0.085	-0.035
Std. Dev.	0.032	0.027	0.043	0.031	0.045
Observations	16	13	14	16	12

	USUNEMP2	CAUNEMP2	BRUNEMP2	AUUNEMP2	ARUNEMP2
Mean	-0.026	0.091	0.000	0.000	-0.145
Maximum	10.020	32.650	59.473	14.518	36.270
Minimum	-7.882	-24.495	-51.295	-12.125	-22.529
Std. Dev.	4.068	15.394	36.016	6.725	14.790
Observations	16	13	14	16	12

	ARXMTOY	AUXMTOY	BRXMTOY	CAXMTOY	USXMTOY
Mean	111.483	91.036	112.351	96.892	97.052
Maximum	189.973	131.259	178.049	136.642	128.208
Minimum	74.076	65.326	55.579	77.377	71.260
Std. Dev.	42.959	20.839	37.529	14.571	16.414
Observations	12	16	14	13	16

	ARFORPOP	AUFORPOP	BRFORPOP	CAFORPOP	USFORPOP
Mean	0.194	0.350	0.040	0.178	0.137
Maximum	0.296	0.734	0.072	0.266	0.153
Minimum	0.115	0.154	0.004	0.128	0.120
Std. Dev.	0.065	0.188	0.023	0.043	0.010
Observations	15	16	16	16	16

	USGAP	CAGAP	BRGAP	AUGAP	ARGAP
Mean	0.073	0.159	0.081	0.014	0.073
Maximum	0.190	0.520	0.173	0.047	0.250
Minimum	0.004	0.024	0.019	0.002	0.013
Std. Dev.	0.070	0.152	0.045	0.013	0.073
Observations	16	16	16	16	15

	ARIMRATE	AUIMRATE	BRIMRATE	CAIMRATE	USIMRATE
Mean	0.016	0.020	0.003	0.014	0.007
Maximum	0.037	0.100	0.009	0.036	0.014
Minimum	0.005	0.003	0.001	0.003	0.002
Std. Dev.	0.010	0.023	0.002	0.010	0.003
Observations	15	16	16	16	16

	ARIMWAGE	AUIMWAGE	BRIMWAGE	CAIMWAGE	USIMWAGE
Mean	48.187	75.593	45.611	70.666	68.647
Maximum	66.852	92.471	68.400	93.081	87.747
Minimum	34.668	53.513	29.696	50.727	50.528
Std. Dev.	10.135	14.686	11.530	12.537	9.787
Observations	15	16	16	16	16

	ARIMWREL	AUIMWREL	BRIMWREL	CAIMWREL	USIMWREL
Mean	67.345	61.785	96.762	57.851	45.689
Maximum	104.677	81.770	240.657	75.116	56.337
Minimum	51.219	43.155	58.515	43.181	31.261
Std. Dev.	15.304	10.889	57.028	10.795	7.950
Observations	13	16	16	13	16

	ARTHREAT	AUTHREAT	BRTHREAT	CATHREAT	USTHREAT
Mean	0.659	0.840	0.035	0.724	0.394
Maximum	1.424	5.307	0.273	2.110	0.768
Minimum	-0.038	0.104	-0.348	0.135	0.117
Std. Dev.	0.409	1.261	0.161	0.631	0.204
Observations	13	16	16	13	16

B. Descriptive Statistics for Annual Data, by Country

ARGENTINA

	GAP	IMRATE	IMWAGE	POLICY	THREAT	UNEMP	WAGER	WGRR	WTOR	XMTOY	WTOY	YPCGRR	WAGEN	PARCOM	DEMOC	FORPOP
Mean	0.072	0.017	48.365	0.662	0.654	-0.254	76.725	0.024	70.305	105.876	69.997	0.026	100.485	2.987	2.837	0.197
Maxim	0.311	0.064	73.767	4.500	2.351	1.085	125.566	0.433	157.383	214.404	105.183	0.296	238.133	3.000	4.000	0.311
Minim	0.004	0.002	32.216	-2.500	-0.171	-2.629	39.067	-0.293	17.874	60.241	31.614	-0.227	32.249	2.000	1.000	0.109
Std. Dev	0.077	0.012	10.446	2.128	0.519	1.005	22.938	0.133	39.110	39.239	18.281	0.101	62.549	0.112	0.787	0.065
Obs	74	71	74	71	61	56	67	66	31	56	56	55	67	80	80	71

AUSTRALIA

	DEMOC	FORPOP	GAP	IMRATE	IMWAGE	POLICY	PARCOM	THREAT	UNEMP	WAGEN	WAGER	WGRR	WTOR	WTOY	XMTOY	YPCGRR
Mean	10.000	0.356	0.014	0.021	75.593	1.444	5.000	0.666	-0.047	103.643	91.233	0.007	121.596	76.733	91.213	0.003
Maxim	10.000	0.885	0.196	0.163	101.613	3.000	5.000	6.835	0.471	215.219	114.738	0.288	242.399	118.517	152.835	0.211
Minim	10.000	0.152	0.000	0.003	44.479	-2.000	5.000	0.037	-1.196	25.581	57.890	-0.237	66.699	35.385	55.007	-0.191
Std.Dev.	0.000	0.192	0.029	0.025	15.303	1.136	0.000	0.943	0.363	45.937	12.040	0.088	48.237	16.626	21.839	0.073
Obs	30	30	81	80	81	80	71	30	77	81	81	77	77	44	81	81

BRAZIL

	DEMOC	FORPOP	GAP	IMRATE	IMWAGE	PARCOM	POLICY	THREAT	UNEMP	WAGEN	WAGER	WGRR	WTOY	YPCGRR	XMTOY
Mean	3.400	0.039	0.080	0.003	45.241	3.000	2.268	0.042	-0.018	74.822	92.376	0.016	117.175	0.014	112.351
Maxim	5.000	0.073	0.301	0.015	76.687	3.000	4.500	0.500	1.947	211.158	149.173	0.480	216.691	0.172	226.435
Minim	1.000	0.003	0.001	0.000	22.600	3.000	-2.000	-0.493	-2.827	17.018	52.825	-0.210	42.360	-0.189	49.313
Std.Dev.	1.588	0.022	0.063	0.003	11.819	0.000	2.123	0.172	0.882	47.983	25.466	0.116	46.182	0.080	38.541
Obs	80	80	79	79	79	79	80	71	79	70	81	81	80	70	70

CANADA

	DEMOC	FORPOP	GAP	IMRATE	IMWAGE	PARCOM	POLICY	THREAT	UNEMP	WAGEN	WAGER	YPCGRR	XMTOY	WTOY	WTOR	WGRR
Mean	8.500	0.178	0.159	0.014	70.583	3.500	0.197	0.743	-0.144	146.388	107.854	0.024	96.950	108.174	126.959	0.015
Maxim	10.000	0.298	0.770	0.055	101.239	5.000	2.000	3.336	0.599	305.191	143.023	0.154	176.721	181.325	161.536	0.147
Minim	7.000	0.122	0.009	0.002	45.501	2.000	-4.500	0.079	-1.836	77.392	63.177	-0.117	70.467	71.147	100.000	-0.091
Std.Dev.	1.113	0.043	0.193	0.011	13.313	1.113	1.937	0.766	0.635	71.173	23.785	0.056	19.506	22.897	16.600	0.049
Obs	64	64	80	80	80	81	64	71	61	64	61	61	60	61	61	30

UNITED STATES

	DEMOC	FORPOP	GAP	IMRATE	IMWAGE	PARCOM	POLICY	THREAT	WAGEN	UNEMP	YPCGRR	XMTOY	WTOY	WGRR	WTOR	WAGER
Mean	9.617	0.136	0.072	0.007	68.708	4.617	-1.620	0.397	129.753	-0.015	0.016	97.092	111.391	0.012	101.878	93.953
Maxim	10.000	0.159	0.247	0.016	91.486	5.000	1.000	1.041	334.998	0.763	0.145	146.382	152.944	0.146	139.745	152.941
Minim	8.000	0.097	0.001	0.001	48.068	3.000	-5.000	0.072	57.234	-1.330	-0.111	50.886	72.255	-0.122	56.110	49.533
Std.Dev.	0.699	0.011	0.073	0.004	10.380	0.699	1.578	0.233	74.303	0.399	0.060	17.869	20.999	0.043	21.492	27.304
Obs	81	81	81	81	81	81	81	71	81	81	81	81	81	81	81	81

C. Correlations of Annual Data, by Country

ARGENTINA

	ARGAP	IMRATE	IMWAGE	POLICY	THREAT	UNEMP	WAGER	WGRR	WTOR	XMTOY	WTOY	YPCGRR	WAGEN	DEMOC	FORPOP
ARGAP	1.000	0.293	0.169	-0.077	0.183	-0.316	-0.129	-0.130	-0.092	-0.153	-0.358	-0.074	0.108	0.016	0.181
IMRATE	0.293	1.000	0.636	0.071	0.893	-0.392	-0.042	-0.292	-0.583	0.226	-0.549	-0.425	0.141	0.342	0.138
IMWAGE	0.169	0.636	1.000	-0.510	0.509	-0.295	0.220	-0.079	-0.749	-0.318	-0.734	-0.281	0.680	0.629	0.508
POLICY	-0.077	0.071	-0.510	1.000	-0.039	-0.385	-0.593	0.000	0.520	0.917	0.473	0.091	-0.935	-0.255	-0.709
THREAT	0.183	0.893	0.509	-0.039	1.000	-0.097	0.326	-0.533	-0.594	0.184	-0.313	-0.271	0.261	0.231	0.134
UNEMP	-0.316	-0.392	-0.295	-0.385	-0.097	1.000	0.603	-0.053	-0.052	-0.299	0.394	0.288	0.241	-0.489	0.047
WAGER	-0.129	-0.042	0.220	-0.593	0.326	0.603	1.000	-0.468	-0.371	-0.374	0.190	0.136	0.680	0.125	0.351
WGRR	-0.130	-0.292	-0.079	0.000	-0.533	-0.053	-0.468	1.000	-0.037	-0.170	-0.169	-0.037	-0.128	-0.105	0.083
WTOR	-0.092	-0.583	-0.749	0.520	-0.594	-0.052	-0.371	-0.037	1.000	0.312	0.577	0.218	-0.643	-0.347	-0.608
XMTOY	-0.153	0.226	-0.318	0.917	0.184	-0.299	-0.374	-0.170	0.312	1.000	0.467	0.105	-0.804	-0.186	-0.699
WTOY	-0.358	-0.549	-0.734	0.473	-0.313	0.394	0.190	-0.169	0.577	0.467	1.000	0.442	-0.483	-0.395	-0.496
YPCGRR	-0.074	-0.425	-0.281	0.091	-0.271	0.288	0.136	-0.037	0.218	0.105	0.442	1.000	-0.086	-0.370	-0.219
WAGEN	0.108	0.141	0.680	-0.935	0.261	0.241	0.680	-0.128	-0.643	-0.804	-0.483	-0.086	1.000	0.420	0.714
DEMOC	0.016	0.342	0.629	-0.255	0.231	-0.489	0.125	-0.105	-0.347	-0.186	-0.395	-0.370	0.420	1.000	0.393
FORPOP	0.181	0.138	0.508	-0.709	0.134	0.047	0.351	0.083	-0.608	-0.699	-0.496	-0.219	0.714	0.393	1.000

AUSTRALIA

	FORPOP	GAP	IMRATE	IMWAGE	POLICY	THREAT	UNEMP	WAGEN	WAGER	WGRR	WTOR	WTOY	XMTOY	YPCGRR
FORPOP	1.000	0.273	-0.497	-0.101	-0.592	-0.092	0.108	-0.383	0.219	-0.265	0.877	0.696	0.326	0.162
GAP	0.273	1.000	0.123	-0.344	0.122	0.513	-0.291	0.159	0.387	-0.210	0.330	-0.093	0.598	0.014
IMRATE	-0.497	0.123	1.000	-0.112	0.844	0.840	-0.806	0.977	0.308	-0.142	-0.610	-0.863	-0.309	-0.183
IMWAGE	-0.101	-0.344	-0.112	1.000	0.104	-0.436	0.105	-0.063	-0.547	0.133	-0.317	-0.069	-0.484	0.000
POLICY	-0.592	0.122	0.844	0.104	1.000	0.622	-0.638	0.799	0.060	0.019	-0.757	-0.857	-0.247	-0.060
THREAT	-0.092	0.513	0.840	-0.436	0.622	1.000	-0.808	0.853	0.643	-0.312	-0.150	-0.604	0.006	-0.181
UNEMP	0.108	-0.291	-0.806	0.105	-0.638	-0.808	1.000	-0.862	-0.463	0.437	0.312	0.768	0.109	0.377
WAGEN	-0.383	0.159	0.977	-0.063	0.799	0.853	-0.862	1.000	0.393	-0.174	-0.537	-0.836	-0.354	-0.155
WAGER	0.219	0.387	0.308	-0.547	0.060	0.643	-0.463	0.393	1.000	-0.522	0.215	-0.112	0.065	-0.130
WGRR	-0.265	-0.210	-0.142	0.133	0.019	-0.312	0.437	-0.174	-0.522	1.000	-0.048	0.088	-0.172	0.473
WTOR	0.877	0.330	-0.610	-0.317	-0.757	-0.150	0.312	-0.537	0.215	-0.048	1.000	0.780	0.457	0.125
WTOY	0.696	-0.093	-0.863	-0.069	-0.857	-0.604	0.768	-0.836	-0.112	0.088	0.780	1.000	0.260	0.318
XMTOY	0.326	0.598	-0.309	-0.484	-0.247	0.006	0.109	-0.354	0.065	-0.172	0.457	0.260	1.000	0.187
YPCGRR	0.162	0.014	-0.183	0.000	-0.060	-0.181	0.377	-0.155	-0.130	0.473	0.125	0.318	0.187	1.000

BRAZIL

	DEMOC	FORPOP	GAP	IMRATE	IMWAGE	POLICY	THREAT	UNEMP	WAGEN	WAGER	WGRR	WTOY	YPCGRR	XMTOY
DEMOC	1.000	-0.895	0.168	-0.460	-0.688	-0.527	0.073	-0.055	-0.708	-0.534	0.042	0.693	-0.065	0.645
FORPOP	-0.895	1.000	-0.082	0.443	0.669	0.610	0.026	0.014	0.730	0.677	0.011	-0.633	0.086	-0.707
GAP	0.168	-0.082	1.000	-0.024	0.096	0.102	0.058	0.045	-0.008	0.274	-0.076	0.198	0.211	-0.256
IMRATE	-0.460	0.443	-0.024	1.000	0.140	0.390	0.584	-0.279	0.176	0.310	-0.120	-0.139	-0.336	-0.059
IMWAGE	-0.688	0.669	0.096	0.140	1.000	0.364	-0.469	0.146	0.753	0.549	0.020	-0.665	0.168	-0.803
POLICY	-0.527	0.610	0.102	0.390	0.364	1.000	0.396	0.505	0.016	0.552	-0.097	-0.086	-0.004	-0.311
THREAT	0.073	0.026	0.058	0.584	-0.469	0.396	1.000	0.017	-0.471	0.239	-0.242	0.502	-0.268	0.398
UNEMP	-0.055	0.014	0.045	-0.279	0.146	0.505	0.017	1.000	-0.310	0.114	-0.226	0.028	0.144	-0.059
WAGEN	-0.708	0.730	-0.008	0.176	0.753	0.016	-0.471	-0.310	1.000	0.482	0.034	-0.779	0.179	-0.817
WAGER	-0.534	0.677	0.274	0.310	0.549	0.552	0.239	0.114	0.482	1.000	-0.242	-0.140	0.055	-0.638
WGRR	0.042	0.011	-0.076	-0.120	0.020	-0.097	-0.242	-0.226	0.034	-0.242	1.000	-0.126	-0.139	-0.008
WTOY	0.693	-0.633	0.198	-0.139	-0.665	-0.086	0.502	0.028	-0.779	-0.140	-0.126	1.000	-0.126	0.708
YPCGRR	-0.065	0.086	0.211	-0.336	0.168	-0.004	-0.268	0.144	0.179	0.055	-0.139	-0.126	1.000	-0.189
XMTOY	0.645	-0.707	-0.256	-0.059	-0.803	-0.311	0.398	-0.059	-0.817	-0.638	-0.008	0.708	-0.189	1.000

CANADA

	DEMOC	FORPOP	GAP	IMRATE	IMWAGE	PARCOM	POLICY	THREAT	UNEMP	WAGEN	WAGER	YPCGRR	XMTOY	WTOY	WTOR	WGRR
DEMOC	1.000	0.128	-0.332	-0.431	0.821	1.000	0.243	-0.489	-0.626	0.714	0.500	0.329	-0.153	-0.217	-0.417	-0.009
FORPOP	0.128	1.000	0.368	-0.173	0.006	0.128	-0.636	-0.169	-0.465	0.541	0.750	-0.278	0.403	-0.219	0.292	-0.307
GAP	-0.332	0.368	1.000	-0.353	-0.533	-0.332	-0.370	-0.263	-0.058	-0.092	-0.123	-0.482	0.577	-0.235	-0.109	-0.054
IMRATE	-0.431	-0.173	-0.353	1.000	-0.361	-0.431	0.114	0.986	0.491	-0.483	-0.018	-0.043	-0.149	0.346	0.600	0.132
IMWAGE	0.821	0.006	-0.533	-0.361	1.000	0.821	0.042	-0.469	-0.669	0.778	0.386	0.495	-0.162	-0.099	-0.165	0.042
PARCOM	1.000	0.128	-0.332	-0.431	0.821	1.000	0.243	-0.489	-0.626	0.714	0.500	0.329	-0.153	-0.217	-0.417	-0.009
POLICY	0.243	-0.636	-0.370	0.114	0.042	0.243	1.000	0.107	0.193	-0.350	-0.309	0.139	-0.458	-0.116	-0.595	0.194
THREAT	-0.489	-0.169	-0.263	0.986	-0.469	-0.489	0.107	1.000	0.571	-0.565	-0.060	-0.115	-0.139	0.347	0.582	0.112
UNEMP	-0.626	-0.465	-0.058	0.491	-0.669	-0.626	0.193	0.571	1.000	-0.923	-0.521	-0.067	-0.285	0.426	0.132	0.015
WAGEN	0.714	0.541	-0.092	-0.483	0.778	0.714	-0.350	-0.565	-0.923	1.000	0.677	0.177	0.212	-0.267	0.012	-0.140
WAGER	0.500	0.750	-0.123	-0.018	0.386	0.500	-0.309	-0.060	-0.521	0.677	1.000	-0.082	0.126	-0.052	0.310	-0.441
YPCGRR	0.329	-0.278	-0.482	-0.043	0.495	0.329	0.139	-0.115	-0.067	0.177	-0.082	1.000	-0.162	0.296	0.014	0.235
XMTOY	-0.153	0.403	0.577	-0.149	-0.162	-0.153	-0.458	-0.139	-0.285	0.212	0.126	-0.162	1.000	0.342	0.129	-0.060
WTOY	-0.217	-0.219	-0.235	0.346	-0.099	-0.217	-0.116	0.347	0.426	-0.267	-0.052	0.296	0.342	1.000	0.380	-0.032
WTOR	-0.417	0.292	-0.109	0.600	-0.165	-0.417	-0.595	0.582	0.132	0.012	0.310	0.014	0.129	0.380	1.000	-0.117
WGRR	-0.009	-0.307	-0.054	0.132	0.042	-0.009	0.194	0.112	0.015	-0.140	-0.441	0.235	-0.060	-0.032	-0.117	1.000

UNITED STATES

	AUTOC	DEMOC	FORPOP	GAP	IMRATE	IMWAGE	PARCOM	POLICY	THREAT	WAGEN	UNEMP	YPCGRR	XMTOY	WTOY	WGRR	WTOR	WAGER
AUTOC	1.000	-0.419	-0.206	-0.288	0.143	0.078	-0.419	0.411	0.001	-0.128	-0.159	0.210	-0.267	0.457	0.317	0.459	-0.400
DEMOC	-0.419	1.000	0.413	0.356	0.110	-0.189	1.000	-0.495	0.206	0.277	0.086	0.159	0.193	-0.468	0.185	-0.229	0.559
FORPOP	-0.206	0.413	1.000	-0.158	0.431	-0.457	0.413	0.183	0.458	-0.427	0.402	0.101	0.415	-0.103	0.070	-0.524	-0.109
GAP	-0.288	0.356	-0.158	1.000	-0.247	-0.333	0.356	-0.570	-0.025	0.429	0.222	-0.133	-0.040	-0.610	-0.003	-0.255	0.666
IMRATE	0.143	0.110	0.431	-0.247	1.000	-0.403	0.110	0.353	0.945	-0.419	0.304	0.022	-0.051	-0.056	0.102	-0.190	-0.295
IMWAGE	0.078	-0.189	-0.457	-0.333	-0.403	1.000	-0.189	-0.233	-0.594	0.482	-0.640	-0.112	-0.093	0.222	0.088	0.519	0.104
PARCOM	-0.419	1.000	0.413	0.356	0.110	-0.189	1.000	-0.495	0.206	0.277	0.086	0.159	0.193	-0.468	0.185	-0.229	0.559
POLICY	0.411	-0.495	0.183	-0.570	0.353	-0.233	-0.495	1.000	0.222	-0.877	0.122	0.115	0.188	0.687	-0.011	0.212	-0.966
THREAT	0.001	0.206	0.458	-0.025	0.945	-0.594	0.206	0.222	1.000	-0.368	0.453	-0.010	-0.062	-0.221	0.002	-0.348	-0.128
WAGEN	-0.128	0.277	-0.427	0.429	-0.419	0.482	0.277	-0.877	-0.368	1.000	-0.456	-0.158	-0.235	-0.469	0.043	0.106	0.854
UNEMP	-0.159	0.086	0.402	0.222	0.304	-0.640	0.086	0.122	0.453	-0.456	1.000	0.166	-0.135	-0.299	0.094	-0.610	-0.061
YPCGRR	0.210	0.159	0.101	-0.133	0.022	-0.112	0.159	0.115	-0.010	-0.158	0.166	1.000	-0.085	0.140	0.322	-0.001	-0.153
XMTOY	-0.267	0.193	0.415	-0.040	-0.051	-0.093	0.193	0.188	-0.062	-0.235	-0.135	-0.085	1.000	0.199	-0.123	-0.106	-0.126
WTOY	0.457	-0.468	-0.103	-0.610	-0.056	0.222	-0.468	0.687	-0.221	-0.469	-0.299	0.140	0.199	1.000	-0.144	0.659	-0.740
WGRR	0.317	0.185	0.070	-0.003	0.102	0.088	0.185	-0.011	0.002	0.043	0.094	0.322	-0.123	-0.144	1.000	0.122	0.021
WTOR	0.459	-0.229	-0.524	-0.255	-0.190	0.519	-0.229	0.212	-0.348	0.106	-0.610	-0.001	-0.106	0.659	0.122	1.000	-0.252
WAGER	-0.400	0.559	-0.109	0.666	-0.295	0.104	0.559	-0.966	-0.128	0.854	-0.061	-0.153	-0.126	-0.740	0.021	-0.252	1.000

Appendix E -- Methodology for Explaining Regime Shifts

For each country, we use the estimated equation from Table 2. We then calculate the change in each of the RHS variables each year and multiply that by their estimated coefficient. Then we calculate their multiplicative impact through the lagged dependent variable.

Suppose we have a six year period, 1925-1930. Each variable contributes contemporaneously, but also will have its share in the lagged dependent variable. Suppose we have the following equation:

$$\text{POLICY} = C_0 + C_1*\text{POLICY}(-1) + C_2*\text{WTOY}(-2)$$

The change in policy is just the difference in the index from 1925 to 1930. Then we calculate how much of that change is due to changes in WTOY(-2) from 1925 to 1930 as the sum of the following:

$A=\{\text{WTOY}(1924) - \text{WTOY}(1923)\}*C_2$					
$B=\{\text{WTOY}(1925) - \text{WTOY}(1924)\}*C_2$	$A*C_1$				
$C=\{\text{WTOY}(1926) - \text{WTOY}(1925)\}*C_2$	$B*C_1$	$A*C_1*C_1$			
$D=\{\text{WTOY}(1927) - \text{WTOY}(1926)\}*C_2$	$C*C_1$	$B*C_1*C_1$	$A*C_1*C_1*C_1$		
$E=\{\text{WTOY}(1928) - \text{WTOY}(1927)\}*C_2$	$D*C_1$	$C*C_1*C_1$	$B*C_1*C_1*C_1$	$A*C_1*C_1*C_1*C_1$	

Note that this method does not consider the impact of previous changes to WTOY that are still playing themselves out slowly through the lagged dependent variable. It is not clear this means that we are underestimating the effects, since the equations themselves omit variables that may have been significant for certain eras, but were not statistically significant in the regressions using the entire time series.