

# Primary Resources, Secondary Labor: Resource Booms and Immigration Policy in the Era of Trade Liberalization\*

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## Abstract

Are trade and immigration policies substitutes or complements? Using the two-sector model in the Dutch disease literature, the paper argues that the degree of a resource boom changes labor-intensive firms' preferences over immigration policy and how they respond to trade liberalization. As trade liberalizes, firms in the tradable sector move into the resource industry or into the non-tradable sector during a resource boom, leading to a decline in support for pro-immigration policy. Without such exit options in resource-poor economies, firms seek to remain viable by supporting pro-immigration policy under trade liberalization. Trade and immigration policies are substitutes during a resource boom but are complements otherwise. Rigorous empirical analyses with new data on immigration policy show that changing firm preferences translate directly into policy outcomes. The variation in immigration policy across multiple labor-scarce economies cannot be fully understood without accounting for trade liberalization and resource booms. The paper poses a serious challenge against the conventional wisdom that trade and immigration policies have always been substitutes. An important implication of the paper is that open economies under growing resource booms will restrict immigration even further.

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# Introduction

Are trade and immigration policies substitutes or complements? The economic history of the past two centuries suggests that trade and immigration policies tend to move in the opposite direction. Liberalizing trade and opening borders seem unable to coexist. During the age of mass migration in the nineteenth century, immigration policies of labor-scarce countries were open while high tariffs persisted in the international goods market. Open borders and relatively closed trade characterized the first globalization.<sup>1</sup> In the post-World War II era, countries that used to be popular destinations of immigrants have implemented policies to restrict or discourage immigration while liberalizing trade through a series of bilateral and multilateral international negotiations. Hatton and Williamson (2005a,b) call this inverse policy correlation between trade and immigration a *dual policy paradox* because low-skilled workers in labor-scarce countries succeeded in securing one form of protection but failed in securing the other.

Importing labor-intensive goods is essentially like allowing low-skilled labor to immigrate. Policymakers who want to lower the domestic price level can either import inexpensive goods from labor-abundant countries through free trade or use immigrant labor to produce labor-intensive goods through open immigration. From the perspective of a social planner whose primary goal is to exploit the benefits of economic openness for balance-of-payment adjustment, trade and immigration policies are at least partial substitutes. Meade (1957, p. 385–386) shows that the adjustment of payments between England and Wales is so much easier than that between Germany and France because the high mobility of goods, labor and capital provides efficient adjustment mechanisms between

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<sup>1</sup>Contrary to popular belief, low tariffs did not characterize the pre-1914 globalization. With an exception of Great Britain, most European economies maintained significant trade protection during this era. While the production of tradable goods constituted a large portion of overall economic activity, international trade did not play a significant role in the tradable sector (Bordo, Eichengreen and Irwin, 1999). See Clemens and Williamson (2004) for data on tariffs.

the two economies.<sup>2</sup>

While economic theories tell us that policymakers as social planners open either trade or immigration, but not both at the same time, the theories remain silent on why policymakers choose a particular combination of trade and migration policies. Moreover, the assumption that policymakers open trade or immigration in order to achieve economic openness is at odds with our usual assumption of political survival, that is, policymakers' desire to stay in power drives their policy choices. Furthermore, many labor-scarce countries' relatively open immigration policies in the era of free trade cast doubt on the existence of a dual policy paradox.<sup>3</sup>

The goal of this paper is two-fold. First, I seek to uncover the relationship between trade and immigration policies of labor-scarce countries.<sup>4</sup> Why have some policymakers adopted more open immigration policy in response to trade liberalization while others have become anti-immigrant? Second, I explain the variation in immigration policy by specifying the conditions under which trade liberalization leads to either pro- or anti-immigration policy at the national level. Immigration policy varies widely across countries and over time.<sup>5</sup> Policymakers often introduce measures that ban labor migration

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<sup>2</sup>For instance, suppose Wales is in economic difficulty. A deflation of prices and wages in Wales will have different effects on flows of goods, capital and people between Wales and England. First, consumers will buy more Welsh goods because they are less expensive than English goods. Second, capital will flow into Wales to take advantage of lower wages. Third, workers in Wales will migrate to England to seek higher wages. Since both regions are located in the British economy within which goods, capital and people are highly mobile, the economic downturn is short-lived, putting Wales back on a par with England in terms of economic growth. The adjustment of payments, however, takes longer between France and Germany since trade is relatively closed and factors are less mobile between the two countries.

<sup>3</sup>Sweden since 1995 is the most obvious example of free trade and open immigration policy.

<sup>4</sup>It is difficult to think of a labor-abundant country that has vibrant policy dynamics in trade and immigration. Governments of developing countries have different policy stances on emigration. While emigration is an important topic with regard to the first and second eras of globalization, it is beyond the scope of this paper.

<sup>5</sup>I use *pro-*, *open* and *liberal* interchangeably to indicate immigration policy that allows or encourages immigration. For immigration policy that reduces or discourages immigration, I use *anti-* and *restrictive* interchangeably.

without a warning, making a sudden policy shift from openness to a complete closure.<sup>6</sup> Others have taken gradual steps toward more restrictive immigration policy. More recently, Scandinavian countries have adopted less restrictive immigration policy toward low-skilled labor migrants and refugees.

I diverge from much of the economic literature by treating labor-intensive firms (henceforth, *firms*) as a primary driving force behind immigration policy and assuming that policymakers are only interested in their re-election chance.<sup>7</sup> This simple framework tells us how firms respond to trade liberalization under different circumstances and how policymakers react to firms' preferences given their political constraints. The Stolper and Samuelson (1941) model tells us that labor-intensive firms in labor-scarce countries face increasing international competition as tariff levels decrease. In theory, firms should seek other forms of protection, such as more liberal immigration policy and government subsidies during trade liberalization. Yet, many wealthy labor-scarce economies have placed restrictions on immigration flows. How can we explain this policy outcome given that trade liberalization increases firms' willingness to lobby for more immigration?

I argue that resource booms and trade liberalization have virtually eliminated firm support for pro-immigration policy in many of the popular destinations of immigrants, such as the U.S., Canada, Australia and the United Kingdom. Resource booms shift domestic labor from the tradable sector to the non-tradable sector while hurting the competitiveness of the tradable sector through exchange rate appreciation. When import-competing firms in the tradable sector face a labor shortage and exchange rate appreciation, firms have two broad choices to remain viable. First, firms seek to lower the labor cost by supporting

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<sup>6</sup>Norway's complete ban on labor migration on December 12, 1975 is an example of a abrupt shift in immigration policy.

<sup>7</sup>Other domestic interest groups may be important in explaining pro-immigration policy. Firms, however, are able to influence immigration policy more than any other group by supplying financial resources to policymakers. See Goldin (1994), Facchini, Mayda and Mishra (2008), Money (1997) and Peters (2014, 2015) for discussion on the role of business interests in shaping immigration policy.

pro-immigration policy. Second, firms can take advantage of the resource boom by moving into the non-tradable sector. Resource booms increase public and private spending, causing a large boom in the service industry. If firms can move to the non-tradable sector, they can adjust the prices of non-tradable goods according to the wage level while freeing themselves from competition against foreign goods from labor-abundant countries.

Resource booms generate both costs and opportunities for firms. Their willingness to lobby for pro-immigration policy or move to the non-tradable sector depends on the degree of trade protection. Due to the cost of capital liquidation and transition, firms that enjoy high tariffs are likely to stay in the tradable sector and lobby for pro-immigration policy during resource booms. On the other hand, firms that are fully exposed to free trade abandon their businesses in the tradable sector and move into the non-tradable sector. Firms in the non-tradable sector are unlikely to spend resources on immigration lobbying because the prices of their goods are no longer fixed at the international level but are adjustable, depending on the cost of production within each industry. Firms no longer lobby for pro-immigration policy under free trade and resource booms, leading to restrictive immigration policy as policymakers accommodate other domestic interests that oppose immigration. Firms, however, lobby aggressively during resource booms as long as trade is relatively closed, inducing policymakers to open doors to immigrants. This suggests a negative policy correlation between trade and immigration openness in resource-booming economies.

As trade liberalizes, firms in resource-*poor* economies lobby for immigration as an alternative form of protection. Under trade protection, there is no need to lower the cost of labor by supporting pro-immigration policy. This is because doing so does not generate more profit under the assumption of perfect competition. Since any labor-intensive firm can take advantage of low-skilled immigrants, firms only lobby up to the point where they can compete with foreign producers. When high tariffs provide sufficient protection, firms

are unwilling to lobby for pro-immigration policy. This implies a positive policy correlation between trade and immigration openness in resource-poor countries.

The argument of this paper implies that policies regulating trade and immigration are substitutes during resource booms but are complements otherwise. While I focus on high-value capital-intensive natural resources, such as oil and precious metals in the post-World War II period, the argument of this paper also sheds light on why the resource-rich New World maintained liberal immigration policy in the nineteenth century during which high tariffs were in place. The New World was rich in labor-intensive natural resources such as coal, gold and timber. The exploitation of these abundant natural resources required labor and capital inflows because they were geographically fixed in labor-scarce countries without sufficient capital. Without immigration, firms in the tradable sector would have faced a much higher wage because they competed with natural resource sectors in attracting labor.

This paper contributes to an emerging scholarly trend of linking trade, capital or migration from a comprehensive perspective of international political economy. Scholars have explored how unfavorable exchange rate appreciation provokes firms to demand trade protection (Broz and Werfel, 2014; Copelovitch and Pevehouse, N.d.), and how exchange rate regime choice and trade policy influence each other (Copelovitch and Pevehouse, 2013). Focusing on international migration, others have examined the role of migrant networks in bringing portfolio capital and foreign direct investment from host states to home countries (Leblang, 2010), how remittances serve as an alternative source of capital and are an important determinant of an exchange rate regime choice (Singer, 2010), and how trade, capital and immigration policies are all inter-wined in a way that affects firm preferences over immigration policy (Peters, 2014, 2015).

Most economic historians have focused on countries in the New World to examine the link between trade and immigration (Timmer and Williamson, 1998; Hatton and

Williamson, 1998, 2005b; O'Rourke and Williamson, 1999). Descriptive history of immigration and trade policies suggests that the relationship is indeed negative, as predicted by the state-centric economic theory. But, these “countries of immigrants” are abundant in a variety of high-value natural resources, a factor that may be driving the policy correlation. Peters (2015) provides the most comprehensive dataset on immigration policy that includes labor-scarce countries across the globe and over a long time horizon. I add additional country-year observations of immigration policy to expand this dataset. Focusing on the post-World War II era, the data show that trade and immigration policies are not always negative or positive. Such policy correlation depends on the magnitude of a resource boom.

The paper continues as follows. First, I introduce the concept of the Dutch disease, examine how trade openness affects firm preferences over immigration policy under various degrees of a resource boom or lack thereof, and suggest testable hypotheses. Scholars often place exclusive emphasis on one aspect of the Dutch disease, exchange rate appreciation. A two-sector model reveals that the spending effect of the Dutch disease has profound implications for firm preferences over the labor market and immigration policy. Second, I describe how I collected, coded, and combined additional country-year observations with Peters (2015)'s immigration policy dataset and present a brief history of these new countries' immigration policy. Third, I assess the empirical validity of the hypotheses. I place my argument under rigorous empirical scrutiny by including potentially omitted variables and conducting additional analyses within different samples. Furthermore, I include almost all indicators of alternative explanations for immigration policy variation and evaluate their empirical validity. I close the paper with suggestions for future research and implications for the migration literature and international political economy.

# Trade, Resource Booms and Immigration Policy

This section examines how resource booms change labor-intensive firms' competitiveness and preferences over immigration policy in labor-scarce states given the degree to which each firm enjoys trade protection. I focus on immigration policy that controls cross-border flows of low-skilled workers from multiple countries into a single labor-scarce economy. The concept of immigration policy used in this paper is, therefore, a national policy that seeks to control inflows of low-skilled foreign individuals from a number of sending states. For simplicity, I take trade policy as exogenous and treat international capital mobility limited while assessing firm preferences over immigration policy. I relax these assumptions to elaborate on how resource booms can affect firm preferences over both trade and immigration policies and how international capital mobility alters the theoretical predictions.

I begin by introducing the concept of the Dutch disease, a term coined by *The Economist* to describe the apparent de-industrialization of the Dutch economy after the discovery and extraction of natural gas reserves in 1959.<sup>8</sup> When an economy extracts natural resources, firms in the tradable sector, namely manufacturing and agriculture face unusual economic circumstances. First, the booming natural resource industry will attract mobile labor and capital from the tradable sector. This shift of factors into a booming resource sector is called the *resource movement effect*.<sup>9</sup> This effect, however, is negligible for labor-intensive firms because natural resources, especially hydrocarbon and minerals require very little labor for exploration and extraction.

Second, a resource boom generates immense wealth leading to higher levels of private and public spending. As more wealth circulates in the economy, individuals seek to

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<sup>8</sup>See "The Dutch Disease" (November 26, 1977), *The Economist*, pp. 82-83.

<sup>9</sup>Labor is likely to be more mobile than capital because the cost of liquidation and transition of capital from one sector to another can be high. Most service industries in the non-tradable sector such as retail and construction do not require specialized skills.



consume more goods and services. The domestic prices of tradable goods are fixed at  $p_i(1 + t_i)$  where  $p_i$  is the world price of good  $i$  and  $t_i$  is the ad valorem tariff rate of good  $i$ . Since the prices of non-tradable goods, such as services can be adjusted domestically, extra spending leads to higher prices of non-tradable goods, increasing labor demand in industries that produce non-tradable goods.<sup>10</sup> Meanwhile, workers in the tradable sector move to the booming non-tradable sector. This is the *spending effect* of the Dutch disease (Corden and Neary, 1982).<sup>11</sup> The relative price increase of non-tradable goods leads to *real* exchange rate appreciation. The domestic wage and the prices of non-tradable goods rise relative to the prices of tradable goods. More units of foreign currency are now necessary to purchase domestic goods and services that cannot be traded internationally. In other words, imports have become inexpensive relative to comparable domestic goods and the domestic wage.

Firms in the tradable sector have two choices to deal with the spending effect of the Dutch disease. Assume that the ad valorem tariff rate,  $t_i$  is arbitrarily high such that domestic producers of good  $i$  can effectively compete with foreign producers of the same good. Since the spending effect increases the domestic wage, firms seek to lower the wage by lobbying for more open immigration policy. Now assume that  $t_i$  approaches zero as trade liberalization takes place. When firms have to deal with the higher domestic wage and the lower price, lobbying for immigration policy is no longer sufficient to keep their businesses profitable. Given the opportunities in the non-tradable sector during a resource boom, firms that are mobile across sectors will move to the non-tradable sector. These

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<sup>10</sup>Governments may use tax revenues on resource income to improve infrastructure. This public spending increases the demand for construction and other related services. As the labor demand increases in these sectors, workers' wages rise. Workers with more income now consume more goods and services. Since the prices of tradable goods are fixed at the world price plus an import duty, the prices of tradable goods do not rise as long as the tariff schedule is fixed. The prices of services, however, will rise by adjusting to the domestic wage level.

<sup>11</sup>An important assumption in the Dutch disease literature is a small open economy where international trade is not completely closed.

mobile firms will no longer lobby for immigration policy because the prices of non-tradable goods will respond to wage fluctuations. Formally, the representative firm's basic profit function in the tradable sector producing good  $i$  is given by

$$\pi_i = \frac{p_i(1+t_i)q_i}{e(\sigma)} - r(1-\alpha_i)K_i - \frac{r\alpha_i K_i}{e(\sigma)} - w(\rho, \sigma)L_i - \tau_i(\rho), \quad (1)$$

where  $q_i = f_i(K, L)$ , the quantity of production as a function of two inputs, capital ( $K$ ) and labor ( $L$ ) with factor prices,  $r$  and  $w(\rho, \sigma)$ , respectively;  $w$  is the domestic wage, assuming that labor is perfectly mobile across sectors, is decreasing in immigration policy openness,  $\rho$ , and is increasing in the magnitude of a resource boom,  $\sigma$ ;  $e(\sigma)$  is increasing in  $\sigma$ , indicating exchange rate appreciation if  $e > 1$  and  $e = 1$  if there is no resource boom,  $\sigma = 0$ ;  $\alpha$  is the proportion of imports being used for production; and  $\tau_i(\cdot)$  is the business tax rate plus the contribution the firm pays for immigration policy,  $\rho$ .<sup>12</sup> The representative firm's profit function in the non-tradable sector producing service  $j$  becomes

$$\pi_j = p_j(\sigma)q_j - r(1-\alpha_j)K_j - \frac{r\alpha_j K_j}{e(\sigma)} - w(\rho, \sigma)L_j - \tau_j(\rho), \quad (4)$$

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<sup>12</sup>Assuming that the representative firm does not close or move to the non-tradable sector, solving the first order condition with respect to  $\rho$  yields:

$$\frac{\partial \pi}{\partial \rho} = -\frac{\partial w}{\partial \rho}L - \frac{\partial \tau_i}{\partial \rho} = 0 \quad (2)$$

$$-\frac{\partial w}{\partial \rho}L = \frac{\partial \tau_i}{\partial \rho}, \quad (3)$$

where  $\frac{\partial w}{\partial \rho} < 0$  such that firms that employ a large amount of labor are willing to pay more contributions for open immigration policy. This result that labor-intensive firms pay more contributions for immigration policy openness than capital-intensive firms holds regardless of the sector and the level of trade openness as long as firms do not exit the tradable market. Labor-intensive firms' willingness to spend political capital over immigration policymaking, however, depends on the magnitude of a resource boom and the degree of trade openness.

where  $p_j$  is an increasing function of  $\sigma$ , the magnitude of a resource boom. Assuming that firms face perfect competition with a cost of transitioning from sector  $i$  to sector  $j$ ,  $C_{ij}$ , that producers of  $i$  and  $j$  use the same bundle of inputs ( $K_i = K_j$ ,  $L_i = L_j$ ,  $\alpha_i = \alpha_j$ ),<sup>13</sup> firms stay in the tradable sector as long as  $\pi_i > \pi_j - C_{ij}$  or when the following condition is met,

$$\frac{p_i(1+t_i)q_i}{e(\sigma)} - p_j(\sigma)q_j + C_{ij} - [\tau_i(\rho) - \tau_j(\rho)] \geq 0 \quad (5)$$

Notice that as  $t_i$  increases, it becomes easier to satisfy the condition above. Trade protection induces firms to stay in the tradable sector. As  $e(\sigma)$  increases, the first term becomes smaller, showing how exchange rate appreciation can offset the effect of trade protection. A resource boom also makes the transition from sector  $i$  to  $j$  more attractive by increasing the price of service  $j$ . The cost of inter-sectoral transition keeps firms in the tradable sector until a resource boom expands at an arbitrarily high degree.

Firms in the non-tradable sector may seek to reap more profit by lobbying for open immigration as long as barriers to entry into the market are sufficiently high. Under perfect competition, any new competitors can enter the market until each firm produces zero profit. Any positive profit induced by additional immigrant labor is going to disappear as long as the market is competitive. If this is true for the non-tradable sector, why would firms in the tradable sector lobby for immigration when high tariffs persist? Due to the cost of inter-sectoral transition, firms do not have an incentive move to the non-tradable sector as long as tariffs protect their goods from foreign competition. In response to the rising domestic wage during a resource boom, firms seek to expand the labor supply by lobbying for immigration before they eventually decide to move to the non-tradable sector. Potential domestic competitors are unlikely to enter the tradable sector as they can set up new businesses in the non-tradable sector. As trade liberalizes or a resource boom

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<sup>13</sup>Since these parameters are fixed, the assumption that they are identical to each other does not change the central results.

continues, fewer firms have an incentive to produce tradable goods, leading to a decrease in firm support for open immigration policy.

As shown in Equation 5, exchange rate appreciation is neither a necessary nor a sufficient condition for firms' lack of interest in supporting pro-immigration policy. Rather, the spending effect of the Dutch disease plays a key role in shaping firm preferences over immigration policy under varying levels of trade openness. When resource-rich countries export natural resources, it has inevitable consequences on the exchange rate. Natural resource sales to other countries increase foreign reserves, causing exchange rate appreciation. If resource-rich countries consume all of their extracted natural resources, they are spending less foreign reserves on foreign natural resources.<sup>14</sup> Whether countries consume or export all of their natural resources, the exchange rate is going to appreciate relative to the counterfactual exchange rate without a resource boom.

I now examine how trade openness changes firm preferences over immigration policy in the absence of a resource boom. When firms in the tradable sector make positive profit under high tariffs, it creates opportunities for potential domestic competitors to enter the market until the tradable market becomes saturated enough to meet the zero-profit condition. Knowing this, firms in the tradable sector do not have an incentive to support immigration since new competitors can free-ride on additional foreign labor brought by existing firms' lobbying efforts and political capital. Potential competitors come from the non-tradable sector and face a cost of inter-sectoral transition,  $C_{ji}$ . Firms in the tradable sector will only lobby for immigration up to the point at which potential competitors are indifferent about entering the tradable market. As trade opens up, the domestic prices of tradable goods decrease. Since firms in the non-tradable sector make zero profit in the

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<sup>14</sup>This is the case of the United States where domestic consumers have consumed almost all of domestic energy for several decades. While some may argue that the U.S. dollar is weak relative to the currencies of trading partners, we do not know the counterfactual exchange rate, had the U.S. imported more energy while producing none domestically.

absence of a growing resource boom, firms in the tradable sector cannot make a sectoral transition. Instead, firms seek to lower the cost of labor by supporting pro-immigration policy. Without the adverse effects of the Dutch disease, firms can remain viable by substituting trade protection with immigrant labor. Formally, the representative firm's basic profit function in the tradable sector producing good  $i$  is given by

$$\pi_i = \frac{p_i(1+t_i)q_i}{e(\sigma)} - r(1-\alpha_i)K_i - \frac{r\alpha_i K_i}{e(\sigma)} - w(\rho, \sigma)L_i - \tau_i(\rho), \quad (6)$$

where  $e(\sigma) = 1$ ; and  $w(\rho, \sigma) = w(\rho)$  because there is no resource boom such that

$$\pi_i = p_i(1+t_i)q_i - rK_i - w(\rho)L_i - \tau_i(\rho). \quad (7)$$

The representative firm's profit function in the non-tradable sector producing service  $j$  is

$$\pi_j = p_jq_j - rK_i - w(\rho)L_j - \tau_j(\rho). \quad (8)$$

Assuming that producers of  $i$  and  $j$  use the same bundle of inputs ( $K_i = K_j$ ,  $L_i = L_j$ ), firms in the tradable sector will lobby for immigration only if firms in the non-tradable sector do not enter the tradable sector, formalized as

$$\pi_i - \pi_j - C_{ji} \leq 0 \quad (9)$$

$$p_i(1+t_i)q_i - p_jq_j - [\tau_i(\rho) - \tau_j(\rho)] - C_{ji} \leq 0. \quad (10)$$

As  $t_i$  increases, it becomes more difficult to satisfy the condition above. As the barrier to entry into the tradable market,  $C_{ji}$  increases, firms in the tradable sector are more likely to support immigration regardless of the level of trade openness.

The following table summarizes how firms' willingness to lobby for immigration changes, depending on the size of a resource boom and the level of trade protection. Since a low tariff level means a high level of trade openness, firms in resource-*poor* countries support pro-immigration policy in response to trade liberalization. On the contrary, firm support for immigration policy in resource-*rich* countries increases as the degree of trade openness decreases.

Table 1: Firm Support for Immigration Policy

		Tariff Level	
		Low	High
Resource Boom	Low	Support	Indifferent
	High	Indifferent	Support

Given the preferences of firms, how do policymakers behave in immigration policymaking? Policymakers in democracies must balance between domestic interest groups who oppose immigration and pro-immigration firms. More support from firms implies more revenues which policymakers can use to increase their re-election chance. In the context of U.S. politics, this may mean campaign contributions during elections. More broadly, firms' contributions are tax revenues which incumbents can use to provide public and private goods to their constituencies. In this respect, policymakers seek to prevent firm deaths for taxes firms pay. When pro-immigration firms perish, policymakers no longer receive tax revenues for immigration policy. Then, policymakers restrict immigration. Similarly, if policymakers know firms can move into the non-tradable sector while continuing to pay taxes, they do not implement open immigration policy. As long as firms can thrive in the tradable sector with an influx of foreign labor, policymakers open up immigration.

Why would voters oppose immigration? Native workers may dislike migrant workers for cultural and economic reasons (Freeman, 1995; Zolberg, 1989). In addition, immigrants

compete with a sub-population of native workers in labor-intensive industries. Furthermore, Hatton and Williamson (2005a,b) argue that immigration may increase income inequality because land and capital owners benefit from immigration-induced labor supply growth while workers lose. Therefore, workers oppose immigration while rising inequality can exert substantial pressure for redistribution on policymakers when more immigrants arrive. Taking a step further, Timmer and Williamson (1998) suggest that there was a causal link between rising inequality and rising barriers to immigration in rich, labor-scarce countries. The literature on attitudes toward immigration has found very little support for self-centric basis of opposition to immigrants. Instead, individuals tend to hold sociotropic attitudes toward immigrants with deep concerns for the impact of immigration on various aspects of society, including economic performance, welfare and national identity.<sup>15</sup>

Having outlined policymakers' dilemma in immigration policymaking, I introduce a model based on the game that induces strategic behavior between firms and the policymaker over immigration policy in Peters (2014, 2015).<sup>16</sup> The game continues as follows. First, firms and the policymaker observe the size of a resource boom and the level of trade openness. Firms and the policymaker are fully aware of how a resource boom, trade policy and immigration policy would affect their profit. Then, firms offer the policymaker contribution schedules that lay out the tax rate the firm will pay for open immigration,  $\rho$  which the policymaker could provide. As  $\rho$  increases, the number of immigrants in the host country increases. After observing firms' contribution schedules, the policymaker chooses  $\rho$  to maximize her utility function,  $G(\cdot)$ .

Every firm makes a truthful contribution schedule, defined as a "contribution schedule that everywhere reflects the true preferences" of the firm (Grossman and Helpman, 1994, p.

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<sup>15</sup>See Hainmueller and Hopkins (2014) for an excellent review of the literature.

<sup>16</sup>This model is based on Grossman and Helpman (1994).

840). And, the policymaker's policy choice is immune to time-inconsistency problems. In other words, a policy choice honestly reflects contribution schedules given the constraints of the policymaker. The set of contribution schedules and a policy choice ( $\rho$ ) is a subgame-perfect Nash equilibrium of the game if and only if (a) a contribution schedule offered by every firm is feasible,<sup>17</sup> (b) the policymaker sets the policy to maximize her own welfare, (c) for every firm, the policy outcome must maximize the joint welfare of the firm and the policymaker, and (d) for every firm, there must exist a policy that elicits a contribution of zero from the representative firm, which the government values as equally as the equilibrium policy (p. 10 Bernheim and Whinston, 1986; Grossman and Helpman, 1994, p. 839, 845).

The policymaker maximizes her utility function to stay in office by implementing immigration policy,

$$G(w, \tau, \rho) = \alpha_1 w(\rho, \sigma) + \alpha_2 \sum_{i \in F} \tau_i(\rho) + \alpha_3 H(\rho), \quad (11)$$

where  $\sum_{i \in F} \tau_i(\rho)$  is the total tax revenue, including contributions made by firms ranging from  $i$  to  $F$ , and  $H(\rho)$  is a function that measures the policymaker's fiscal and political costs of making a policy choice. Opening immigration can be unpopular among native workers, as it incurs cultural, fiscal, and political costs.<sup>18</sup>  $H(\rho)$  is a decreasing function of  $\rho$ . The policymaker places  $\alpha_{k \in [1,3]}$  on each term and  $\sum_k^n \alpha_k = 1$  implying  $\alpha_3 = 1 - \alpha_1 - \alpha_2$ . Since  $w(\rho, \sigma)$  is a decreasing function of  $\rho$ ,  $\alpha_1$  measures how concerned the policymaker is about the overall wage level in the economy. Note that  $w(\cdot)$  is increasing in  $\sigma$ , the magnitude of a resource boom. Immigration policy aims to offset an increase in the domestic wage

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<sup>17</sup>For instance, contributions must be non-negative and no greater than firms' income.

<sup>18</sup>There is a vast literature on these costs. Hatton and Williamson (2005a,b) show that immigration may increase income inequality because land and capital owners benefit from immigration-induced labor supply growth while workers lose. See Hainmueller and Hiscox (2007, 2010) for cultural costs of immigration. Lastly, see Hanson, Scheve and Slaughter (2007); Neuman (1993); Razin, Sadka and Suwankiri (2011) for fiscal costs.



caused by a resource boom. As the political strength of labor increases, the weight the policymaker places on the wage level,  $\alpha_1$  increases as well. The second term,  $\tau_i(\rho)$  is an increasing function of  $\rho$ , since firms are willing to make more contributions as the supply of foreign labor increases in the country. The first order condition for the policymaker with respect to  $\rho$  is

$$\alpha_2 \sum_{i \in F} \frac{\partial \tau_i}{\partial \rho} = -\alpha_1 \frac{\partial w}{\partial \rho} - \alpha_3 \frac{\partial H}{\partial \rho} \quad (12)$$

Since both  $w(\cdot)$  and  $H(\cdot)$  are decreasing functions of  $\rho$ , the derivatives of these functions with respect to  $\rho$  are negative. In order to implement pro-immigration policy, the policymaker needs more contributions from firms as the marginal effects of immigration on her constraints become larger.

So far, I have treated trade openness as an exogenous factor. It is possible that the Dutch disease expedites trade liberalization through de-industrialization of labor-intensive sectors.<sup>19</sup> When firms that oppose trade liberalization exit the tradable market due to the Dutch disease, it becomes easier for policymakers to open up trade. In addition, capital-intensive firms that face exchange rate appreciation may seek to lower tariffs of their foreign markets by supporting bilateral or multilateral free trade agreements. As the Dutch disease induces capital-intensive exporters to mobilize themselves for trade liberalization, labor-intensive firms may find it easier to lobby for open immigration instead of trade protection. Treating trade liberalization as a consequence of the Dutch disease does not change the central results of my argument.

Another possibility is that policymakers shut doors to immigrants for whatever reason. Such restrictions on labor inflows cause labor-intensive firms to exit the market due to a

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<sup>19</sup>Resource extraction requires abundant capital. Upon the discovery of capital-intensive natural resources, foreign capital flows into the domestic economy to facilitate exploration, extraction and refinement. This massive influx of capital changes the factor endowment of the economy, causing a decrease in the output of labor-intensive goods according to the Heckscher-Ohlin model of international trade (Rybczynski, 1955).

higher domestic wage. Firm exits yield more political influence to proponents of free trade. In this view, trade liberalization is a consequence of restrictive immigration policy, implying a negative policy correlation between trade and immigration openness. My theory suggests that this negative policy correlation only occurs in resource-rich countries. If immigration restrictions cause trade liberalization by raising the domestic wage, this should be observable in resource-poor countries as well. The theory, however, predicts a positive policy correlation in resource-poor countries. If immigration policy is driving trade policy through its effect on the labor market, why would opening up immigration leads to trade liberalization? As foreign labor empowers labor-intensive firms, there should be more opposition to trade liberalization.

The history of trade policy in labor-scarce democracies suggests that the possibility of immigration policy influencing trade policy is indeed unlikely, especially in the post-World War II era. With the passage of the Reciprocal Trade Agreements Act in 1934, the United States Congress limited its influence in trade policy making while increasing the President's authority to negotiate with foreign governments (Bailey, Goldstein and Weingast, 1997). While the role of the RTAA in promoting free trade has been questioned in the literature,<sup>20</sup> the institutional features of the RTAA at least facilitated the movement toward free trade in the U.S. Furthermore, the post-World War II multilateral trade integration within Europe and the rise of the European Union as a supranational institution encouraged many labor-scarce European countries to open up their markets through reciprocity, giving birth to the Common Customs Tariff (CCT) through the European Union Customs Union (EUCU).<sup>21</sup> Yet, we observe quite divergent immigration policies among European countries

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<sup>20</sup>See Hiscox (1999) for how party politics and parties' relationships with different trade coalitions actually promoted both the RTAA and trade liberalization in the U.S.

<sup>21</sup>Since European economies produce different products, domestic interests of each country seek to protect what they actually produce while supporting liberalization on goods they mostly import (Ehrlich, 2009). Regardless, EUCU has virtually eliminated internal tariffs within the European Community and has greatly reduced CCT since the 1990s. Trade liberalization and market integration within the EU have increased trade openness in all member states with some cross-national variation of openness.

during this period of trade liberalization. It is implausible to speculate that different immigration policies have led to the EU-wide economic integration in the goods market.

Firm preferences and contributions for immigration directly translate into the policymaker's utility function in the model. Since firms make contributions under two stylized circumstances in Table 1, under open trade in a resource-poor country and under closed trade in a resource-rich country, I suggest the following testable hypotheses.

*Hypothesis 1: Trade openness reduces immigration policy openness during a resource boom.*

*Hypothesis 2: Trade openness increases immigration policy openness in the absence of a resource boom.*

Hypotheses 1 and 2 test whether a resource boom conditions the correlation between trade and immigration policies, the question of primary interest in this paper. Since a resource boom can exert similar consequences on firms' immigration policy preferences as trade openness does. I suggests the following hypotheses to achieve the second aim of the paper, explaining the variation in immigration policy across countries and over time.

*Hypothesis 3: A resource boom increases immigration policy openness when trade is closed.*

*Hypothesis 4: A resource boom reduces immigration policy openness when trade is open.*

Since a resource boom indirectly hurts firms by shifting labor from the tradable sector to the non-tradable sector through the spending effect, firms in highly protected sector seek additional labor by lobbying for open immigration policy.<sup>22</sup> As trade opens up, firms

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<sup>22</sup>While firms would greatly benefit if newly arrived immigrant workers are tied to their industries, firms still lobby for pro-immigration policy as long as immigrant workers expand the labor supply. Assume an extreme labor market condition under which all immigrant workers would be employed in the non-tradable sector. Firms in the tradable sector still lobby for immigration because immigrant workers would crowd out domestic workers from the non-tradable sector to the tradable sector. Domestic workers who would have

choose to incur some cost of inter-sectoral transition and move to the non-tradable sector as a resource boom expands.

## Data and History of Immigration Policy, 1946–2013

While scholars have suggested many theories on the determinants of immigration policy, the lack of cross-sectional time-series data on immigration policy has kept the discipline from performing rigorous statistical evaluation of the theories. Although there have been recent efforts to form a collaborative project to gather cross-sectional data on immigration law and policy between 1960 and 2010, many datasets only cover advanced democracies that are members of the Organization for Economic Cooperation and Development.<sup>23</sup> Furthermore, the datasets have a relatively short time horizon, making it difficult to test hypotheses that have a significant temporal component. In this section, I describe how I augmented the recent dataset constructed by Peters (2015) by adding five more labor-scarce countries and provide a brief historical account of immigration policy in these countries.

The immigration policy variable is a factor score based on the fifteen dimensions of immigration openness, listed in Table 2. Each dimension except the indicators regarding refugee provisions, asylum provisions and family provisions takes a score ranging from zero to five, with the latter indicating a more liberal policy stance toward immigrants. Provision indicators are coded as zero or one to indicate whether immigration laws address these issues. The factor score covers a variety of immigration regulations and laws that seek to control immigration flows by screening potential immigrants or specifying the extent to which immigrants are entitled to various rights and benefits. While most scores come from

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moved to the non-tradable sector before an influx of immigrants now remain in the tradable sector when immigration policy is open.

<sup>23</sup>See the International Migration Policy and Law Analysis (IMPALA) Database for more information. <http://projects.iq.harvard.edu/impala>

actual immigration laws in effect, executive policy discretion over deportation and enforcement also contributes to the final makeup of the factor score.

Table 2: Dimensions of Immigration Policy

Dimension	Description
Universality by Nationality	Discrimination based on nationality
Universality by Skill or Income	Discrimination based on skills or income
Citizenship	Ease of naturalization or citizenship acquisition
Immigrant Rights	Political, legal or welfare rights
Refugee	Number of refugees allowed to enter
Refugee Provisions	Provisions on refugees
Asylum	Ease of getting an asylum
Asylum Provisions	Provisions on asylum
Recruitment	Visas or government programs
Labor Prohibitions	Labor market restrictions for immigrants
Deportation	Deportable offenses and administrative processes
Enforcement	Border enforcement or employment screening
Family	Sponsorship by citizenship and restrictions
Family Provisions	Special provisions for families
Quota	Percentage of population allowed to enter annually

The original dataset in Peters (2015) includes nineteen countries from the late eighteenth century to 2010, covering up to 225 years. There is a wide cross-sectional variation of resource income within each country over time. The list of autocracies includes oil-rich autocracies (Saudi Arabia and Kuwait) and the resource-poor Singapore that have never experienced democratization, and former authoritarian regimes such as Argentina, Brazil, South Korea and Taiwan. South Korea and Taiwan have low resource income while Argentina and Brazil have considerable resource wealth. Across historically consolidated democracies, we also observe a wide variation in resource income. Australia, Canada, the Netherlands, and the United States top the list while France, Japan and especially Switzerland do not possess much resource wealth. I add five more countries to the dataset, Austria, Belgium, Chile, Norway and Sweden from 1950 to 2013 by using the codebook in

Peters (2015).<sup>24</sup> These countries account for 320 observations in the sample with a wide variation of resource income.

I use the factor loadings obtained by Peters (2015) to construct comparable factor scores for additional observations because I currently do not have access to the dataset consisting of each dimension's raw score.<sup>25</sup> The immigration policy factor score in Peters (2015) correlates highly (at 0.95) with a standardized average of nationality, skill, quota, recruitment, labor prohibitions, deportation and enforcement. For new observations, the correlation between the factor score and a standardized average of the seven aforementioned dimensions is 0.94, showing that the artificially constructed factor score is consistent with the existing factor score in the augmented dataset. The factor score measuring the openness of immigration policy now ranges from around  $-2$  (most restrictive) to  $2$  (most liberal). Figure 1 shows the variation in immigration policy in the countries added to the dataset from 1950 to 2013.

Several theoretical and practical grounds justify the collection of additional data from 1950. Before World War I, Norway was an emigrant-sending country, experiencing the second highest rate of per-capita emigration just below Ireland during the Great Famine (Moses, 2011, p. 17). Emigration peaked in Norway and Sweden in the 1890s, sending workers mainly to the New World (Hatton and Williamson, 1998, p. 48). It was not until

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<sup>24</sup>A team of three international lawyers with specialty in national and international migration laws searched, collected and coded all domestic laws, international treaties (i.e. bilateral migration agreements and Schengen) and secondary sources that illustrate each country's immigration policy in a given year. The team is collectively proficient in English, French, German and Spanish. For the Nordic countries, we used English translation of national immigration laws and secondary sources written in English. We then cross-checked the indicators with descriptive history of immigration policy in the countries. We are confident that the collected data cover almost all existing aspects of immigration policy in Austria, Belgium, Chile, Norway and Sweden from 1950 to 2013. The extended dataset will include more countries, including Denmark and Spain.

<sup>25</sup>This means I cannot run a new factor analysis over the augmented immigration policy dataset. Instead of running a separate factor analysis for the new countries, I decided to use the factor loadings of Peters (2015) to have a consistent indicator of immigration policy.

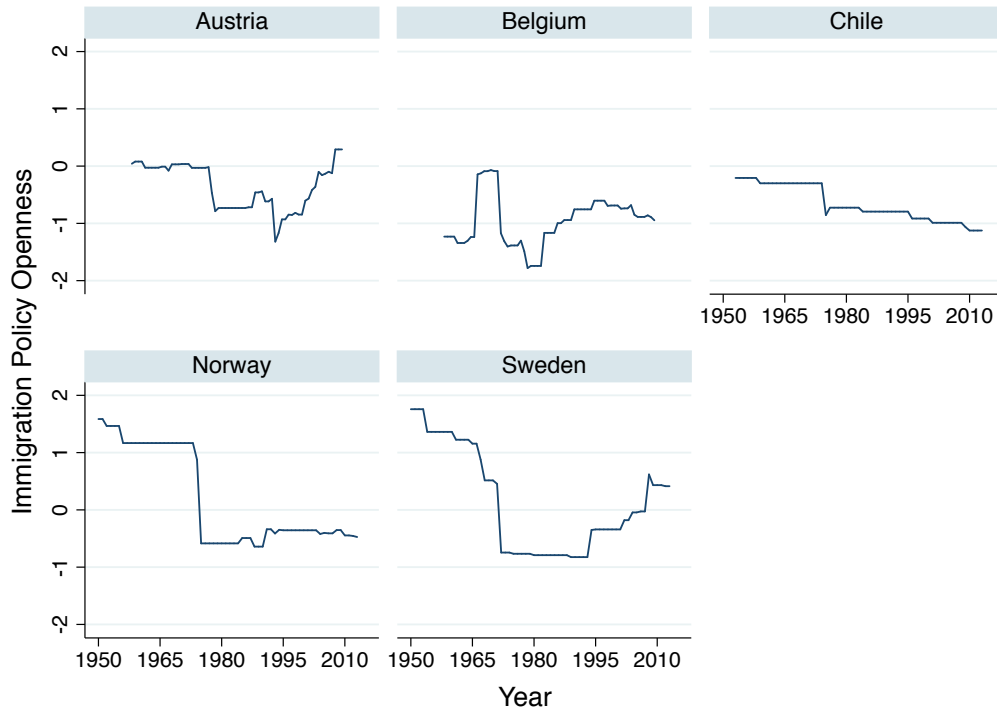
Table 3: Countries Included in the Augmented Dataset

Group	Country	Years Included in the Augmented Dataset	Resource Income after the World War II
Settler States	United States	1790–2010	High
	Australia	1787–2010	High
	Canada	1783–2010	High
	New Zealand	1840–2010	High
	South Africa	1806–2010	High
	Argentina	1810–2010	High
	Brazil	1808–2010	Middle
	Chile*	1950–2013	High
European Liberal Democracies	Austria*	1950–2013	Low
	Belgium*	1950–2013	Very Low
	France	1793–2010	Middle
	Germany	1871–2010	Middle
	Netherlands	1815–2010	High
	Norway*	1950–2013	Very High
	Sweden*	1950–2013	Middle
	Switzerland	1848–2010	Very Low
United Kingdom	1792–2010	High	
Export-led Economies	Japan	1868–2010	Low
	Hong Kong	1843–2010	Very Low
	Singapore	1955–2010	Very Low
	South Korea	1948–2010	Low
	Taiwan	1949–2010	Low
Oil-rich Autocracies	Saudi Arabia	1950–2010	Very High
	Kuwait	1961–2010	Very High

\* indicates the countries whose immigration policy have been collected and constructed by the author.

the end of World War II when the Nordic states began absorbing refugees and immigrants from the rest of the war-torn Europe. While Austria and Belgium have a record of a few policy measures regarding immigration and emigration over the past two centuries, it is unclear what constituted as national policies specific to Austria and Belgium. When Nazi Germany annexed Austria in 1938, the Nazi regulations replaced many of Austria’s policies toward immigration. As a small economy in the highly mobile Bénélux region, Belgium’s

Figure 1: Immigration Policy in the Countries New to the Dataset



serious efforts in designing and implementing immigration policy began only after World War II. In addition, Chile has become one of the most recent destinations of immigrants, mostly from Europe after a period of mass emigration during the Pinochet regime. Moreover, it becomes increasingly difficult to find sources for immigration policy and to assess their relevance during war and the inter-war period.<sup>26</sup>

The post-WWII history of immigration policy in the Nordic states shares many similar temporal patterns with the two-century-long history of settler states in the New World. Prior to the 1970s, the Nordic states maintained open immigration policy without any restrictions on nationality, skills and quota. Norway and Sweden placed significant restrictions in the mid-1970s and in the early 1970s, respectively, allowing only a small

<sup>26</sup>It is easier to collect and code pre-WWII data on immigration policy for countries in the New World because these “countries of immigrants” have been destinations of immigrants for centuries while European countries were their sending states.



number of immigrants to become legal residents. Norway's main justification for its complete ban on labor migration was based on integration issues concerning existing immigrants.<sup>27</sup> Policymakers in Norway stated that new effective integration policies must be in place before they could welcome new immigrants. While Norway still maintains relatively open borders compared to other European countries, the policy shift in 1975 marked the end of the pre-1975 free immigration regime. Sweden, however, relaxed restrictions starting in 1995 as it signed a series of international treaties regarding EU-wide free movement of labor. Sweden's national immigration policy took a significant shift toward openness in December, 2008 when the government allowed employers to recruit for any occupation and started granting renewable permits to all incoming labor migrants. In addition, Sweden allows immigrants' access to the national health and social welfare systems as long as their stay in Sweden exceeds one year. The Swedish constitution also guarantees immigrants' right to join trade unions and to form their own unions. In addition, family reunion is possible without a waiting period and financial requirements (Cholewinski, 2004, p. 78-79). This substantial opening of policy places Sweden as the most open industrialized economy in terms of labor mobility in the 21st century.

Austria and Belgium exhibit very volatile patterns of immigration policy. Nazi Germany's immigration policy initially shaped Austria's passport law of 1945, mandating that foreigners who want to travel to Austria must be endorsed while there was a wide range of grounds for refusing an endorsement. Migrants were required to demonstrate economic self-sufficiency and to provide evidence that they will not become a burden to the Austrian health and medical facilities. This remnant of Nazi Germany persisted in Austrian immigration policy until 1954 when Aliens Police Law replaced the old immigration regime. Austria encouraged low-skilled migrants to work in the economy

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<sup>27</sup>It turns out this was the time during which many firms in the Norwegian economy were moving to the non-tradable sector during an acute oil boom.

through bilateral agreements with Spain (1962), Turkey (1964) and Yugoslavia (1966) and placed no skill or income restrictions until 1975. In 1990, Austria restricted immigration by making requirements for employing foreign nationals stricter and stipulating that migrants are tied to one type of job. In 1994, Austria extended rights and social benefits to citizens of the European Economic Area (EEA) as the EEA treaty of freedom of movement came into force. When Austria passed a series of new immigration laws on July 1, 2011, a criteria-based system replaced the quota-based immigration model with favorable terms for high-skilled and seasonal workers.

Prior to 1967, the Belgian immigration policy sought to bring a large number of low-skilled workers. At the international level, the Belgian government aggressively pursued bilateral agreements with multiple sending states including Spain (1956), Greece (1957), Morocco (1964), Turkey (1964), Tunisia (1969), Algeria (1970) and Yugoslavia (1970). In the early 1960s, the Belgian Ministry of Justice stopped enforcing strict immigration laws. For instance, a work permit was no longer considered a prerequisite for permanent residence. Immigration authorities even implicitly tolerated an influx of tourists who would then get a residence permit upon arrival in the country. Starting with the 1967 law of strict enforcement, a number of Belgian immigration authorities imposed strict limits on new immigrants and proposed a cut in the number of work permits. The post-1974 immigration regime marks the beginning of immigration policy favoring highly educated foreigners. In the mid-1980s, the government began to introduce integration policy for the first time. Although immigrants in general have access to welfare benefits, the rights to which each immigrant has access depend on the type of immigrant visa and years of residence. In 2006, Belgium passed a ground-breaking immigration law that grants voting rights in local elections to immigrants from developing countries with at least five years of legal residence.

## Data on Resource Booms and Trade Policy

We now have a comprehensive dataset covering immigration policy of both resource-rich and resource-poor countries over a long time horizon. Before assessing the validity of the hypotheses, we need to reduce the dataset to a sample that meets the core assumptions of the argument. The theoretical framework in the Grossman and Helpman (1994, 2001) assumes that the policymaker balances between special interests and voters to maximize her utility. Moreover, I have deduced firm preferences over immigration policy under the assumption of perfect market competition. Due to these two assumptions, the hypotheses are not suitable to evaluate immigration policy in autocracies where market competition and voter influence over immigration policy are severely limited. Therefore, I restrict my analysis to democracies by using the regime classification provided by Przeworski et al. (2000) and expanded by Cheibub, Gandhi and Vreeland (2010). I have updated this regime indicator up to 2013. Since Hong Kong's political regime is not classified, I exclude the country from empirical analysis.

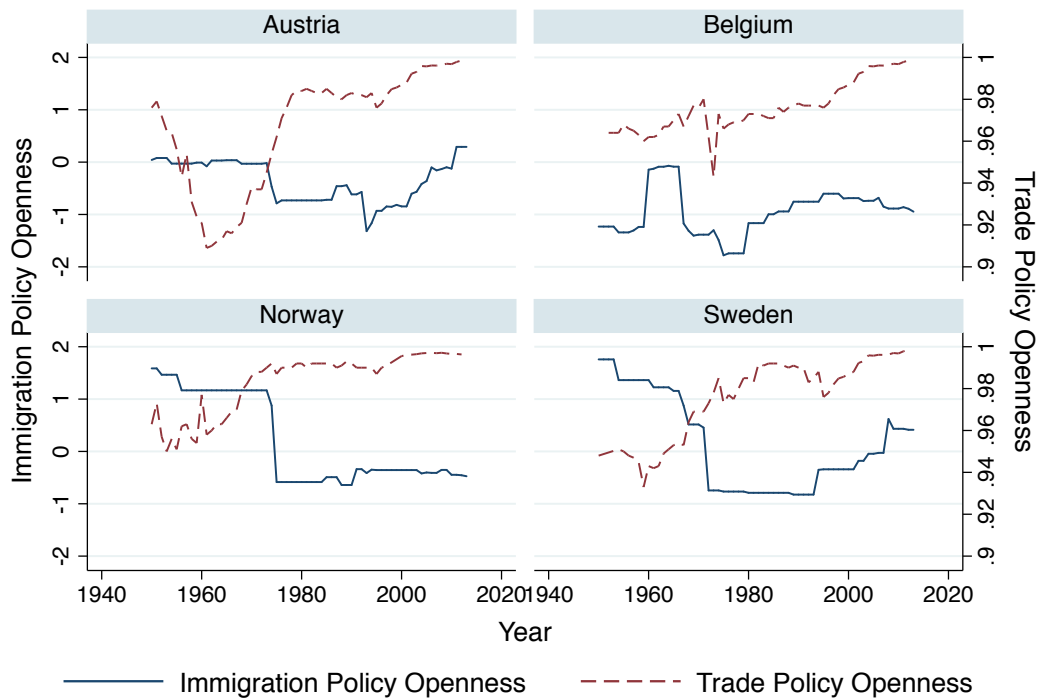
I also restrict the sample to the post-WWII era in which democracies in the West became consolidated, stable and more inclusive. Moreover, the end of World War II marks the beginning of a large-scale resource boom on a global scale, showing a wide cross-national variation of resource income over time. Although a series of gold rushes and other mineral booms occurred in the 19th century, we currently do not have reliable data on gold production during this period. The most comprehensive dataset on resource income collected by Haber and Menaldo (2011) provides gold data from 1900. For these reasons, the analysis begins in 1946. I have expanded the resource income dataset to cover years up to 2013 by using growth rates of resource income from World Bank (2014).<sup>28</sup> Resource income includes fuel (oil, gas

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<sup>28</sup>Haber and Menaldo (2011) used the Penn World Table to retrieve data on resource income and macroeconomic indicators. To be consistent with the data, I used growth rates of the World Bank's World Development Indicators to fill missing data for most recent years in the dataset.

and coal) as well as minerals (i.e. gold, diamond, silver and copper). The production quantity of each resource is multiplied by the real world price, expressed in thousands of 2007 U.S. dollars. To measure the size of a boom in each economy, the total income from all resources is divided by population in a given year.

Figure 2: Policy Openness of Western European Countries New to the Dataset



For trade openness, I use the tariff dataset compiled by Clemens and Williamson (2004), measuring the total value of import duties divided by the total value of imports. For years after 1999, Peters (2015) collected tariff data for most of the countries included in her immigration policy dataset. I updated the tariff data for the new countries for missing years. Since Sweden Joined the European Union Customs Union (EUCU) in 1995, the country has been subject to the common EU-wide tariff levels. Norway, however, has not participated

in the EUCU, so I use the World Bank (2014)'s World Development Indicators to measure Norway's trade openness. Austria and Belgium have been members of the EUCU for decades, so they take identical values for many years. More precisely, the trade openness indicator is mostly a policy variable, not an actual amount of duties collected by governments over an actual amount of imports. Since numerous factors concerning the supply and demand of imports drive the actual flows of imports, I use the actual policy indicator for trade openness to assess the *policy* correlation between trade and immigration. Figure 2 illustrates trends of trade and immigration policies. Note that in the figure, I subtracted the tariff indicator from one to generate a variable that measures trade openness. The value of one indicates a completely free trade regime.

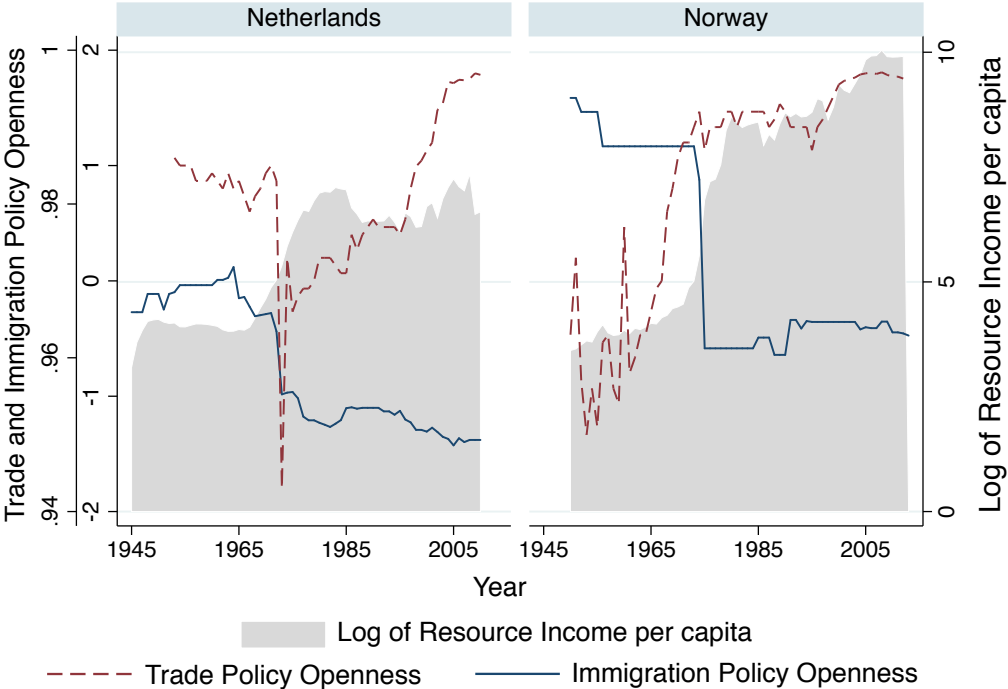
## Data Analysis

Before specifying an empirical model and reviewing the results of several multivariate analyses with a set of controls, I first present some graphical illustration on the relationship between trade and immigration policies. I focus on resource-rich countries that have experienced different degrees of booms to see if there is any visible pattern of a changing policy correlation over time within each country and any pattern that shows the effect of changing resource income on immigration policy under varying degrees of trade openness. First, I examine the Dutch policies over trade and immigration to see if the actual Dutch disease had any effect on the policy correlation and immigration policy in the Netherlands. I compare the Dutch experience with that of another comparable small economy in Europe, oil-rich Norway. In addition, I graphically examine the United States with Canada and Australia with New Zealand.

Figure 3 shows trade and immigration policy trends under various degrees of a resource boom. The y-axis scale on the far left measures trade policy openness while the y-axis scale

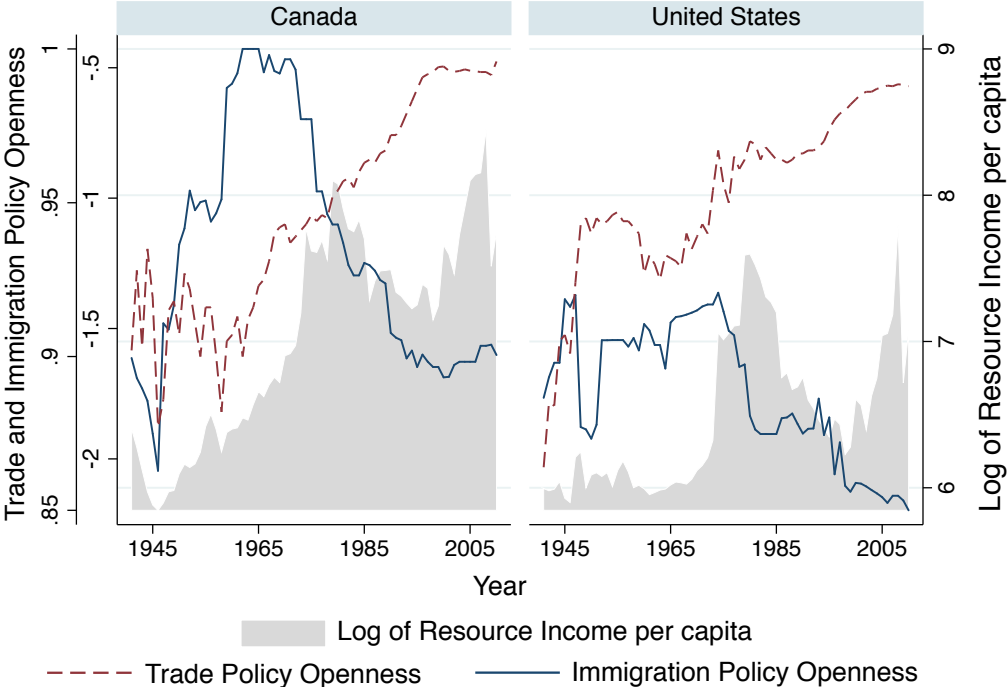
to the right of the trade policy scale measures immigration policy openness. Note that although trade policies of both economies tend to be volatile, the tariff level never exceeds 6 percent between 1945 and 2013. Given that these countries are small open economies in terms of trade, we can assess the effect of a resource boom on immigration policy. Since trade is relatively open during this period, we should expect that a resource boom reduces immigration policy openness according to Hypothesis 4. The negative correlation between resource income per capita and immigration policy openness is striking for the two economies. The Dutch immigration policy responds to even small changes in the natural gas boom.

Figure 3: Trade and Immigration Policies during Resource Booms, Netherlands and Norway



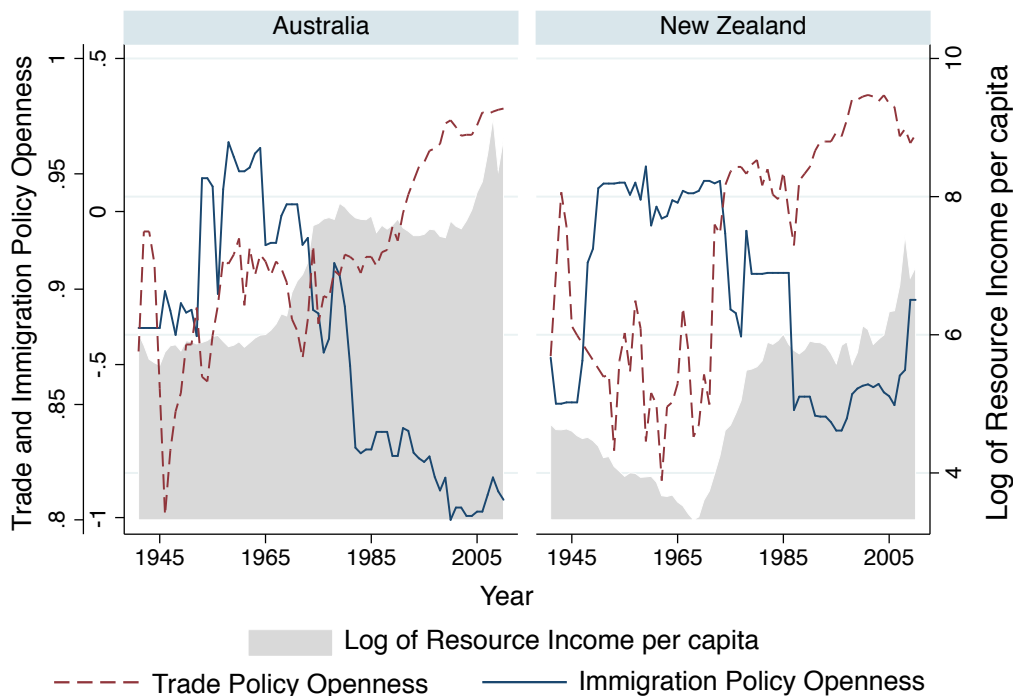
The abrupt end of Norwegian open immigration policy in 1975 also completely coincides with an oil boom in the early 1970s. What about the correlation between trade and immigration policies? Resource booms in both economies peaked during the 1970s. Prior to the 1970s, both economies earned considerable resource income, but this period cannot be classified as a boom or lack thereof. Hypothesis 1 predicts that increasing trade openness reduces immigration policy openness during a resource boom. The Dutch trade policy shows a robust negative relationship with immigration policy after the 1970s. A similar pattern characterizes Norwegian immigration policy after 1970. Figure 3 alone provides strong illustrative evidence for Hypotheses 1 and 4 without accounting for other alternative explanations for restrictive immigration policy.

Figure 4: Trade and Immigration Policies during Resource Booms, Canada and the U.S.



What about Canada and the United States? Prior to 1970, trade was relatively closed in Canada. According to Hypothesis 3, we should expect that a growing resource income increases immigration policy prior to 1970. This is exactly what happened in Canada prior to the 1970s. Canadian firms under trade protection supported pro-immigration policy in order to deal with the rising domestic wage during a resource boom. The U.S. immigration policy prior to 1970 also shows this pattern, albeit less visually robust. As trade opens up further and resource booms continue in both economies after the 1970s, we observe a steep downward pattern of immigration policy in North America as predicted by Hypothesis 1. When the resource boom in the U.S. slowed down in the mid-1980s, we see that immigration policy is less responsive to increasing trade liberalization.

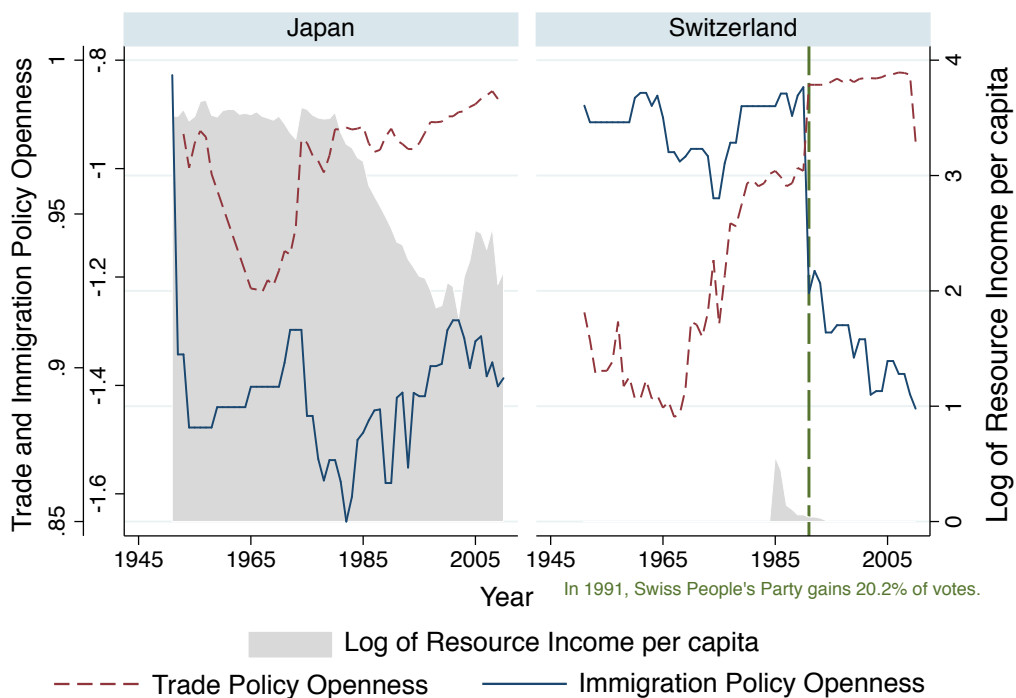
Figure 5: Trade and Immigration Policies during Resource Booms, Australia and New Zealand.





Finally, I take a look at Australia and New Zealand to see if their experience is similar to North America and the resource-rich European economies. Both economies show some patterns that provide more illustrative support for some of the Hypotheses. Most importantly, we observe a strong negative policy correlation between trade and immigration as resource booms grow.

Figure 6: Trade and Immigration Policies in Resource-Poor Japan and Switzerland



While Figures 3, 4 and 5 are consistent with Hypotheses 1, 3 and 4, we have not seen graphical representation of Hypothesis 2 that predicts increasing trade openness will lead to less restrictive (more liberal) immigration policy in resource-poor countries. In order to see this, I present the trade and immigration policies of Japan and Switzerland. As illustrated in Figure 6, Switzerland's immigration policy is positively correlated with trade

policy, especially since 1970 until 1991 when a right-wing populist party, Swiss People's Party (SVP) gained 20.2 percent of votes. The rise of the new SVP led to an abrupt closure of borders in 1991. Japan's trade policy shows a somewhat positive correlation with immigration policy when Japan started losing its already low resource income. More recently, Japanese firms in the car, electronics, and food-manufacturing sectors have started relying on migrant workers, most of whom are descendants of Japanese immigrants who migrated to Latin America before World War II. Most migrant workers to Japan use recruiting agencies to find work. Agencies send them to labor contractors in Japan and dispatch them to Japanese factories (Higuchi, 2005, p.1).

A quick look at the figures reveals ample evidence for the hypotheses. Trade policy and resource booms seem to determine most changes in immigration policy of countries in multiple regions across the globe. With these pictures in mind, I can use multivariate analyses to assess the empirical validity of the hypotheses. The following ordinary least squares (OLS) specification with robust standard errors evaluates the four hypotheses.

$$\begin{aligned} \text{Immigration Policy}_{it} = & \beta_0 + \beta_1 \text{Tariff Level}_{it} + \beta_2 \text{Log of Resource Income per Capita}_{it} \\ & + \beta_3 \text{Tariff Level}_{it} \times \text{Log of Resource Income per Capita}_{it} \\ & + \sum_{k=4}^n (\beta_k \text{Control Variable}_{(k-3),it}) + \tau_{it} + \alpha_i + \mu_t + \epsilon_{it}, \end{aligned}$$

where  $\tau_t$  is a linear time trend specific to each country,  $\alpha_i$  and  $\mu_t$  indicate country fixed effects and year fixed effects, respectively, and *Tariff Level* is the total value of import duties divided by the total value of imports, and multiplied by 100 for straightforward interpretation. When *Tariff Level* = 0, trade is completely open. This means that  $\beta_2$  is the effect of resource income on immigration policy under free trade and that  $\beta_1$  is the effect of trade *protection* when a country does not have any resource income. Using the trade protection indicator instead of the openness indicator facilitates a more straightforward

interpretation of the coefficients. The expected sign of  $\beta_1$  is now negative because Hypothesis 2 predicts a positive correlation between trade *openness* and immigration policy. The sign of  $\beta_2$  is negative because resource income reduces immigration policy openness under free trade according to Hypothesis 4. The coefficient of the interaction term,  $\beta_3$  is positive according to Hypotheses 1 and 3.

For statistical transparency, I run the base model without any control variable and report the results in Model 2 in Table 4. I also compare the results from Peters (2015)'s original sample in Model 1 with the results of Model 2. I introduce the first set of control variables that are potentially causing omitted variable bias. I include the natural log of population divided by area (log of population density), economic growth rate and log of GDP per capita. I have retrieved the economic data from Haber and Menaldo (2011) and updated them using the World Development Indicators. To be consistent the data from the Penn World Table, I used growth rates to compute GDP per capita. All these three economic indicators are highly correlated with resource booms and are believed to have some effect on immigration policy on theoretical grounds. I also include the polity score from Marshall and Gurr (2014) to control for the level of political development that may be driving both trade openness and immigration policy. Since the sample is restricted to democracies, the polity score is unlikely to have an effect on the dependent variable. Yet, since the sample covers a relatively long time horizon starting immediately after World War II, I have decided to include the variable in Models 3 and 4. Across the four models, only the sign of  $\beta_2$  of *Log of Resource Income per Capita* in Model 1 is incorrect.

High tariff levels are negatively correlated with the openness of immigration policy. In Model 4, as *Tariff Level* increases by one unit (i.e. from 3 percent to 4 percent on the total value of imports), immigration policy becomes restrictive by approximately a .05 factor unit. In other words, as trade opens up by one unit (i.e. from a 4 percent tariff level to a 3 percent tariff level on imports), immigration policy becomes more open by a .05 factor

Table 4: Determinants of Immigration Policy in Democracies, 1946-2013

Model	(1)	(2)	(3)	(4)
Dataset	Peters	Augmented Peters		Augmented
Tariff Level	-0.042** (0.017)	-0.042* (0.020)	-0.045*** (0.013)	-0.048*** (0.016)
Resource Income	0.048 (0.107)	-0.114* (0.062)	-0.016 (0.116)	-0.137** (0.055)
Tariff Level $\times$ Resource Income	0.012*** (0.003)	0.012** (0.004)	0.011*** (0.002)	0.012*** (0.003)
Log of Population Density			0.906* (0.514)	1.006** (0.366)
GDP Growth			0.396 (0.488)	0.580 (0.529)
Log of GDP per capita			0.089 (0.272)	-0.089 (0.217)
Polity Score			0.023 (0.015)	0.016 (0.016)
Time Trend	-0.004 (0.005)	0.005 (0.005)	-0.018** (0.006)	-0.005 (0.009)
Constant	-0.862 (0.677)	-1.013 (0.671)	-2.693* (1.509)	-2.638 (1.746)
Observations	763	1048	726	972
Countries	15	20	15	20
R <sup>2</sup>	0.560	0.519	0.615	0.591

Note: This table portrays a pooled cross-sectional time-series ordinary least squares (OLS) analysis of immigration policy in year  $t$ . All independent variables are taken from year  $t$ . Robust standard errors are shown in parentheses. \*\*\*, \*\*, and \* indicate statistical significance levels of 1, 5, and 10 percent, respectively. Country and year fixed effects are included in all models.

unit. This relationship is robust across all four models, confirming the plausibility of Hypothesis 2. In Models 2 and 4, resource income is negatively and significantly correlated with immigration policy. Since the coefficient of *Log of Resource Income per Capita* indicates the effect of a resource boom on immigration policy only when trade is completely open, only the augmented dataset supports Hypothesis 4. The Netherlands, a country in the original dataset, however, is an exemplary case of Hypothesis 4. Including Norway in the new dataset increases the variation in resource income, possibly driving the

empirical discrepancy between the two datasets.<sup>29</sup>

So far, the empirics have provided strong support for Hypotheses 2 and 4, particularly in the augmented dataset. In order to assess how trade openness modifies the way through which a resource boom affects immigration policy (Hypothesis 3), I need to compute the marginal effect of a resource boom at varying levels of trade openness. Similarly, the empirical assessment of Hypothesis 1 requires computing the marginal effect of trade openness while holding resource income at varying levels.<sup>30</sup> Before graphing the marginal effects, I run additional multivariate analyses with additional control variables.

Recently, the economics literature has examined the distributional consequences of natural resource booms with an empirical emphasis on inequality (Golderis and Malone, 2011; Bhattacharyya and Williamson, 2013). While the literature is more empirically driven, the theory tells that because some factors are less mobile across sectors, resource booms tend to benefit the most mobile factors, usually those can invest liquid assets in booming sectors. This tends to benefit the very top end of the income distribution while hurting those that are tied to the lagging sectors. Moreover, political economists argue that natural resources exacerbate inequality by reducing the quality of political institutions (Acemoğlu and Robinson, 2006, 2012; Engerman and Sokoloff, 2012).

The economic explanation of resource booms and inequality may cast doubt on the result that resource booms cause more restrictive immigration policy under trade openness. Economists have argued that inequality is linked to restrictions on immigration flows (Timmer and Williamson, 1998; Hatton and Williamson, 2005a,b). The institutional explanation, however, is not applicable for countries of our interest because it is based on theories of the rentier state (Beblawi, 1987; Karl, 1997; Mahdavy, 1970; Ross, 2001).<sup>31</sup>

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<sup>29</sup>Excluding Norway from Model 4 does not change the results much.

<sup>30</sup>See Brambor, Clark and Golder (2006); Berry, Golder and Milton (2012) for more information on how to interpret the coefficients of constitutive and interaction terms.

<sup>31</sup>The rentier-state framework is based on the bargaining model between economic actors and revenue-seeking governments over taxation and democratization (Bates and Lien, 1985; Levi, 1982; North, 1981;

These theories elaborate on mechanisms through which natural resources deteriorate the quality of institutions or exacerbate inequality in transitional democracies or autocracies, not in consolidated democracies.

Even if it is true that natural resource booms increase inequality, it is uncertain how increasing inequality affects immigration policy in a democracy. Supposedly, the median voter should care about rising inequality in order to draw any policy response on immigration from the policymaker. Assume that immigration increases redistributive pressure through inequality. The median voter is less likely to contribute to tax revenues for future redistribution than economic elites. Since elites would be forced to fund redistributive concessions from the policymaker, they are most likely to oppose immigration, not the median voter. In fact, the median voter is likely to gain from immigration as low-skilled immigrants can provide cheaper services to them. Even if it is true that the median voter does not favor inequality, how does she get information about the level of inequality within society? Does she use immigration flows as a proxy for inequality? For these reasons, the causal argument between inequality and immigration policy is more fragile than it seems at first glance.

Regardless, I include *Inequality* in Model 5 to see if it has any effect on immigration policy. Data on inequality are extremely scarce, and available data often have very sparse observations. Moreover, some measures of inequality may not be relevant in studying immigration policy. Theoretically, immigration inflows benefit firms while hurting workers. Capitalists benefit from open immigration, increasing the margin of their profit vis-à-vis workers in the same industrial sector. For these economic dynamics between capital and

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Tilly, 1992). Without resource revenues, governments must tax their citizens assets to operate. If citizens assets are immobile, governments may find it easy to tax their citizens without deferring to the citizens policy preferences. When assets are mobile, revenue-seeking governments must enact policies that are conducive to the economic interests of asset-owning citizens in exchange for tax revenues. These policies often result in democratization with the assurance of property rights and suffrage. The presence of resource rents, however, reduces asset-owning citizens bargaining leverage as long as resource revenues fill the fiscal coffers of the state, freeing policymakers from the need to trade democratization in exchange for tax revenues.

labor in immigration policymaking, I use Ortega and Rodriguez (2006)'s inequality indicator measuring the capital share of the value added in the industrial sector.<sup>32</sup> In Model 5 of Table 5, the coefficient of *Inequality* is correctly signed as negative. But, we cannot reject the null hypothesis at any reasonable confidence level. Lagging *Inequality* by a year, two or five does not change the results. Inequality simply does not influence immigration policy in eighteen democracies from 1946.<sup>33</sup>

I drop *Inequality* to have more observations in the samples of Models 6, 7 and 8. Instead, I include welfare taxation in Model 6 to see if welfare states are more likely to restrict immigration. I use Cusack (2000)'s welfare indicator measuring taxes collected for social security as a share of GDP. Consistent with the literature on immigration policy and welfare state, I find a negative correlation between the share of welfare taxation in GDP and immigration policy openness. A one-percent increase of welfare taxation relative to GDP makes immigration policy more restrictive by a factor-unit of 0.067. Including welfare taxation, however, does not reduce the empirical validity of the hypotheses. In fact, the effects are stronger both substantively and statistically relative to the results of Model 4. Compared to Model 4's 972 observations and 20 countries, the number of observations and the number of countries in Model 6 are reduced to 535 and 13, respectively with the welfare indicator. Since the indicator is only available for OECD countries from 1950 to 1995, it is not surprising that the coefficients of the variables are more pronounced given the theoretical model's core assumptions of advanced democratic institutions and perfect market competition.

Models 7 and 8 address some of the alternative hypotheses in the literature that examines the role of parties, the size of the immigrant electorate and the role of labor

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<sup>32</sup>Houle (2009) used *Amelia II* to include imputed data in missing observations. I use this version of the data in Model 5.

<sup>33</sup>Using the GINI coefficient in a sample from 1972, Peters (2015) finds no evidence of a negative correlation between immigration policy and inequality.

Table 5: Determinants of Immigration Policy in Democracies, 1946-2013

Model	(5)	(6)	(7)	(8)
Tariff Level	-0.091*** (0.025)	-0.078*** (0.023)	-0.059** (0.023)	-0.041** (0.016)
Resource Income	-0.175*** (0.056)	-0.206*** (0.056)	-0.225*** (0.055)	-0.241*** (0.039)
Tariff Level × Resource Income	0.022*** (0.005)	0.018*** (0.005)	0.014*** (0.004)	0.010*** (0.003)
Log of Population Density	1.219 (0.766)	0.470 (0.548)	0.248 (0.586)	0.507 (0.541)
GDP Growth	0.171 (0.709)	0.064 (0.597)	-0.054 (0.565)	-0.522 (0.532)
Log of GDP per capita	-0.390 (0.267)	0.049 (0.360)	-0.063 (0.338)	-0.051 (0.208)
Polity Score	-0.014 (0.027)	-0.029 (0.020)	-0.040** (0.016)	-0.015 (0.020)
Inequality	-0.778 (1.100)			
Welfare Taxation as % of GDP		-0.067** (0.029)	-0.078*** (0.025)	-0.088*** (0.024)
Net Union Density			-1.748* (0.865)	-1.888** (0.691)
<b>Legislative Seat %</b>				
Left-wing Libertarian				0.033* (0.015)
Left				-0.013*** (0.004)
Right				-0.007* (0.004)
Right-wing Populist				-0.013*** (0.004)
Schengen				-0.178 (0.173)
OECD				-0.131 (0.142)
Time Trend	-0.013 (0.012)	-0.006 (0.013)	-0.004 (0.013)	
Constant	1.647 (2.644)	-0.660 (3.039)	1.905 (3.134)	1.086 (2.858)
Observations	637	535	535	535
Countries	18	13	13	13
R <sup>2</sup>	0.622	0.705	0.721	0.749

Note: This table portrays a pooled cross-sectional time-series ordinary least squares (OLS) analysis of immigration policy in year  $t$ . All independent variables are taken from year  $t$ . Robust standard errors are shown in parentheses. \*\*\*, \*\*, and \* indicate statistical significance levels of 1, 5, and 10 percent, respectively. Country and year fixed effects are included in all models.



unions (Koopmans, Michalowski and Waibel, 2012; Givens and Luedtke, 2005; Haus, 2002; Watts, 2002).<sup>34</sup> In Model 7, I add *Net Union Density* to assess the role of labor unions in influencing immigration policy.<sup>35</sup> Historically, labor unions have had both pro- and anti-immigration stances. In the early 1970s, Belgian unions vehemently opposed a newly adopted immigration policy of deporting unemployed immigrants. The Belgian government eventually withdrew this deportation policy due to labor unions' opposition. Theoretically, unions presumably oppose immigration because immigrants compete with native workers. As the collective organization of domestic labor grows, we should expect decreasing immigration policy openness. Both Models 7 and 8 show that *Net Union Density* is negatively associated with immigration policy openness. In Model 7, a one-unit increase in the share of workers affiliated with unions restricts immigration policy by a factor-unit of 0.0175.<sup>36</sup>

Finally, I examine how the ideological makeup of legislature influences immigration policy by including party variables from the Comparative Political Parties Dataset by Swank (2014). If left-wing libertarians truly uphold the ideal notion of a radically free market, they should support open immigration policy. In Model 8, left-wing libertarians support open immigration more than any other party. Right-wing populists oppose immigration as they target low-income voters for political mobilization. Left party members oppose immigrants because their support base consists of workers. It is unclear why right party members oppose immigration, albeit the evidence is weak substantively and statistically. It is possible that right parties' stance toward immigration policy depends on how easy it is for immigrants to become citizens in the host country.<sup>37</sup>

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<sup>34</sup>I also add dummy variables for members of the OECD and the Schengen agreement. Being members of these international clubs is negatively correlated with immigration policy openness but is not statistically significant.

<sup>35</sup>Data come from Golden, Lange and Wallerstein (2000).

<sup>36</sup>Note that *Net Union Density* is constructed to range from 0 to 1.

<sup>37</sup>Peters (2015) finds that both governing center and right parties support immigration relative to left parties. Note that this is consistent with the results in Model 8. Compared to left parties, right party

Across Models 5 through 8 with additional controls, the coefficients of *Tariff Level*, *Resource Income* and the interaction term maintain the expected signs and are highly statistically significant. I have addressed possible concerns for omitted variable bias theoretically and empirically. The empirical validity of the hypotheses remains robust to the inclusion of additional control variables and in the presence many missing observations. Now I report the marginal effects of *Resource Income* on *Immigration Policy* at various levels of trade openness and the marginal effects of *Tariff Level* on *Immigration Policy* at various levels of resource income. The first graph will test Hypothesis 3 while the second graph will test Hypothesis 1. I first report the results using Model 4 without a time trend.<sup>38</sup> Since Model 4 has about 1000 observations with both OECD and non-OECD democracies, we can consider the marginal effects of Model 4 more generalizable. There is strong evidence that resource booms condition the policy correlation between trade and immigration as shown in Figure 7b. In the absence of a resource boom, the correlation between tariff level and immigration policy openness is -0.05 suggesting that trade *openness* and immigration openness are positively correlated at 0.05 when no resource boom occurs.

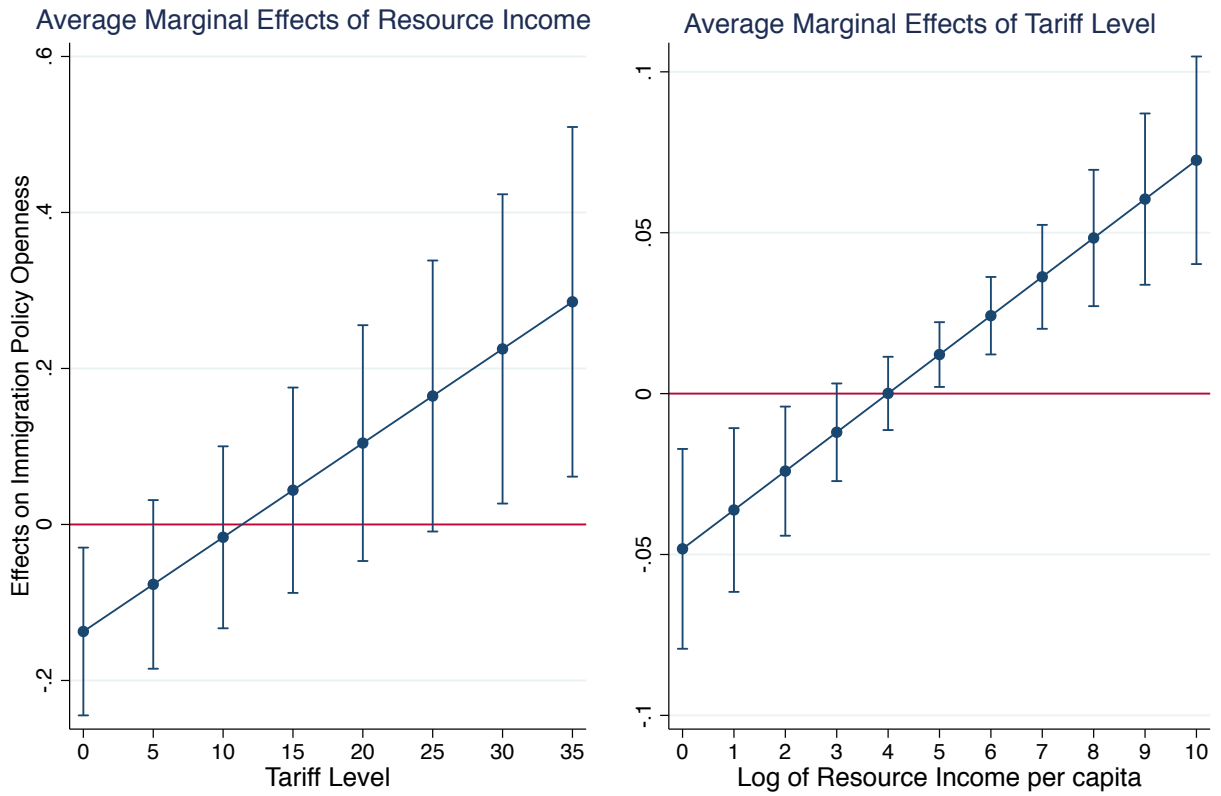
Given that many democracies in the sample tend to have open trade policy, there is robust evidence that resource booms induce more restrictive immigration policy under free trade as illustrated in Figure 7a. Moreover, there must be very high trade protection with a minimum tariff level between 25 and 35 for resource booms to induce firms to support pro-immigration policy. Due to the acute adverse effects of the Dutch disease, firms need extremely high tariffs to remain in the tradable sector during a resource boom. Do these results hold in Model 8? Figure 8 shows similar marginal effects for a sample that is limited to OECD countries from 1950 to 1995. Resource booms condition the direction of the policy correlation between trade and immigration (Figure 8b). There is even stronger

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members support immigration or oppose immigrant to a lesser extent. in Model 8, left party members oppose more than

<sup>38</sup>Using a time trend and year fixed effects makes computing the marginal effects technically impossible.

Figure 7: Marginal Effects on Immigration Policy with 95% CIs (Model 4)

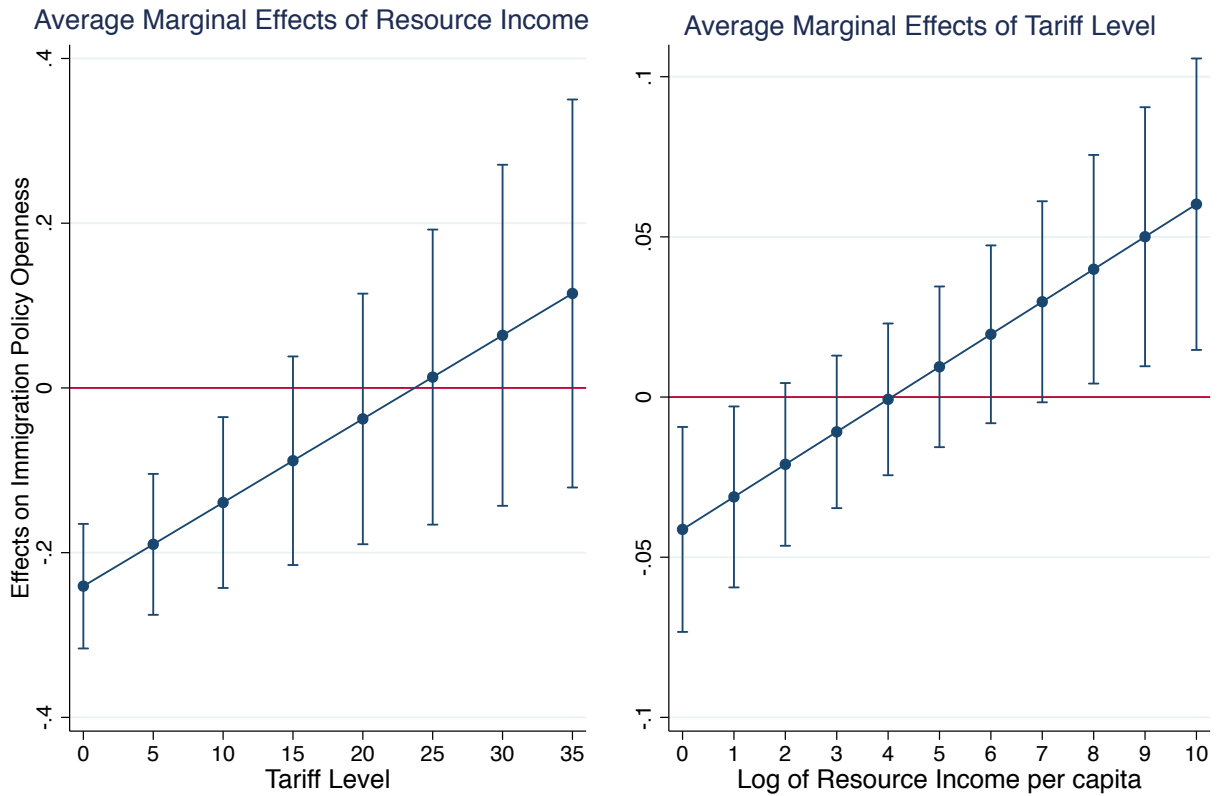


(a) Testing Hypotheses 3 and 4

(b) Testing Hypotheses 1 and 2

evidence that resource booms make immigration policy more restrictive as long as trade is somewhat open (Figure 8a). Even when *Tariff Level* is at 10, resource booms reduce firm support for open immigration by driving them to the non-tradable sector. As these moving firms do not lobby for open immigration, policymakers implement measures to ban immigration inflows.

Figure 8: Marginal Effects on Immigration Policy with 95% CIs (Model 8)



(a) Testing Hypotheses 3 and 4

(b) Testing Hypotheses 1 and 2

## International Capital Mobility and Immigration Policy

Increasing capital mobility around the globe is an important feature of today's globalization and domestic politics. Capital mobility and financial integration may constrain policymakers in a number of ways. When capital is highly mobile, governments may become "hostages to foreign exchange and capital markets" (Haggard and Maxfield, 1996, p. 36). Governments must forgo monetary autonomy or exchange rate stability under mobile capital (Mundell, 1961). Capital mobility also undermines policymakers' ability to engineer a pre-electoral economic boom given the exchange rate regime and the type of macroeconomic expansion (Clark and Reichert, 1998; Clark and Hallerberg, 2000).

How does firms' ability to move their plants abroad alter the predictions of the theoretical argument in this paper? Peters (2014, 2015) emphasizes the role of capital mobility in shaping firm preferences over immigration policy during trade liberalization. When manufacturing firms move to labor-abundant economies, they no longer lobby for pro-immigration policy. When taking international firm mobility into account, the extent to which firms lobby for immigration in response to trade liberalization in a resource-poor economy (Hypothesis 2) depends on their ability to move their plants abroad. When firms cannot move abroad, they support pro-immigration policy as trade liberalizes (in a resource-poor economy). Since policymakers lose contributions when firms move out of the country, they no longer open immigration when capital is internationally mobile.

Even when capital is completely immobile internationally, resource booms under open trade still reduce the openness of immigration policy by providing exit options for firms within the domestic economy. However, when firms can move out of the domestic economy due to the Dutch disease, it may remove even more firms from a pro-immigration business coalition. Therefore, the extent to which a resource boom reduces immigration policy openness under open trade (Hypothesis 4) is greater when capital is mobile across international borders.

I use the capital control data from Bordo et al. (2001) and the Chinn-Ito Index of financial openness (Chinn and Ito, 2006) to evaluate these predictions.<sup>39</sup> Since the argument of this paper implicitly assumes that moving plants abroad is quite costly for firms, empirical analyses should provide more support for the hypotheses in terms of statistical significance when cross-border capital mobility is limited. I divide the samples in Models 4 and 8 into Models 9 through 12 under capital controls and capital openness. While Bordo et al. (2001)'s indicator is a binary indicator of capital control with 1

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<sup>39</sup>As an extension of the argument, I treat capital policy exogenous. Policymakers may have a variety of macroeconomics reasons to impose capital controls according the Mundell-Fleming framework (?Mundell, 1962; Bernhard, Broz and Clark, 2002).

Table 6: Determinants of Immigration Policy in Democracies, 1946-2013

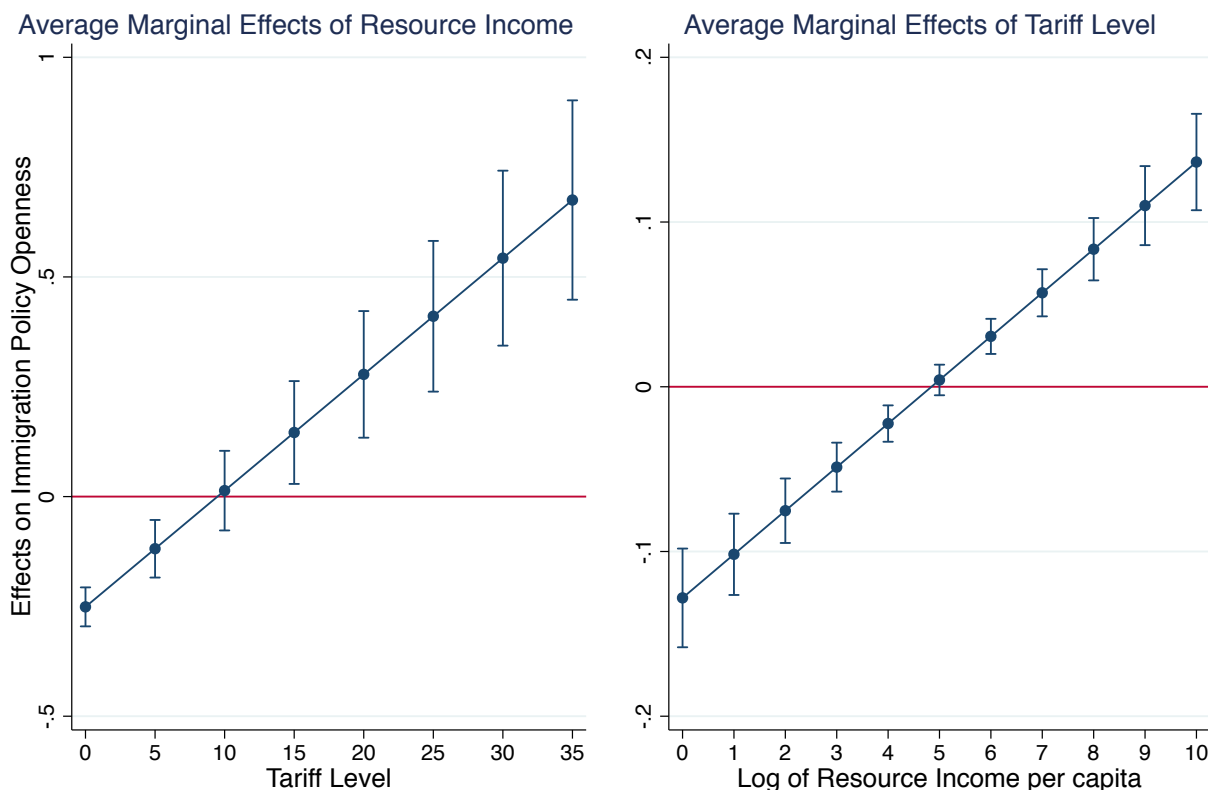
Model	(9)	(10)	(11)	(12)
Capital Control	Yes	No	Yes	No
Tariff Level	-0.085*** (0.021)	-0.098 (0.121)	-0.128*** (0.015)	-0.157 (0.124)
Resource Income	-0.141* (0.071)	-0.227*** (0.039)	-0.251*** (0.023)	-0.312*** (0.050)
Tariff Level × Resource Income	0.017*** (0.004)	0.028 (0.018)	0.026*** (0.003)	0.030 (0.019)
Log of Population Density	1.940*** (0.421)	1.374** (0.571)	0.670 (0.947)	0.722 (0.514)
GDP Growth	0.138 (0.307)	0.399 (0.927)	-0.253 (0.493)	0.833 (0.959)
Log of GDP per capita	-0.426* (0.234)	-0.066 (0.650)	0.324 (0.237)	-1.239* (0.671)
Polity Score	0.007 (0.009)	0.004 (0.081)	-0.000 (0.025)	-0.185** (0.070)
Welfare Tax Revenue as % of GDP			-0.038 (0.036)	-0.051* (0.026)
Net Union Density			0.889 (1.458)	-0.984 (0.599)
<b>Legislative Seat %</b>				
Left-wing Libertarian			0.027 (0.018)	0.018 (0.010)
Left			-0.007 (0.010)	0.002 (0.012)
Right			-0.004 (0.008)	-0.005 (0.003)
Right-wing Populist			0.009 (0.019)	-0.016* (0.008)
Schengen				-0.105 (0.142)
OECD			0.068 (0.106)	1.220* (0.584)
Constant	-2.768 (2.501)	-4.621 (7.300)	-4.237 (4.478)	11.520* (6.187)
Observations	449	523	256	279
Countries	20	17	13	13
R <sup>2</sup>	0.653	0.594	0.840	0.728

Note: This table portrays a pooled cross-sectional time-series ordinary least squares (OLS) analysis of immigration policy in year  $t$ . All independent variables are taken from year  $t$ . Robust standard errors are shown in parentheses. \*\*\*, \*\*, and \* indicate statistical significance levels of 1, 5, and 10 percent, respectively. Country and year fixed effects are included in all models.

indicating some measure of capital control, the Chinn-Into Index is continuous between 0 and 1 with the latter indicating a closed financial market. After I combined the indicators, I created a binary indicator of capital control by coding anything below the mean (0.38) as

open and the rest as closed.

Figure 9: Marginal Effects on Immigration Policy with 95% CIs under Capital Controls



(a) Testing Hypotheses 3 and 4

(b) Testing Hypotheses 1 and 2

When cross-border capital mobility is restricted in Models 9 and 11 in Table 6, policymakers open immigration as trade liberalizes. This is because firms without exit options in resource-poor countries seek to increase immigration as an alternative form of protection. Policymakers help these firms in order to receive taxes from surviving firms. In Models 10 and 12 (mobile capital), while the sign of *Tariff Level* is correct and substantively significant, we cannot reject the null hypothesis. As firms move abroad in response to trade liberalization, a pro-immigration business coalition loses influence in immigration policymaking. Across Models 9 through 12, resource income is negatively

correlated with immigration policy under free trade. As predicted, the effect becomes more substantively significant when capital controls are absent. When firms can move to the domestic non-tradable sector or abroad during a resource boom under free trade, policymakers shut doors to immigrants. Figure 9 illustrates marginal effects to test all of the four hypotheses in Model 11. These results are more statistically robust than those of Model 8.

## Conclusion

The paper was empirically and theoretically motivated by divergent correlations between trade and immigration policies across a multitude of wealthy labor-scarce economies over several decades in the post-WWII era. The theoretical predictions of the paper and rigorous empirical analyses with a new dataset pose a serious challenge against the conventional wisdom that trade and immigration policies have always been substitutes. The policy correlation is sometimes negative not because policymakers regard them as policy substitutes in achieving economic openness, but because firm preferences over immigration policy change radically, depending on the degree of trade openness in resource-booming economies. Trade liberalization during a resource boom makes the tradable sector unattractive for owners of capital. Direct and indirect de-industrialization through the resource movement and the spending effects of the Dutch disease have virtually eliminated firm support for pro-immigration policy in many open resource-rich countries. Prior to trade liberalization, firms seek to expand the labor supply by supporting open immigration policy in resource-rich economies. During this brief period of trade protection, immigration policy becomes more liberal in resource-rich countries.

Trade liberalization, however, provokes firms to demand more open immigration policy in resource-poor countries. Without domestic exit options in the resource industry or in



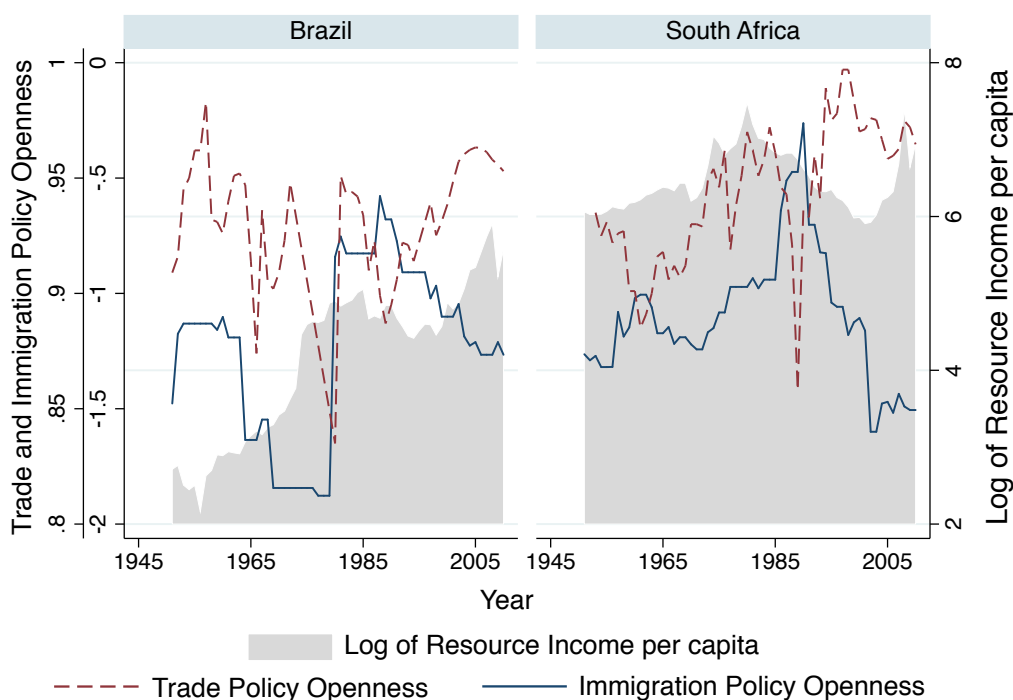
the non-tradable sector, firms are willing and able to fight one aspect of globalization (free trade) with another (open immigration). This seemingly ironic political strategy of firms toward globalization leads to a conjoint opening of trade and immigration. As firms become mobile across international borders, the positive policy correlation between trade and immigration policies disappears. An important lesson from this paper is that foreign economic policies regarding goods, money and people affect each other by changing firm preferences. Increasing international capital mobility also accentuates the negative policy correlation in resource-rich countries. Under high cross-border capital mobility, resource booms and trade liberalization provide firms with more outside options. As firms can either move into the domestic non-tradable sector or invest abroad, they no longer ask policymakers for more open immigration policy. The economic integration in the international goods and capital markets causes disintegration of the international labor market with resource-booming economies.

The state's dependence on capital implies that firm preferences over immigration policy directly translate into policies through multiple channels of influence on policymakers. Whether pro-immigration firms make campaign contributions or provide tax revenues to the state, most legislations, executive policy and actual enforcement in immigration policy honestly reflect firms' explicit and implicit influences on immigration policy and their intimate relationship with the state. A remaining question is why firms have failed to stop trade liberalization while having been able to influence immigration policy for so long. In trade politics, labor-intensive firms meet their most formidable opponents, other firms who favor free trade due to the presence of reciprocity through bilateral trade agreements. Labor-intensive firms do not face other firms that oppose immigration in immigration policymaking. Capital-intensive firms are indifferent toward immigration policy that concerns low-skilled labor. As only labor-intensive firms dominate in immigration policymaking, changes in immigration policy accurately reflect their preferences.

# Appendix

## Transitional Democracies: Brazil and South Africa

Figure A1: Trade and Immigration Policies in Transitional Democracies



The two core assumptions of the theoretical model in this paper are (near) perfect market competition and democratic institutions through which policymakers are accountable to voters. Restricting empirical analyses to democracies according to the classification by Przeworski et al. (2000) and Cheibub, Gandhi and Vreeland (2010), however, removes transitional democracies from the sample. In this section, I briefly examine whether Brazil and South Africa meet the theoretical predictions. South Africa is abundant in valuable minerals, such as gold, silver and diamonds. Figure A1 shows a robust negative relationship between trade and immigration policies in resource-rich South

Africa (Hypothesis 1). There is some evidence that increasing resource income decreases immigration policy openness in the 2000s during which the country democratized and lowered tariffs substantially (Hypothesis 4).

Prior to Brazil's oil boom, trade and immigration policies show a positive correlation from 1950 to 1965 (Hypothesis 2). This relationship becomes increasingly negative as oil revenues have flowed into the Brazilian economy since the 1980s until today. When trade was abruptly closed in the late 1970s, we see increasing immigration policy openness in response to an acute oil boom (Hypothesis 3). Although the graphical illustration in Figure A1 is only suggestive, the policy trends of these two countries are consistent with the theoretical predictions outlined in the paper. The trends become more consistent with the argument of the paper for years during and after democratic transition.

## Summary, Correlation and Fixed Effects Tables

Table A1: Summary Statistics, Democracies after 1945

Variable	Mean	Std. Dev.	Min.	Max.	N
Immigration Policy	-0.772	0.689	-2.197	1.758	1099
Tariff Level	4.427	4.378	0.147	38.1	1126
Log of Total Resource Income per capita	4.797	2.133	0	10.045	1203
Log of Population Density	3.891	1.666	0.181	6.508	1100
GDP Growth	0.028	0.038	-0.121	0.672	1203
Log of GDP per capita	9.585	0.572	7.2	10.541	1203
Polity Score	9.239	2.347	-9	10	1198
Inequality	0.538	0.123	0.345	0.820	725
Welfare Taxation/GDP	7.95	5.442	0	21.27	657
Net Union Density	0.399	0.165	0.085	0.828	722
Percent of Left-wing Legislative Seats	1.97	3.508	0	16	955
Percent of Left Legislative Seats	36.944	16.08	0	65	955
Percent of Right Legislative Seats	39.095	16.484	3	90	955
Percent of Right-wing Legislative Seats	2.537	5.988	0	31	955

Table A2: Summary Statistics, OECD Members, 1950–1995

Variable	Mean	Std. Dev.	Min.	Max.	N
Immigration Policy	-0.757	0.746	-2.197	1.758	858
Tariff Level	3.784	3.395	0.217	31.2	910
Log of Total Resource Income per capita	4.858	2.175	0	10.045	955
Log of Population Density	4.015	1.674	0.181	5.992	868
GDP Growth	0.026	0.026	-0.095	0.182	955
Log of GDP per capita	9.723	0.458	7.705	10.541	955
Polity Score	9.871	0.633	5	10	953
Inequality	0.502	0.088	0.345	0.698	613
Welfare Taxation/GDP	7.95	5.442	0	21.27	657
Net Union Density	0.399	0.165	0.085	0.828	722
Percent of Left-wing Legislative Seats	1.97	3.508	0	16	955
Percent of Left Legislative Seats	36.944	16.08	0	65	955
Percent of Right Legislative Seats	39.095	16.484	3	90	955
Percent of Right-wing Seats	2.537	5.988	0	31	955

Table A3: Coefficients of Country Fixed Effects for Models 1 through 12

Model	1	2	3	4	5	6	7	8	9	10	11	12
Canada	0.579*** (0.046)	0.634*** (0.035)	2.829** (1.188)	3.003** (0.890)	3.530* (1.818)	-1.728 (1.140)	-1.728 (1.140)	-3.193*** (0.841)	5.210*** (1.072)	3.853** (1.533)	-3.753 (2.637)	-1.494 (1.186)
Brazil	0.728*** (0.213)	0.458*** (0.134)	0.984*** (0.204)	0.699*** (0.199)	0.031 (0.520)	0.000 (.)	0.000 (.)	0.000 (.)	0.906*** (0.347)	0.000 (.)	0.000 (.)	0.000 (.)
Chile	0.000 (.)	0.266 (0.345)	0.000 (.)	-1.212 (1.581)	-5.161*** (1.268)	0.000 (.)	0.000 (.)	0.000 (.)	-1.129 (1.978)	-1.746 (5.232)	0.000 (.)	0.000 (.)
Argentina	0.845*** (0.091)	0.766*** (0.062)	1.404*** (0.281)	1.396*** (0.179)	0.649 (0.564)	0.000 (.)	0.000 (.)	0.000 (.)	2.048*** (0.290)	1.377*** (0.466)	0.000 (.)	0.000 (.)
United Kingdom	1.287*** (0.062)	1.211*** (0.037)	-0.836 (1.283)	-1.165 (0.869)	-1.906 (1.790)	1.308*** (0.434)	1.902*** (0.523)	2.810*** (0.730)	-3.670*** (1.092)	-1.710 (1.203)	2.472*** (0.690)	0.656 (1.277)
Netherlands	0.694*** (0.026)	0.808*** (0.027)	-2.315* (1.403)	-2.267** (1.161)	-3.742 (2.375)	20.288 (12.704)	18.688 (13.390)	31.614*** (10.574)	-4.695*** (1.453)	-3.420 (2.223)	35.146 (25.897)	20.394* (11.200)
Belgium	0.000 (.)	-0.133 (0.087)	0.000 (.)	-4.675* (2.442)	-9.027** (3.563)	106.673 (74.287)	94.915 (78.250)	165.409*** (62.657)	-7.146** (3.086)	-6.498 (6.811)	187.498 (149.602)	113.233* (64.518)
France	0.995*** (0.289)	0.579*** (0.174)	-0.478 (1.022)	-0.971 (0.599)	-1.785 (1.292)	2.449*** (0.652)	2.397*** (0.702)	3.968*** (0.570)	-2.177*** (0.753)	-2.117** (0.831)	4.471*** (1.486)	0.777 (0.933)
Switzerland	0.670 (0.504)	0.095 (0.339)	-2.542* (1.533)	-2.598** (1.289)	0.000 (.)	38.124 (26.310)	33.852 (27.762)	59.018*** (22.202)	-3.915** (1.642)	-4.217 (2.898)	67.740 (53.234)	39.279* (23.239)
Germany	-0.395** (0.194)	0.078 (0.076)	-4.080*** (1.350)	-3.228** (1.508)	-5.982*** (2.532)	56.092 (38.508)	50.117 (40.567)	87.325*** (32.411)	-5.701*** (1.920)	-4.401 (3.901)	98.413 (77.808)	59.268* (33.475)
Austria	0.000 (.)	0.617*** (0.183)	0.000 (.)	-2.708 (2.087)	-6.871*** (2.595)	107.915 (75.017)	96.026 (79.003)	167.003*** (63.309)	-4.441* (2.681)	-3.822 (6.329)	188.683 (150.729)	115.220* (65.085)
Sweden	0.000 (.)	1.129*** (0.233)	0.000 (.)	-0.786 (1.773)	-4.480*** (1.386)	108.971 (75.901)	97.148 (79.912)	168.647*** (64.097)	-0.108 (2.311)	-1.466 (5.748)	190.684 (152.414)	116.724* (65.635)
Norway	0.000 (.)	1.480*** (0.329)	0.000 (.)	0.122 (1.716)	-3.468*** (1.130)	109.800 (76.145)	97.601 (80.167)	169.148*** (64.346)	0.522 (2.256)	0.126 (5.718)	191.107 (152.860)	118.166* (65.811)
South Africa	0.591*** (0.082)	0.613*** (0.065)	0.157 (0.332)	0.011 (0.224)	-0.880* (0.451)	0.000 (.)	0.000 (.)	0.000 (.)	-0.405 (0.296)	0.000 (.)	0.000 (.)	0.000 (.)
Taiwan	-0.528*** (0.160)	0.000 (.)	-6.577*** (2.301)	-5.165** (2.553)	0.000 (.)	0.000 (.)	0.000 (.)	0.000 (.)	-8.087*** (2.970)	-6.979 (6.750)	0.000 (.)	0.000 (.)
Korea	-0.255 (0.178)	0.341*** (0.034)	-5.894*** (2.146)	-4.473* (2.405)	-8.872** (3.611)	0.000 (.)	0.000 (.)	0.000 (.)	-7.219** (2.865)	0.000 (.)	0.000 (.)	0.000 (.)
Japan	-0.239** (0.100)	-0.184* (0.103)	-4.206*** (1.616)	-3.783** (1.559)	-6.161** (2.679)	50.901 (35.516)	45.269 (37.423)	79.616*** (29.824)	-6.795*** (1.878)	-5.099 (3.789)	90.444 (72.244)	53.586* (31.056)
Australia	1.147*** (0.060)	1.208*** (0.074)	3.600*** (1.312)	3.793*** (0.957)	4.113** (1.970)	0.000 (.)	0.000 (.)	0.000 (.)	6.386*** (1.172)	4.409*** (1.573)	0.000 (.)	0.000 (.)
New Zealand	0.993*** (0.055)	1.184*** (0.037)	0.640 (0.663)	1.259*** (0.449)	0.000 (.)	0.000 (.)	0.000 (.)	0.000 (.)	2.096*** (0.595)	1.149 (1.380)	0.000 (.)	0.000 (.)
Observations	763	1048	726	972	637	535	535	535	449	523	256	279
Countries	15	20	15	20	18	13	13	13	20	17	13	13

Note: This table portrays the coefficients of country dummies in a pooled cross-sectional time-series ordinary least squares (OLS) analysis of immigration policy in year  $t$ . Robust standard errors are shown in parentheses. \*\*\*, \*\*, and \* indicate statistical significance levels of 1, 5, and 10 percent, respectively. The coefficients of the United States are not reported because the U.S. is the baseline. Countries that are excluded from each model are noted by 0.000 (.).

Table A4: Correlation Matrix, Democracies after 1945

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
(1)	1													
(2)	0.234***	1												
(3)	0.00729	-0.0177	1											
(4)	-0.141***	-0.295***	-0.510***	1										
(5)	0.0974**	0.0466	-0.0589*	0.0953**	1									
(6)	-0.248***	-0.508***	0.107***	0.132***	-0.263***	1								
(7)	0.0466	-0.185***	0.0726*	0.199***	-0.00831	0.419***	1							
(8)	-0.204***	0.296***	-0.0977**	-0.0804*	0.0834*	-0.435***	-0.445***	1						
(9)	-0.286***	-0.499***	-0.0664	0.453***	-0.116**	0.340***	-0.278***	-0.158***	1					
(10)	0.598***	-0.0253	0.0716	-0.146***	0.0289	-0.127***	0.284***	-0.258***	0.234***	1				
(11)	-0.0479	-0.392***	0.0182	0.167***	-0.175***	0.464***	0.109***	-0.401***	0.145***	0.217***	1			
(12)	0.491***	-0.0796*	-0.0210	0.177***	0.0163	-0.0772*	0.0678*	-0.401***	0.516***	0.197***	0.197***	1		
(13)	-0.289***	0.153***	0.0467	-0.0661	-0.0579	0.0171	-0.219***	0.123**	-0.176***	-0.431***	-0.130***	-0.279***	1	
(14)	-0.0495	-0.329***	-0.0489	0.00992	-0.139***	0.409***	0.0828*	-0.122**	0.0779*	0.153***	0.599***	0.0346	-0.120***	1

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

**Variable List:**

(1) Immigration Policy, (2) Tariff Level, (3) Log of Total Resource Income per capita, (4) Log of Population Density, (5) GDP Growth, (6) GDP per capita, (7) Polity Score, (8) Inequality, (9) Welfare Taxation/GDP, (10) Net Union Density, (11) Percent of Left-wing Legislative Seats, (12) Percent of Left Legislative Seats, (13) Percent of Right Legislative Seats, (14) Percent of Right-wing Legislative Seats

Table A5: Correlation Matrix, OECD Members, 1950–1995

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
(1)	1													
(2)	0.267***	1												
(3)	0.00599	-0.0749*	1											
(4)	-0.204***	-0.330***	-0.539***	1										
(5)	0.126***	0.105**	-0.0712*	0.0901**	1									
(6)	-0.407***	-0.488***	0.143***	-0.0808*	-0.401***	1								
(7)	0.0124	-0.0530	0.0720*	-0.0649	-0.0429	0.102**	1							
(8)	-0.344***	-0.0890*	-0.0906*	0.0262	0.103*	0.0275	0.188***	1						
(9)	-0.286***	-0.499***	-0.0664	0.453***	-0.116**	0.340***	-0.278***	-0.217***	1					
(10)	0.598***	-0.0253	0.0716	-0.146***	0.0289	-0.127***	0.284***	-0.158***	-0.288***	1				
(11)	-0.0479	-0.392***	0.0182	0.167***	-0.175***	0.464***	0.109***	-0.258***	0.234***	0.217***	1			
(12)	0.491***	-0.0796*	-0.0210	0.177***	0.0163	-0.0772*	0.0678*	-0.401***	0.145***	0.516***	0.197***	1		
(13)	-0.289***	0.153***	0.0467	-0.0661	-0.0579	0.0171	-0.219***	0.123*	-0.176***	-0.431***	-0.130***	-0.279***	1	
(14)	-0.0495	-0.329***	-0.0489	0.00992	-0.139***	0.409***	0.0828*	-0.122**	0.0779*	0.153***	0.599***	0.0346	-0.120***	1

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

**Variable List:**

(1) Immigration Policy, (2) Tariff Level, (3) Log of Total Resource Income per capita, (4) Log of Population Density, (5) GDP Growth, (6) GDP per capita, (7) Polity Score, (8) Inequality, (9) Welfare Taxation/GDP, (10) Net Union Density, (11) Percent of Left-wing Legislative Seats, (12) Percent of Left Legislative Seats, (13) Percent of Right Legislative Seats, (14) Percent of Right-wing Legislative Seats

## References

- Acemoglu, Daron and James A. Robinson. 2006. *Economic Origins of Dictatorship and Democracy*. New York: Cambridge University Press.
- Acemoglu, Daron and James A. Robinson. 2012. *Why Nations Fail: The Origins of Power, Prosperity, and Poverty*. New York: Crown Publishers.
- Bailey, Michael A., Judith Goldstein and Barry R. Weingast. 1997. “The Institutional Roots of American Trade Policy: Politics, Coalitions, and International Trade.” *World Politics* 49(3):309–338.
- Bates, Robert H. and Da-Hsiang Donald Lien. 1985. “A Note on Taxation, Development, and Representative Government.” *Politics & Society* 14(2):53–70.
- Beblawi, Hazem. 1987. The Rentier State in the Arab World. In *The Rentier State: Nation, State and the Integration of the Arab World*, ed. Hazem Beblawi and Giacomo Luciani. London: Croom Helm pp. 85–98.
- Bernhard, William, J. Lawrence Broz and William Roberts Clark. 2002. “The Political Economy of Monetary Institutions.” *International Organization* 56(4):693–723.
- Bernheim, B. Douglas and Michael D. Whinston. 1986. “Menu Auctions, Resource Allocation, and Economic Influence.” *Quarterly Journal of Economics* 101(1):1–31.
- Berry, William, Matt Golder and Daniel Milton. 2012. “Improving Tests of Theories Positing Interaction.” *Journal of Politics* 74:653–671.
- Bhattacharyya, Sambit and Jeffrey G. Williamson. 2013. “Distributional Consequences of Natural-Resource Booms: Lessons from Australia.” *CEPR Discussion Paper* . 9582.



- Bordo, Michael, Barry Eichengree, Daniela Klingebiel and Maria Soledad Martinez-Peria. 2001. "Is the Crisis Problem Growing More Severe?" *Economic Policy* 21(32).
- Bordo, Michael D., Barry Eichengreen and Douglas A Irwin. 1999. "Is Globalization Today Really Different than Globalization a Hunderd Years Ago?" *NBER Working Paper* . No. W7195.
- Brambor, Thomas, William Roberts Clark and Matt Golder. 2006. "Understanding Interaction Models: Improving Empirical Analyses." *Political Analysis* 14:63–82.
- Broz, J. Lawrence and Seth H. Werfel. 2014. "Exchange Rates and Industry Demands for Trade Protection." *International Organization* 68(2).
- Cheibub, José Antonio, Jennifer Gandhi and James Raymond Vreeland. 2010. "Democracy and Dictatorship Revisited." *Public Choice* 143:67–101.
- Chinn, Menzie D. and Hiro Ito. 2006. "What Matters for Financial Development? Capital Controls, Institutions and Interactions." *Journal of Development Economics* 81(1):163–192.
- Cholewinski, Ryszard. 2004. *The Legal Status of Migrants Admitted for Employment*. Council of Europe Publishing.
- Clark, William Roberts and Mark Hallerberg. 2000. "Mobile Capital, Domestic Institutions, and Electorally Induced Monetary and Fiscal Policy." *The American Political Science Review* 94(2):323–346.
- Clark, William Roberts and Usha Nair Reichert. 1998. "International and Domestic Constraints on Political Business Cycles in OECD Economies." *International Organization* 52(1):87–120.

- Clemens, Michael A. and Jeffrey G. Williamson. 2004. "Why Did the Tariff-Growth Correlation Change after 1950?" *Journal of Economic Growth* 9(1):5–46.
- Copelovitch, Mark and Jon C. Pevehouse. 2013. "Ties that Bind? Preferential Trade Agreements and Exchange Rate Policy Choice." *International Studies Quarterly* 57(2):385–399.
- Copelovitch, Mark and Jon C. Pevehouse. N.d. "The Trilemma and Trade Policy: Exchange Rates, Financial Openness, and WTO Disputes." Unpublished Manuscript. University of Wisconsin-Madison.
- Corden, W. Max and J. Peter Neary. 1982. "Booming Sector and De-Industrialization in a Small Open Economy." *Economic Journal* 92:825–848.
- Cusack, Thomas R. 2000. "General Government Taxation Data Set." Online. [http://www2000.wzb.eu/alt/ism/people/misc/cusack/d\\_sets.en.htm](http://www2000.wzb.eu/alt/ism/people/misc/cusack/d_sets.en.htm).
- Ehrlich, Sean D. 2009. "How Common is the Common External Tariff? Domestic Influences on European Union Trade Policy." *European Union Politics* 10(1):115–141.
- Engerman, Stanley L. and Kenneth L. Sokoloff. 2012. *Economic Development in the Americas since 1500: Endowments and Institutions*. New York: Cambridge University Press.
- Facchini, Giovanni, Anna Maria Mayda and Prachi Mishra. 2008. "Do Interest Groups Affect U.S. Immigration Policy?" *IMF Working Paper* . WP/08/244.
- Freeman, Gary P. 1995. "Modes of Immigration Politics in Liberal Democratic States." *International Migration Review* 29(4):881–902.

- Givens, Terri and Adam Luedtke. 2005. "European Immigration Policies in Comparative Perspective: Issue Salience, Partisanship and Immigrant Rights." *Comparative European Politics* 3:1–22.
- Golden, Miriam, Peter Lange and Michael Wallerstein. 2000. "Union Centralization among Advanced Industrial Societies: An Empirical Study." Online. <http://hdl.handle.net/1902.1/10193> UNF:3:RvCaQbChZc7ffAtCuUlJ0g== Miriam Golden [Distributor] V2 [Version].
- Golderis, Benedikt and Samuel W. Malone. 2011. "Natural Resource Booms and Inequality: Theory and Evidence." *The Scandinavian Journal of Economics* 113(2):388–417.
- Goldin, Claudia. 1994. The Political Economy of Immigration Restriction in the United States, 1890–1921. In *The Regulated Economy: A Historical Approach to Political Economy*, ed. Claudia Goldin and Gary D. Libecap. National Bureau of Economic Research Project Report pp. 223–257.
- Grossman, Gene M. and Elhanan Helpman. 1994. "Protection for Sale." *American Economic Review* 84:833–850.
- Grossman, Gene M. and Elhanan Helpman. 2001. *Special Interest Politics*. Cambridge, MA: MIT Press.
- Haber, Stephen and Victor Menaldo. 2011. "Do Natural Resources Fuel Authoritarianism?" *American Political Science Review* 105(1):1–26.
- Haggard, Stephan and Sylvia Maxfield. 1996. "The Political Economy of Financial Internationalization in the Developing World." *International Organization* 50(1):35–68.
- Hainmueller, Jens and Daniel Hopkins. 2014. "Public Attitudes toward Immigration." *Annual Review of Political Science* 17:225–249.

- Hainmueller, Jens and Michael J. Hiscox. 2007. "Educated Preferences: Explaining Attitudes Toward Immigration in Europe." *International Organization* 61(2):399–442.
- Hainmueller, Jens and Michael J. Hiscox. 2010. "Attitudes toward Highly Skilled and Low-skilled Immigration: Evidence from a Survey Experiment." *American Political Science Review* 104(1):61–84.
- Hanson, Gordon H., Kenneth Scheve and Matthew J. Slaughter. 2007. "Public Finance and Individual Preferences Over Globalization Strategies." *Economics & Politics* 19(1):1–33.
- Hatton, Timothy J. and Jeffrey G. Williamson. 1998. *The Age of Mass Migration: Causes and Economic Impact*. New York: Oxford University Press.
- Hatton, Timothy J. and Jeffrey G. Williamson. 2005a. "A Dual Policy Paradox: Why Have Trade and Immigration Policies Always Differed in Labor-Scarce Economies?" Unpublished manuscript, National Bureau of Economic Research.
- Hatton, Timothy J. and Jeffrey G. Williamson. 2005b. *Global Migration and the World Economy*. Cambridge, MA: The MIT Press.
- Haus, Leah. 2002. *Unions, Immigration, and Internationalization: New Challenges and Changing Coalitions in the United States and France*. New York: Palgrave Macmillan.
- Higuchi, Naoto. 2005.
- Hiscox, Michael J. 1999. "The Magic Bullet? The RTAA, Institutional Reform, and Trade Liberalization." *International Organization* 53(4):669–698.
- Houle, Christian. 2009. "Inequality and Democracy: Why Inequality Harms Consolidation but Does Not Affect Democratization." *World Politics* 61(4):589–622.
- Karl, Terry Lynn. 1997. *The Paradox of Plenty*. Berkeley: University of California Press.

- Koopmans, Ruud, Ines Michalowski and Stine Waibel. 2012. "Citizenship Rights for Immigrants: National Political Processes and Cross-National Convergence in Western Europe, 1980-2008." *American Journal of Sociology* 117(4):1202–1245.
- Leblang, David. 2010. "Familiarity Breeds Investment: Diaspora Networks and International Investment." *American Political Science Review* 104(3):584–600.
- Levi, Margaret. 1982. "The Predatory Theory of Rule." *Politics & Society* 10(4):431–465.
- Mahdavy, Hossein. 1970. The Patterns and Problems of Economic Development in Rentier States: The Case of Iran. In *Studies in Economic History of the Middle East*, ed. Michael A. Cook. London: Oxford University Press.
- Marshall, Monty G. and Ted Robert Gurr. 2014. "Polity IV Project: Political Regime Characteristics and Transitions, 1800-2013." Online.  
**URL:** <http://www.systemicpeace.org/polity/polity4.htm>
- Meade, James. 1957. "The Balance-of-Payments Problems of a European Free-Trade Area." *Economic Journal* 67(267):379–396.
- Money, Jeannette. 1997. "No Vacancy: The Political geography of Immigration Control in the Advanced Industrial Countries." *International Organization* 51(4).
- Moses, Jonathon W. 2011. *Emigration and Political Development*. New York: Cambridge University Press.
- Mundell, Robert. 1957. "International Trade and Factor Mobility." *American Economic Review* 47(3):321–335.
- Mundell, Robert. 1961. "A Theory of Optimum Currency Areas." *American Economic Review* 51:657–664.

- Mundell, Robert. 1962. The Appropriate Use of Monetary and Fiscal Policy under Fixed Exchange Rates. IMF Staff Papers 9 International Monetary Fund Washington, DC: .
- Neuman, Gerald L. 1993. "The Lost Century of American Immigration Law (1776-1875)." *Columbia Law Review* 93(8):1833–1901.
- North, Douglas. 1981. *Structure and Change in Economic History*. New York: W.W. Norton and Company.
- O'Rourke, Kevin H. and Jeffrey G. Williamson. 1999. *Globalization and History: The Evolution of a Nineteenth-Century Atlantic Economy*. Cambridge, MA: MIT Press.
- Ortega, Daniel and Francisco Rodriguez. 2006. "Are Capital Shares Higher in Poor Countries? Evidence from Industrial Surveys." Corporacin Andina de Fomento (CAF) and IESA, and Wesleyan University.
- Peters, Margaret E. 2014. "Trade, Foreign Direct Investment and Immigration Policy Making in the United States." *International Organization* 68(4).
- Peters, Margaret E. 2015. "Open Trade, Closed Borders: Immigration Policy in the Era of Globalization." *World Politics* 67(1).
- Przeworski, Adam, Michael E. Alvarez, Jose Antonio Cheibub and Fernando Limongi. 2000. *Democracy and Development: Political Institutions and Well-Being in the World, 1950–1990*. Cambridge, MA: Cambridge University Press.
- Razin, Assaf, Efraim Sadka and Benjarong Suwankiri. 2011. *Migration and the Welfare State: Political-Economy Policy Formation*. Cambridge, MA: MIT Press.
- Ross, Michael L. 2001. "Does Oil Hinder Democracy?" *World Politics* 53(3):325–361.

- Rybczynski, Tadeusz Mieczyslaw. 1955. "Factor Endowment and Relative Commodity Prices." *Economica* 22(88). New Series.
- Singer, David Andrew. 2010. "Migrant Remittances and Exchange Rate Regimes in the Developing World." *American Political Science Review* 104(2):307–323.
- Stolper, Wolfgang F. and Paul A. Samuelson. 1941. "Protection and Real Wages." *Review of Economic Studies* 9(1):58–73.
- Swank, Duane. 2014. "Electoral, Legislative, and Government Strength of Political Parties by Ideological Group in Capitalist Democracies, 1950-2011: A Database." <http://www.marquette.edu/polisci/documents/PARTY19502011.xls>.
- Tilly, Charles. 1992. *Coercion, Capital, and European States, AD 990–1992*. Oxford: Blackwell.
- Timmer, Ashley S. and Jeffrey G. Williamson. 1998. "Immigration Policy Prior to the 1930s: Labor Markets, Policy Interactions, and Globalization Backlash." *Population and Development Review* 24(4):739–771.
- Watts, Julie R. 2002. *Immigration Policy and the Challenge of Globalization: Unions and Employers in Unlikely Alliance*. Ithaca, NY: Cornell University ILR Press.
- World Bank. 2014. "World Development Indicators." .
- Zolberg, Aristide R. 1989. "The Next Waves: Migration Theory for a Changing World." *International Migration Review* 23(3):403–430.