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Do Interest Groups Affect US Immigration Policy

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Do Interest Groups affect US Immigration Policy?*

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Abstract

While anecdotal evidence suggests that interest groups play a key role in shaping immigration policy, there is no systematic empirical analysis of this issue. In this paper, we construct an industry-level dataset for the United States, by combining information on the number of temporary work visas with data on lobbying activity associated with immigration. We find robust evidence that both pro- and anti-immigration interest groups play a statistically significant and economically relevant role in shaping migration across sectors. Barriers to migration are lower in sectors in which business interest groups incur larger lobby expenditures and higher in sectors where labor unions are more important.

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"Immigration policy today is driven by businesses that need more workers — skilled and unskilled, legal and illegal." Goldsborough (2000)

1 Introduction

On May 1, 2006, over a million demonstrators filled US TV screens. They were mainly Latinos, who marched peacefully through America's cities in the hope that Congress would finally introduce legislation to overhaul the country's immigration policy. A year later, a bipartisan legislation was proposed by Senators Ted Kennedy and John Kyl, but since it was unveiled, "it has been stoned from all sides "(The Economist, May 24, 2007). Even though many observers have deemed the status quo unacceptable, no measures have been voted yet.

What determines US immigration policy today? In particular, are political-economy factors important in shaping immigration to the United States? What is the role played by industry-specific interest groups? In this paper, we address these issues by analyzing the impact of political organization by business lobbies and workers' associations on the structure of U.S. migration policy across sectors between 2001 and 2005. This paper represents, to the best of our knowledge, the first study to provide systematic *empirical* evidence on the political-economy determinants of today's immigration to the U.S. and, in particular, on the role played by interest groups.

Trade and migration represent two of the main facets of international economic integration. A vast theoretical and empirical literature considers the political-economy determinants of *trade* policy trying to explain the political constraints that work against free trade. In contrast, the literature on the political economy of migration policy is very thin and mainly theoretical. So far, in analyzing the determinants of international labor flows, the migration literature has mostly focused on supply factors, i.e. factors which affect the willingness of workers to move across borders. On the other hand, the analysis of the drivers of the demand side of international migration, the most important being migration policies in developed countries, has not received as much attention.[1] This is in spite of the fact that, as trade restrictions have been drastically reduced, the benefits from the elimination of existing trade barriers are much smaller than the gains that could be achieved by freeing international migration.[2] This gap in the literature is very surprising and can be partly explained by

[1]For example, Borjas (1994) points out that "the literature does not yet provide a systematic analysis of the factors that generate the host country demand function for immigrants." (page 1693). See Section 2 for a discussion of the related literature.

[2]A recent World Bank study estimates that the benefits to poor countries of rich countries allowing only

unavailability of data. The purpose of this paper is to offer a contribution towards filling this gap.

There exists abundant anecdotal evidence which suggests that political-economy factors and, in particular, interest groups play a key role in shaping U.S. immigration policy. Starting from the very birth of organized labor and for most of their history, unions have been actively engaged in efforts to limit inflows of foreign workers. The enactment of the first legislative measure to systematically limit immigration from a specific country — the Chinese Exclusion Act of 1882 — was the result of the efforts of the newly founded Federation of Organized Trade and Labor Unions. Similarly, the American Federation of Labor (AFL) played an important role in the introduction of the Literacy Test provision in the 1917 Immigration Act, with the explicit intent to "screen and reduce the inflow of unskilled workers in the U.S labor force" (Briggs (1998), page 125). More recently, the AFL-CIO supported measures to reduce illegal immigration, that culminated in the 1986 Immigration Reform and Control Act. Similarly, during the recent debate on shortage of nurses, the American Nurses Association has strongly opposed a measure to increase the number of H1-C visas, pointing out that "...the provision would lead to a flood of nurse immigrants and would damage the domestic work force" (New York Times, May 24 2006).

At the same time, complementarities among production factors are fundamental in understanding the behavior of pressure groups. In the past, active subsidization of immigration has been demanded and obtained by business associations in many labor–scarce countries, as has been extensively documented by Timmer and Williamson (1996). The position of business lobbies in favor of migration is also consistent with more recent anecdotal evidence. For instance, in the aftermath of the 2006 midterm elections, the vice- president of Technet, a lobbying group for technology companies, stressed that the main goal of the reforms proposed by her group is the relaxation of migration policy constraints (CIO, December 19 2006. Available at http://www.cio.com/article/27581/.)

In addition, new visa categories have been introduced as the result of lobbying activities. An interesting example is the case of H2R visas. In 2005, the quota for H2B visas was filled with none of them going to the seafood industry in Maryland.[3] This industry started heavy lobbying of the Maryland senator Barbara A. Mikulski who was able to add a last-minute

a 3 percent rise in their labor force by relaxing migration restrictions is US$300 billion per year (Pritchett 2006). For similar results see also Hamilton and Whalley (1984).

[3]H2B visas are for temporary workers in unskilled, seasonal, non-agricultural occupations (for example in the planting-pine-trees industry; the resort industry, the seafood industry, the gardening industry in the North of the United States etc.).

amendment to the Tsunami Relief Act (P.L. 109-13) of May 11, 2005 (Cox News May 4, 2006). As a result, a new visa category was introduced (H2R visas). The requirements for H2R visas are the same as for H2B visas, but there is no quota: As long as the individual has held an H2B visa in one of the previous three fiscal years, he can get an H2R visa. This has substantially expanded the number of temporary, non–agricultural workers allowed to enter the country.

To motivate our empirical analysis, we start by developing a simple theoretical framework. We show that, in a given sector, the more politically–organized labor invests in lobbying expenditures, the higher the level of protection and, hence, the lower the number of immigrants. At the same time, the more politically–organized business owners spend on lobbying, the less restrictive migration policy and, therefore, the higher the number of immigrants in a given sector.

We use a new, U.S., industry–level dataset that we create by combining information on the number of visas across sectors with data on the political activities of organized groups, both in favor and against an increase in migration. The data set covers the period between 2001 and 2005. In order to proxy for the political organization of anti-migration lobbying groups, we use data on workers' union membership rates across sectors, from the Current Population Survey. In addition, and most importantly, we take advantage of a novel dataset developed by the Center for Responsive Politics, that allows us to identify firms' lobbying expenditures by targeted policy area. We are thus able to use information on business lobbying expenditures that are specifically channeled towards shaping immigration policy. This represents a substantial improvement in the quality of the data relative to the existing international economics literature which has used, instead, political action committees (PAC) contributions. First, PAC contributions represent only a small fraction (10%) of targeted political activity, the remainder being made up by lobbying expenditures. Second, PAC contributions cannot be disaggregated by issue and, thus, cannot be easily linked to a particular policy.

Our findings are consistent with the predictions of the theoretical model. In particular, we show that both pro– and anti–migration interest groups play a statistically significant and economically relevant role in shaping migration across sectors. We find that barriers to migration are – *ceteris paribus* – higher in sectors where labor unions are more important, and lower in those sectors in which business lobbies are more active. Our preferred estimates suggest that a 10% increase in the size of lobbying expenditures by business groups per native worker is associated with a 2.9% larger number of visas per native worker, while

a one-percentage-point increase in union density – for example, moving from 10 to 11 percentage points, which amounts to a 10% increase in union membership rate – reduces it by 3.2%. The results are robust introducing a number of industry-level control variables (e.g. output, prices, origin country effects, etc.) and to addressing endogeneity issues with an instrumental-variable estimation strategy.

The remainder of the paper is organized as follows. Section 2 reviews the relevant literature, while Section 3 describes migration policy in the United States and provides the motivation for focusing on industry-specific aspects of U.S. migration policy. Section 4 describes the main features and predictions of the theoretical model (fully developed in the Appendix). Section 5 describes the data, while the results of our empirical analysis are reported in section 6. Finally, Section 7 concludes the paper.

2 Literature

There are only few studies that analyze the politics of distortions in international factor movements. This is surprising given that other dimensions of globalization have been extensively analyzed. For example, a large body of theoretical and empirical literature is devoted to understanding the political economy of protection in international trade. Furthermore, while in this literature the protection for sale model of Grossman and Helpman (1994) has emerged as the leading framework to understand the commercial policy formation process, a unified framework to understand migration policy has yet to emerge.[4] In what follows, we first review the existing theoretical literature on the political economy of migration policy, starting with direct democracy models and turning next to settings in which the lobbying activities of organized groups play a key role. Second, we discuss the (scarce) empirical evidence on these issues.

In a seminal contribution, Benhabib (1996) considers the human capital requirements that would be imposed on potential immigrants by an income-maximizing polity under majority voting. Output is modeled using a constant returns to scale production function combining labor with human (or physical) capital. Both factors are internationally mobile. The median voter chooses to admit individuals who supply a set of factors that are complementary to her own endowment. As a result, if the median voter is unskilled, he will choose a policy that sets a lower bound on the skill level of the immigrants, that is only skilled foreigners

[4]For an overview of the trade literature, see the surveys by Rodrik (1995), Helpman (1997), and Gawande and Krishna (2003). Facchini (2004) surveys instead the literature on political economy models of trade and factor mobility.

will be admitted. On the other hand, if the median voter is highly educated, he will set an upper bound on the skill level of the immigrants, and thus will be in favor of admitting only individuals with low levels of education. The main shortcoming of this analysis is that the optimal policy does not identify the actual size of the inflows. This is clearly at odds with the policies followed by countries all around the world, which are characterized by quotas. In our theoretical framework the presence of a fixed factor will instead allow us to determine the politically optimal number of immigrants to be admitted.

A different solution to this problem has been proposed by Ortega (2005), who extends Benhabib's model to a dynamic setting to explore the trade off between the short run economic impact of immigration and its medium to long run political effect. In particular, while immigration affects only the labor market in the current period, in the future it also influences the political balance of the destination country, as the descendants of migrants gain the right to vote. As a result, on the one hand, skilled natives prefer an immigration policy that admits unskilled foreign workers since, due to complementarities in production, this policy will increase the skilled wage. On the other, the arrival of unskilled immigrants and the persistency of skill levels across generations can give rise to a situation in which unskilled workers gain the political majority and, therefore, vote for policies that benefit them as a group. Thus, through the political channel, skilled natives prefer an immigration policy that admits skilled foreign workers. The interplay between these two forces allows Ortega to characterize under which conditions an equilibrium migration quota might arise, i.e. to derive a prediction in terms of the size of migration inflows.[5]

The paper in the migration literature that is most closely related to our work is Facchini and Willmann (2005). Using the menu auction framework pioneered by Bernheim and Whinston (1986), the authors model the determination of policies towards international factor mobility as the result of the interaction between organized groups and an elected politician. Using a one–good multiple factors framework, Facchini and Willmann (2005) find that policies depend on both whether a production factor is represented or not by a lobby and on the degree of substitutability/complementarity between factors. Our theoretical framework differs from their model in two ways. On the one hand, we explicitly link equilibrium policies to actual lobbying expenditures, rather than to whether a factor is organized or not. Secondly, we consider a multi–sector environment, which allows us to analyze

[5]The median voter approach has also been used in the large literature analyzing the impact of immigration on the recipient country's welfare system. Among the many papers see Mazza and van Winden (1996), Razin, Sadka, and Swagel (2002), Scholten and Thum (1996), Razin and Sadka (1999) and the literature surveyed in the recent volume by Krieger (2005).

how lobbying expenditures by industry affect migration policy.[6]

The economics literature lacks a systematic empirical analysis of the political-economy factors that affect contemporary migration. On the other hand, we have *historical* accounts of the political economy of immigration restrictions between the end of the XIX century and the beginning of the XX century (Goldin 1994, Timmer and Williamson 1996). In particular, in her study of the introduction of the 1917 literacy test, Goldin (1994) points out how capital owners have been against this restrictive measure, notwithstanding the initial fear of labor upheavel fuelled by foreign workers. Similarly, she also documents how both the AFL and the Knight of Labor were among the supporters of the introduction of this measure as early as 1897.

While the empirical literature on individual attitudes towards immigrants is closely related to the topic,[7] in general it does not examine how attitudes translate into migration policy outcomes.[8] The only empirical work we could find that *indirectly* looks at the political-economy determinants of current migration policy is Hanson and Spilimbergo (2001). This paper focuses on U.S. border enforcement and shows that it softens when sectors using illegal immigrants expand. The authors suggest that "sectors that benefit greatly from lower border enforcement lobby politicians on the issue, while sectors that benefit modestly are less politically active." The main purpose of this paper is to evaluate this conjecture – that lobbying affects immigration policy – though in the context of legal immigration to the United States.

3 Migration Policy in the United States

Current legislation in the United States distinguishes two main channels for non–citizens to enter the country legally: permanent (immigrant) admission and temporary (non–immigrant) admission. Individuals granted permanent admission are classified as "lawful permanent residents" (LPR) and receive a green card. They are allowed to work in the United States and may apply for US citizenship. Foreigners entering the country as non immigrants are instead

[6]Recently, a small theoretical literature has emerged which explicitly models the role played by organized groups in shaping migration policy in a setting with imperfectly competitive factor markets. Amegashie (2004) and Bellettini and Berti Ceroni (2006) are examples of this approach. Our analysis will instead be based on competitive factor markets, where no unemployment occurs in equilibrium.

[7]See, for example, Scheve and Slaughter (2001), Mayda (2006), O'Rourke and Sinnott (2004), Hanson, Scheve, and Slaughter (2007), Facchini and Mayda (2008b).

[8]The only exceptions are two very recent works, Facchini and Mayda (2008a) and Krishnakumar and Mueller (2008).

not allowed to work, except for those admitted under specific categories. Non immigrants cannot directly apply for naturalization as they first need to be granted LPR status.

The distinction between permanent immigrants and temporary non–immigrants has been first introduced in the Steerage Act of 1819, but it was only with the Immigration Act of 1907 that aliens have been required to declare themselves as either permanent immigrants or temporary non–immigrants. The Immigration Act of 1924 introduced several classes of temporary admission, based on the purpose of the initial entry, and successive legislation has further expanded their number. More recently, the immigration policy in the US has been disciplined by the Immigration and Naturalization Act (INA) of 1990 and its successive modifications.

As for the acquisition of LPR status, current policies identify a set of preferences, fixing an annual flexible quota of 416,000 to 675,000 for family–sponsored preferences, employment preferences and diversity immigrants. Immediate relatives (spouses and children of US citizens and parents of adult US citizens) are exempt from the annual numeric limits set for preferences. Interestingly, recent data shows that immediate relatives of US citizens account today for over 40% of annual LPR inflows (CBO (2006)). Refugees and asylum seekers are also exempt from preference limits. The number of refugees admitted each year is set by the US President and, for the period 2003–2007, the cap has been fixed at 70,000 admissions per year. There is instead no numeric limit for asylum seekers.

As for admissions as a non–immigrant, 5,735,577 visas were issued on average per year during the 2001-2005 period.[9] Among non–immigrant visas, it is useful to distinguish between "work and related visas" and "other admissions". The latter category includes temporary visitors, official representatives, transitional family members and students plus their spouses/children. "Other admissions" represent approximately eighty–five percent of the total number of non–immigrant visas issued in 2001–2005.

During the same period, 835,294 work and related visas were approved on average every year. Of these, 315,372 are issued to what the Department of Homeland Security classifies as "Temporary workers", which includes well known visa categories such as: H1B (workers of distinguished merit and ability), H1A & H1C (registered nurses and nurses in shortage area), H2A (workers in agricultural services), H2B (workers in other services), H3 (trainees) and H4 (spouses and children of temporary workers). The other work and related visas are assigned to, for example, "workers with extraordinary ability in the sciences, arts, education, business, or athletics " (O1, O2), "internationally recognized athletes or entertainers" (P1,

[9]Notice that this number does not include individuals admitted under the visa waiver program.

P2, P3), "religious workers" (R1) and "exchange visitors" (J1). See Table 3 for a summary of the numbers of visas issued under each category.

The characteristics as well as the application procedures vary substantially across visa categories. For instance, H1B visas are used to employ a foreign worker in a "specialty occupation" which, in general, requires the applicant to hold at least a bachelor's degree. The visa is issued for three years and can be renewed once, up to six years of total employment. An employer who intends to hire a foreign worker under the H1B program must follow three steps. First, he needs to submit a labor condition application (LCA) to the US Department of Labor. Importantly, the employer must document that the perspective H1B visa holder will receive a wage that is no lower than the prevailing wage for the same position in the geographic area or the wage actually paid by the employer to individuals with similar workplace characteristics. The employer must also attest that the working conditions of US workers similarly employed will not be adversely affected. Once the LCA has been certified, the employer files a petition to the United States Citizenship and Immigration Services (USCIS). In the petition the employer needs to substantiate the potential worker's education and qualifications. Finally, once the USCIS has approved the petition, a visa will be issued by the State Department if the individual lives abroad. If instead the individual is already living in the United States, the USCIS will convert the visa status to H1B.

Another interesting example is represented by the P visa category reserved to "internationally recognized athletes or entertainers". To be admitted under a P visa, an athlete or team must be internationally recognized which, according to USCIS, means "having a high level of achievement in a field, evidenced by a degree of skill and recognition substantially above that ordinarily encountered, to the extent that such achievement is renowned, leading, or well-known in more than one country." For instance, major–league baseball teams are able to hire players under the P visa category, while players in minor–league teams do not qualify (Cox News May 4, 2006.)

Importantly, many work visa categories are subject to an explicit quota set by Congress[10] For instance, this is the case for H1A, H1B, and up to 2005 for H2B visas. Whether a visa program is constrained or not by a quota is likely to be the result of lobbying activities. For instance, universities and government research laboratories were able to obtain a permanent exemption from the overall H1B quota starting in 2000. Moreover, the introduction in 2005 of the new H2R visa category – brought about by the lobbying activity of the Maryland seafood industry – has in practice eliminated the quota for non agricultural temporary workers (H2B).

[10]By quotas we mean the number of visas that policymakers set *ex ante*.

Table 1: Number and types of non–immigrant visa issuances, 2001–2005

Type of temporary admission	*Visa Category*	*Average 2001–2005*
Work and related visas		**835,294**
Exchange visitors and spouses/children	J1, J2	291,241
Workers with extraordinary ability	O1, O2	8,865
Internationally recognized athletes or entertainers	P1, P2, P3	32,762
Cultural Exchange and Religious Workers	Q1, Q2, R1	10,414
Treaty traders/investors and their children	E	35,282
Spouses/children of certain foreign workers	O3, P4, Q3, R2, I	21,469
NAFTA Professionals and spouses/children	TN, TD	2,124
Intracompany transferees and spouses/children	L1, L2	117,765
Temporary workers of which:		
Workers of distinguished merit and ability	H1B	130,051
Registered nurses and nurses in shortage area	H1A, H1C	122
Workers in agricultural services	H2A	31,322
Workers in other services	H2B	72,684
Trainees	H3	1,518
Spouses and children of temporary workers	H4	79,675
Other admissions		**4,900,283**
Temporary Visitors	B1, B2, B1/B2 B1/B2/BCC	4,154,485
Official representatives and transitional family members	A, G, K	165,141
Students and spouses/children	F1, F2, M1, M2	266,099
Other non work visas		314,558
Total non immigrant visa issuances		**5,735,577**

Notes: Data are based on the 'Report of the Visa Office' (`http://travel.state.gov`), 2001–2005. Notice that aliens issued a visa do not necessarily enter the United States in the year of issuance.

In this paper we will focus on temporary non–immigrant visas and, in particular, on work visas. In other words, we will not use the number of employment–based green cards, for the following two reasons: The first and most relevant one is that green cards based on employment preferences represent a very small fraction of the overall number of LPR admitted every year. For instance, in 2001, out of 1,064,318 individuals who were granted permanent resident status, only 179,195 (16.8% of the total) were admitted under the employment-preference category and this number even includes their spouses and children. The second reason is that we were not able to obtain data, from the Department of Homeland Security, on employment–based green cards *by sector*, which is the level at which we carry out our

analysis.

Looking at the wide variety of existing non–immigrant work visas, one can immediately notice that some categories are clearly occupation/sector specific. For instance, H1A & H1C visas are for nurses, H2A visas are for temporary agricultural workers, R1 visas are for religious workers, P visas are for performing artists and outstanding sportsmen, etc. At the same time, other important visa categories cannot be immediately linked to a specific sector. This is true for instance for H1B, L1 and H2B visas.

Whether there exists or not a visa specific to a sector is likely to be a function of the lobbying activities carried out by that particular sector. For example, H1C visas for nurses were introduced in 1999 in the Nursing Relief for Disadvantaged Areas Act (NRDAA) (Pub. L. No. 106-95) as the result of fierce lobbying by hospitals and nursing homes. Similarly, the H-2 program was created in 1943 when the Florida sugar cane industry obtained permission to hire Caribbean workers, with temporary visas, to cut sugar cane.[11] On the other hand, many other sectors have been less successful in obtaining a visa program specifically targeted to their needs. This is for instance the case of sectors that receive immigrants mainly through programs like the H1B or H2B, which are characterized by an overall quota but no explicit sector–specific allocation. Still, the intensive lobbying activity carried out even by firms active in these sectors suggests that the policymaker's final allocation of visas issued under the H1B or H2B programs across sectors is likely to be influenced by lobbying activities.[12]

In addition whether sector specific quotas exist or not, the data suggest that lobbying on immigration takes place at the sectoral level, since the top contributors are often associations representing specific industries, for example the American Hospital Association, the American Nursery and Landscape Association, the National Association of Homebuilders and National Association of Computer Consultant Businesses, etc. (See `http://www.opensecrets.org`.)[13]

[11] Recently Congressman Anthony Weiner (NY) has proposed a bill to create a new visa category especially for models interested in working in the United States to benefit the New York fashion industry. See *The Economist* June 21, 2008 "Beauty and the geek".

[12] Lobbying on the overall quota for visa programs that cover multiple sectors is likely to be affected by free riding.

[13] In 2005, American Hospital Association alone contributed about 10 percent of the lobbying expenditures for immigration.

4 Theoretical framework

Recent rational choice analyses have pointed out how interest groups can directly participate in the political process in at least two ways. On the one hand, they provide substantive information to policy makers. On the other, they offer financial incentives to influence policy outcomes. In the international economics literature the most influential approach, pioneered by Grossman and Helpman (1994), has emphasized the second "quid pro quo" view and, in particular, the role of direct campaign contributions in shaping policies.[14] Formally, Grossman and Helpman (1994) have proposed an analytical foundation for a political support function that is based on the politician including pressure groups' campaign contributions directly in its objective function. While this approach has been very successful and can be thought of as the current paradigm in the literature on endogenous trade policy, an important feature of this model is that "the *existence* of a lobby matters in equilibrium, and not its actual contribution level..." (Eicher and Osang 2002).[15] Furthermore, the Grossman and Helpman (1994) model ignores the important informational channel through which lobbies can also influence policy and the data shows that, if anything, businesses might perceive "informational" lobbying to be at least as important as campaign contributions.[16] To characterize the link between equilibrium policy outcomes and contributions and to allow for a more general role of lobbies, we have decided to use a "protection formation function" approach. [17] According to this view, government policy is simply a function of the expen-

[14]More generally, our view is that the reward to a politician for a political favor might take much more complicated forms than direct campaign contributions. For instance, politicians can receive gifts from lobbyists, like dinners and trips. In addition, often politicians at the end of their career become themselves active lobbyists and, in some cases, are able to earn substantial rewards for carrying out their activities in this role. According to the CRP website, "Lobbying firms were still able to find 129 former members of Congress willing to lobby on everything from postal rates to defense appropriations. Former Rep. Bob Livingston (R-La.), who was once days away from becoming Speaker of the House, drummed up $1.14 million in business in his first year as an independent lobbyist."

[15]In the protection-for-sale approach, the relationship between equilibrium policy outcome and contributions cannot be characterized under general assumptions and, more importantly, the direction of this relationship is not necessarily intuitive, as it depends on the bargaining power of the players (see Goldberg and Maggi (1999)). As Grossman and Helpman (1994) point out, if there is only one lobby interacting with the elected politician, the lobby will capture all the surplus from the relationship, keeping the policy maker at the same welfare level as in a world with free trade and no payments carried out by the lobby. On the other hand, if all sectors are organized, the policy implemented will be free trade - thus no favor will be received by any lobby in the political equilibrium - and the government will capture all the surplus from the relationship (page 845–847). For more on this important issue, see also Goldberg and Maggi (1999).

[16]See Milyo, Primo, and Groseclose (2000) and the discussion contained in section 5.1. For recent theoretical models of informational lobbying, see Bennedsen and Feldman (2006), Dahm and Porteiro (2004) and Lohmann (1995).

[17]A more general framework, which allows not only for the *quid pro quo* but also the informational channel, is the most appropriate given the data we use, i.e. data on lobbying expenditures which do not end up directly

ditures undertaken by pro and anti–immigration groups, and we refrain from spelling out more in detail how interest groups actually affect the political process.

We develop the theoretical framework of the paper in the Appendix. In this section, we provide a description of the main assumptions and predictions of the model. We consider a small open economy – both in the goods' and factors' market – with $n + 1$ sectors. Our framework is based on a short-run view of the economy in which factors are sector-specific or, in other words, labor markets are segmented by industry.[18] The numeraire sector uses only sector–specific labor, while the output of all other sectors is produced using sector–specific labor, which we assume to be internationally mobile, and a fixed factor (capital). The assumption of a small open economy implies that both international goods and factor prices are given. Consumers are characterized by a separable, quasi–linear utility function. Finally, restrictions to the physical relocation of people across countries take the form of a (binding) quota.[19]

Inspired by the pioneering contributions of Findlay and Wellisz (1982) and Eicher and Osang (2002), we model measures towards labor mobility in each sector as the result of expenditures by a pro–migration lobby (made up by capital owners) and by an anti–migration lobby (made up by workers). The relationship between lobbying expenditures and the final policy outcome is modeled using a 'protection function approach'. The two lobbies play a non cooperative game and we show that in equilibrium, in a given sector, the amount of protection afforded to labor – i.e., the restrictiveness of the policy adopted by the government – depends on both the lobbying expenditures made by organized labor, as well as on the expenditures made by capital. In particular, if organized labor in a sector contributes more, this will *ceteris paribus* imply higher levels of protection from foreign inflows of workers and, hence, lower the equilibrium number of immigrants. At the same time, if organized business owners spend more, this will *ceteris paribus* make migration policy in that sector less restrictive and, therefore, increase the number of immigrants.

in policymakers' hands. In general, lobbying expenditures are used both to pay lobbyists for their work of talking and informing policymakers and, less transparently, to provide financial incentives to politicians.

[18]This assumption is consistent with our focus on sector-specific aspects of migration policy.

[19]We can reinterpret the policy tool more broadly as the result of: quotas on sector–specific visas; the allocation to a given sector of visas which are not sector specific; and more general regulations that affect the inflow of foreign workers in specific sectors.

5 Data

In this section we first provide background information on lobbying expenditures. Next, we describe the sources of the other data we use in the empirical analysis. Finally, we present summary statistics for the main variables used in the regressions.

5.1 Lobbying expenditures

In the United States, special interest groups can legally influence the policy formation process by offering campaign finance contributions or by carrying out lobbying activities.[20]

Campaign finance contributions and, in particular, contributions by political action committees (PAC) have been the focus of the literature (see for example Snyder 1990, Goldberg and Maggi 1999, Gawande and Bandyopadhyay 2000). Yet PAC contributions are not the only route by which interest groups' money might be able to influence policy makers and, given the existing limits on the size of PAC contributions (see Milyo, Primo, and Groseclose (2000) for details), it is likely that they are not the most important one. In particular, it has been pointed out that lobbying expenditures are of "... an order of magnitude greater than total PAC expenditure" (Milyo, Primo, and Groseclose 2000). Hence, it is surprising that so few empirical papers have looked at the effectiveness of lobbying activities in shaping policy outcomes. To the best of our knowledge, only a recent article by de Figueiredo and Silverman (2006) has taken a close look at this issue.[21]

One important reason for this relative lack of interest is that, while PAC contributions data has been available for a long time, only with the introduction of the Lobbying Disclosure Act of 1995, individuals and organizations have been required to provide a substantial amount of information on their lobbying activities. Starting from 1996, all lobbyists[22] must

[20] According to the Lobbying Disclosure Act of 1995, the term "lobbying activities" refers to "lobbying contacts and efforts in support of such contacts, including preparation and planning activities, research and other background work that is intended, at the time it is performed, for use in contacts, and coordination with the lobbying activities of others." The term "lobbying contact" refers instead to "any oral or written communication (including an electronic communication) to a covered executive branch official or a covered legislative branch official that is made on behalf of a client with regard to (i) the formulation, modification, or adoption of Federal legislation (including legislative proposals); (ii) the formulation, modification, or adoption of a Federal rule, regulation, Executive order, or any other program, policy, or position of the United States Government; (iii) the administration or execution of a Federal program or policy (including the negotiation, award, or administration of a Federal contract, grant, loan, permit, or license); or (iv) the nomination or confirmation of a person for a position subject to confirmation by the Senate."

[21] In particular, the authors find that for a university with representation in the House or Senate appropriations committees, a 10% increase in lobbying yields a 3 to 4% increase in earmark grants obtained by the university.

[22] An individual is defined as a "lobbyist" for a particular client if he/she makes more than one "lobbying

file semi–annual reports to the Secretary of the Senate's Office of Public Records (SOPR), listing the name of each client (firm) and the total income they have received from each of them. At the same time, all firms with in-house lobbying departments are required to file similar reports stating the dollar amount they have spent.[23]

Importantly, legislation requires the disclosure not only of the dollar amounts actually received/spent, but also of the issues for which lobbying is carried out (Table A2 shows a list of 76 general issues at least one of which has to be entered by the filer). The report filed by a lobbying firm, Morrison Public Affairs Group, on behalf of O'Grady Peyton Intl (a subsidiary of AMN Health Care Services) for the period January-June 2004 is shown in Table A3. As it can be seen, O'Grady Peyton Intl's report lists only one issue, i.e. immigration. Another example is a report filed by a client, i.e. Microsoft corporation, for its lobbying expenditures between January - June 2005 (Table A4). Besides immigration, Microsoft lists other six issues in this report (not shown). Thus, the new legislation provides access to a wealth of information, and the purpose of this paper is to use it to assess how lobbying influences migration policy.

The data on lobbying expenditures is compiled by the Center for Responsive Politics (CRP) in Washington D.C., using the semi-annual lobbying disclosure reports, which are posted in its website. The reports analyzed by CRP cover lobbying activity that took place from 1998 through 2005. Due to unavailability of data on other variables, particularly visas, we restrict the analysis in this paper to the period 2001-2005. Annual lobbying expenditures and incomes (of lobbying firms) are calculated by adding mid-year totals and year-end totals.[24] CRP also matches each firm to an industry.

We define "overall" or "total" lobbying expenditures in an industry as the sum of lobbying expenditures by all firms in that industry *on any issue*. The lobbying expenditures for immigration in an industry are calculated instead using a three-step procedure. First, only those firms are considered which list "immigration" as an issue in their lobbying report.[25] Second, the total expenditure of these firms is split *equally* between the issues they lobbied

contact" and the "lobbying activities" he is involved with constitute at least 20 percent of the individual's time in services for that client over any six-month period.

[23]A firm could be a subsidiary of a parent firm or the parent firm itself if there are no subsidiaries. In the former (latter) case, CRP provides lobbying expenditure data at the subsidiary (parent-firm) level. Notice that different subsidiaries of the same parent firm can be associated with different industries. Finally, the list of firms includes many industry associations.

[24]Whenever there is a discrepancy between data on income and expenditures, CRP uses information from lobbying reports on expenditure.

[25]The lobbying dataset from 2001-2005 comprises an unbalanced panel of a total of 12,376 firms/associations of firms, out of which 481 list immigration as an issue in at least one year.

for. Finally, these firm-level expenditures on immigration are aggregated for all firms within a given industry. For robustness, we also use another measure of lobbying expenditure on migration which is based on the total lobbying expenditure of firms who write down migration as an issue in their report.

As shown in Table 2, between 1999 and 2004,[26] interest groups have spent on average about 3.8 billion U.S. dollars per political cycle on targeted political activity, which includes PAC campaign contributions and lobbying expenditures.[27] Lobbying expenditures represent by far the bulk of all interest groups money (close to ninety percent). Therefore, the focus of the literature on the role of PAC contributions in shaping policies might be misleading for at least two reasons. First, PAC contributions represent only a small fraction of interest groups' targeted political activity (10 percent), and any analysis of the role of lobbies in shaping policy based on only these figures could be misleading. Second, linking campaign contributions to particular policy issues is very difficult and often requires some ad-hoc assumptions. For instance, in their pioneering work on the estimation of Grossman and Helpman (1994) protection for sale model, Goldberg and Maggi (1999) have used minimum PAC expenditure thresholds to identify whether a sector was organized or not *from the point of view of trade policy determination*. The availability of direct information on the main purposes of the lobbying activity provides a clear advantage in linking lobbying expenditures to actual outcomes.

The importance of doing so is shown in Figure 1 – which is based on the average over three election cycles – where in the top panel we have a scatter plot of overall lobbying expenditures and PAC contributions, while in the bottom panel we have a scatter plot of lobbying expenditures associated with immigration policy and PAC contributions. In the top panel, we find a very high correlation between total lobbying expenditures and PAC contributions across sectors. This result is consistent with the political science literature and may suggest that PAC contributions are integral to groups' lobbying efforts and that they allow them to gain access to policymakers (Tripathi, Ansolabehere, and Snyder 2002). In contrast, the very low correlation between PAC contributions and lobbying expenditures for migration policy, in the bottom panel, is striking. It suggests that, if we were to use

[26]Table 2 and Figure 1 are based also on data for the political cycle 1999-2000, which we cannot use in the empirical analysis since visa data is not available for these years.

[27]We follow the literature that excludes from targeted-political-activity figures "soft money" contributions, which went to parties for general party–building activities not directly related to Federal campaigns; in addition, soft money contributions were not subject to any limits and cannot be associated with any particular interest or issue (see Milyo, Primo, and Groseclose 2000 and Tripathi, Ansolabehere, and Snyder 2002). Soft money contributions have been banned by the 2002 Bipartisan Campaign Reform Act.

the data on PAC contributions – assuming they are associated with immigration – we might obtain misleading results. Hence the use of our new dataset is fundamental in order to clearly identify how lobbying affects migration policy.

5.2 Other Data

The information on lobbying expenditures is merged with data on visas and on a number of control variables. Data on visas covers the following letter categories: H1A, H1B, H1C, H2A, J1, O1, O2, P1, P2, P3, R1 (see Table 1). The other two potentially relevant work visa categories are L1 (intracompany transferees) and H2B (non–agricultural temporary workers) but unfortunately we were not able to obtain data on these visas *by sector*. We gathered information on the number of H1B visas approved by sector from the USCIS.[28] The data on H1B petitions approved at the firm level is aggregated by the USCIS at the industry level according to the NAICS classification. Finally, the figures for the other types of work visas we have used come from the yearly 'Report of the Visa Office', available online at `http://travel.state.gov`.

We also use data from the Integrated Public Use Microdata Series - Current Population Survey (IPUMS-CPS) for the years between 2001 and 2005. The IPUMS-CPS data set is based on the March Annual Demographic File and Income Supplement to the Current Population Survey (CPS). It contains individual-level information on a range of socio-economic characteristics, such as: industry; employment status; birthplace; nativity (foreign-born vs. native-born); union/employee association membership; education and wages and salary income. We use CPS data restricted to individuals aged 18-64 who participate in the civilian labor force. Following the theoretical framework, workers are differentiated according to their industry of employment. The variable *ind1950* in the IPUMS-CPS is used to obtain information on the industry in which the worker performs or performed – in his most recent job, if unemployed at the time of the survey – his or her primary occupation. This variable uses the 1950 Census Bureau industrial classification system. The list of CPS industries is shown in Table A5.

The IPUMS-CPS data set contains information at the individual level, which is aggregated to the industry level to construct the following variables: total number of natives, fraction of union members, fraction of unemployed, and mean weekly earnings. To construct the latter three variables, we restrict the sample to natives, who are defined as native-born

[28]This data was kindly provided by James Fitzsimmons.

respondents, regardless of whether their parents are native-born or foreign-born. The weekly earnings are deflated using the U.S. GDP deflator from the IMF. All the variables are constructed using sampling weights as recommended by the IPUMS-CPS.

While we have direct information on the lobbying expenditures by capital owners (i.e. firms), our measure for workers is only indirect as CRP does not provide data on lobbying expenditures by unions at the industry level.[29] Thus, we use the fraction of natives who are union members in each industry as our measure of political organization of labor in that sector. The rationale for this choice is that, in sectors where the union membership rate is higher, the free-rider problem associated with lobbying is likely to be less pronounced. That is, in those sectors there exist fewer non-union members (free-riders) who benefit from policies brought about by the lobbying activity and, therefore, the contributions by unions tend to be higher. Finally, notice that our measure of lobbying activity of organized labor is relevant for all visa types, including the H1B category, since it covers both membership in unions and professional workers associations.

We also gather data on other control variables at the industry level. The data on output, price and (inward) foreign direct investment (FDI) is from the Bureau of Economic Analysis. Output represents the market value of an industry's production in current dollars, and the base for the price index is the year 2000. FDI (in millions of current dollars) measures the stock of foreign direct investment. The data on domestic capital (in millions of current dollars) is a stock variable and is from the Annual Capital Expenditures Survey (ACES) carried out by the U.S. Census Bureau. Output, prices and FDI are available for all years between 2001 and 2005, but the capital data is not yet available for 2005. The data on output and price are at the 6-digit input-output classification of the BEA, whereas FDI and domestic capital follow the 1997 North American Industrial Classification System (NAICS).

Finally, to measure push factors for migrants in source countries, we develop a sector–specific measure of shocks. In particular, we use information on years in which there was a shock in a developing country as captured by a war, earthquake, wind storm or drought. The data on wars is from a database compiled by the Heidelberg Institute for International Conflict Research and the World Bank; the data on other shocks is from Ramcharan (2007). The industry-specific measure of shocks is given by a weighted average of the shocks in each origin country, with weights equal to the share of immigrants in that industry from each

[29]There are 25 worker unions during the period 2001-2005 which lobby for immigration, some of them are national and spread across all sectors (e.g. AFL-CIO and United Food and Commercial Workers) while others are sector specific (e.g. Machinists/Aerospace Workers Union). Thus it is not possible to construct a complete industry level dataset of lobbying expenditures by unions.

origin country.[30]

In order to match the CPS data with that on visas, lobbying expenditures and the additional controls and create an industry-level dataset, we construct separate concordances of (i) NAICS (ii) CRP and (iii) BEA input-output classifications to the 1950 Census Bureau industrial classification.[31] As a result, we obtain a dataset that covers 120 3-digit industries that follow the 1950 Census Bureau industrial classification (CPS classification).

5.3 Summary statistics

Table A1 shows the summary statistics for the variables used in the regression analysis. On average between 2001-2005 an industry spends about $100,000 per year on immigration–related lobbying activities (when we split equally among the various issues). If we consider instead the *total* expenditures by firms in a sector which lobby for immigration, on average an industry spends about $1.1 mn per year. These values hide substantial cross–sectoral heterogeneity as illustrated in Figure 2, which shows the top 10 industries in terms of lobbying expenditures on immigration in the period 2001–2005. Engineering and computer services, and Educational services are the top spenders on lobbying for immigration. In this group we also find Hospitals, Food and related products, Office machines and computer manufacturing and Agriculture. Figure 3 shows instead the top 10 sectors with the highest number of visas. Educational services and Engineering and computer services are, not surprisingly, at the top also of the list. Agriculture, Hospitals, Medical and other health services also appear in the list. Thus, four industries with very high expenditures on immigration are also among those receiving the highest number of visas.

Before proceeding to the regression analysis, it is instructive to document bivariate relationships between key variables using simple scatter plots. Figure 4 suggests that there exists a positive correlation between lobbying expenditures for immigration and the number of visas across sectors (both variables are, in this graph, averaged over the years 2001-2005 and scaled by the number of natives in each sector). Thus, these basic scatter plots suggest

[30] We use data on immigrants by sector and origin country from the CPS. Immigrants are defined as foreign-born individuals.

[31] There is not always a one-to-one correspondence between two sectors in any two classifications. In the case where there are, for example, multiple CPS industries corresponding to a given CRP industry, the lobbying expenditures are divided among CPS industries according to the share of natives in each CPS industry. Next, in order to take into account the cases where one CPS industry is matched to many CRP industries (which is often the case), the data is summed and collapsed at the CPS industry level. Similar procedures are adopted for matching the data on output, price, FDI, domestic capital and the number of visas to the CPS dataset.

that sectors with larger lobbying expenditures on immigration are characterized by a higher number of visas. The relationship between union membership rates and the number of visas (divided by the number of natives) is instead negative, that is sectors with higher union densities have fewer immigrants on average over the period (Figure 5). Finally, since H1B visas represent a very important admission category and have received much attention in the public debate, it is interesting to explore whether these correlations continue to hold for these visas in isolation. Figures 6 and 7 illustrate that this is indeed the case. Of course, the scatter plots are only suggestive, and the purpose of the remainder of the paper is to examine the robustness of these simple correlations.

6 Empirical analysis

Our theoretical framework shows that barriers to migration are a function of the lobbying expenditures of the two factors of production in each industry – labor and capital. *Ceteris paribus*, in sectors where labor is more politically active and therefore spends more in lobbying, native workers receive more protection, that is the number of visas is smaller. However, *ceteris paribus*, in sectors where capital is more active and therefore invests more in lobbying, native workers receive less protection, that is the number of visas is larger. We assess the theoretical predictions of the model using our rich dataset on business lobbying expenditures and union membership rates.[32]

Notice that, as our focus in this paper is on sector-specific aspects of U.S. migration policy, we analyze the variation in the number of visas *across sectors*. We use data which is averaged over the five years between 2001 and 2005, that is we only exploit the cross-sectional variation. Indeed, most of the variation in the data is across sectors, rather than over time. Based on the decomposition of the variance into between and within components, we find that 97.4% of the variation in log(visas) is across industries.

The dependent variable of the empirical analysis is the number of visas, divided by the number of native workers in the same sector ($\log(visas/native\ workers)$). The two key explanatory variables are the log of the industry's lobbying expenditure on migration, divided by the number of native workers in the same sector ($\log(lobbying\ exp/native\ workers)$) – which measures the extent of political organization of capital – and the *union membership*

[32]Unfortunately it is not possible to carry out a structural estimation of our model as data on lobbying activity on behalf of labor is not available *by sector*. See footnote 29. This forces us to use union density as a proxy for labor lobbying activity thus making it impossible to give a structural interpretation to the coefficient estimates we obtain.

rate, which equals (*native union members/native workers*) and measures the extent of political organization of labor.

Notice that our key variables are scaled by the number of native workers in the same sector.[33] The reason is that we want to control for differences in the sizes of industries, which might create a bias in the estimation of the coefficients. For example, sectors that employ a higher number of native workers tend to hire more immigrants as well and can spend larger sums on lobbying activity. Thus, without accounting for the size of the sector, the estimate of the impact of business lobbying expenditures would be biased upwards. The remainder of the section presents our results.

6.1 Main results

Table 3 presents the main results of the empirical analysis and provides evidence which is consistent with the theoretical predictions. In all tables, standard errors are *robust,* to account for heteroscedasticity. In regressions (1)-(2), we find a positive and significant (at the 1% level) coefficient on log(*lobbying exp/native workers*), and a negative and significant (at the 10% level) coefficient on *union membership rate*. These results suggest that barriers to migration are lower in those sectors in which business lobbies are more active, and higher in sectors where labor unions are more important. The two key variables of the empirical analysis explain 14% of the variation in the number of visas per native worker across sectors (regression (2)). In fact, log(*lobbying exp/native workers*) alone explains 11% of the variation. The magnitude of the coefficients (0.356 for log(*lobbying exp/native workers*) and -2.594 for *union membership rate* in regression (2)) implies that a 10% increase in the size of the industry's lobbying expenditures on migration per native worker raises the number of visas to that industry, per native worker, by 3.6%. In addition, a one-percentage-point increase in union density – for example, moving from 10 to 11 percentage points, which amounts to a 10% increase in the union membership rate – reduces it by 2.6%. We test the robustness of these results in column (3) where we introduce a number of industry-level control variables.

Although our key variables are already scaled by the number of native workers, we are still concerned that our estimates might be driven by differences in the size of sectors. Therefore, in regression (3), we control for the value of output produced in each industry. Output is a more comprehensive measure of the size of a sector because it takes into account the impact

[33]To make sure that our regression results are not driven by the scaling factor, each specification includes the log (*number of native workers*) as an additional control.

of factors other than labor.

In column (3), we also introduce the industry-specific unemployment rate, which is likely to be correlated with both the demand for foreign workers in that sector and the union membership rate. The sign of the correlation between union density and the industry-specific unemployment rate is a priori ambiguous. On the one hand, in sectors with higher unemployment rates, workers feel a bigger threat of being fired, which increases their incentive to join unions. On the other, in sectors with higher unemployment rates, the bargaining power of unions is lower, which implies that union densities are lower as well. Finally, the correlation between the unemployment rate and the number of visas is a also a priori ambiguous.

Regression (3) also controls for the price of the good produced in a sector. To the extent that a positive price shock in an industry affects the marginal revenue product of labor differently for immigrant vs. native workers, there will be an effect on the labor demand for foreign workers relative to natives. We also control for the stock of capital (both domestic and foreign) used in each industry. To the extent that the degree of complementarity between capital and labor is higher (lower) for immigrant vs. native workers, sectors which use more capital should also be characterized by higher (lower) demand for foreign workers. The results in regression (3) suggest that output, the unemployment rate, prices, domestic and foreign capital all have an insignificant effect on the number of visas per native worker. Most importantly, our main findings on the key explanatory variables ($\log(lobbying\ exp/native\ workers)$ and *union membership rate*) survive all the robustness checks in column (3). The magnitude of the estimated coefficients on lobbying expenditure and union membership rates are only marginally affected by the introduction of the control variables: they remain of the same sign and the same (or better) significance level.

As mentioned above, as a measure of migration restrictions, we use the number of visas *issued*. This is an *ex post* measure of quotas, which might be affected by the supply side of international migration flows. In other words, the number of visas issued is an equilibrium outcome that results from the interaction of migration policy and of those factors that affect the willingness of migrants to move. The rationale for using the ex post measure is that migration quotas are likely to be binding, for the most part, in the United States, which implies that changes in the number of visas coincide with policy changes. For instance, it is well known that the H1B visa quotas are regularly filled within the first few days of each fiscal year. However, to address the possibility that this assumption does not hold, we assess the robustness of our results by including variables that affect the willingness of migrants to relocate and, therefore, the number of visas if migration quotas are not binding. In column

(3), we control for negative shocks – such as wars, earthquakes, windstorms or droughts – taking place in the origin countries of immigrants working in any given industry (*shocks*). The negative and significant coefficient on *shocks* can be interpreted as being driven by the ability of migrants to leave their origin countries. Although their willingness to migrate may increase following a shock, their ability is likely to decrease because credit constraints become more binding following the event. Another interpretation which is consistent with our framework is that immigrants from countries affected by a shock might be entitled to enter the US as asylum seekers or political refugees and, in that case, the number of *work* visas in the sectors where those immigrants are employed will decrease. In column (3), we also account for pull factors by including the (log) U.S. lagged wages. As expected from a supply point of view, they have a positive and significant impact on the number of visas issued in a given sector. In other words, sectors with higher wages attract more immigrants. Alternatively, an interpretation related to policy is that authorities might be more willing and better able to accommodate the requests of pro-migration lobbyists that represent booming sectors. Regression (3) shows that our results on the key variables are robust to the introduction of these additional regressors.

Although we have checked the robustness of our findings to the introduction of a number of controls, we are still concerned that our estimates might be driven by endogeneity and reverse causality. It is especially important to address endogeneity of our two key variables, as lobbying expenditures by capital and labor are endogenous in the theoretical model itself. In general, it is not clear *ex ante* how reverse causality might affect the estimates. On the one hand, sectors with more migrants may already be close to their optimal levels, which would decrease their incentive to invest in lobbying expenditures. In this case, our estimates would be biased towards zero. On the other, sectors which receive a higher number of visas might find it necessary to increase their lobbying activity in order to solve problems related to the large pool of immigrants they hire (such problems might include access of immigrant workers and their children to education, health, etc.). In this case, the estimate on lobbying expenditures would be biased upwards, i.e. the true effect would be lower than the estimated effect. Similarly, it is possible that sectors which receive a higher number of visas have either higher or lower union densities. The first case might arise if a higher number of immigrants in a sector increases the threat felt by native workers in labor markets and, therefore, their incentive to join unions. On the other hand, in sectors with larger pools of immigrants, the bargaining power of unions might be lower, which means that union densities will be lower as well.

We address reverse causality and other sources of endogeneity by using an instrumental–variable estimation strategy. We use two instruments for log(*lobbying exp/native workers*). First, we construct a measure of lobbying expenditures by firms in each sector which do *not* list migration as an issue in their lobbying reports. Out of a total of 12,376 firms in the lobbying dataset, the majority (96 percent) does not list immigration as an issue. We assume that these firms' lobbying expenditures on issues other than immigration do not affect migration directly (exclusion restriction). At the same time, it is likely that industry-level factors affect lobbying expenditures of all firms in a given sector, no matter what policy issues firms are interested in. For example, according to the political economy literature of trade policy, lobbying activity is in general determined by factors like the number of firms, their size distribution, geographic concentration, etc. within a sector Trefler (1993). Therefore, we expect our instrument to be correlated with the lobbying expenditures on migration (first stage).

As an additional instrument for lobbying expenditures on migration, we use a variable that measures the concentration of firms in a sector. In doing so, we follow the trade literature which uses traditional political economy variables to instrument for campaign contributions (Goldberg and Maggi 1999 and Gawande and Bandyopadhyay 2000). In particular, our measure of concentration is the variance of firm size (proxied by annual payroll) within a sector. The idea is that the more concentrated a sector is (the higher the variance in firms' size), the easier it is for firms in that industry to overcome the collective action problem in forming a lobby, thus the larger are the lobbying expenditures (Olson 1965). The data on annual payroll of firms is obtained from the US Census, County Business Patterns (http//www.census.gov/csd/susb/defterm.html).

Next, our instrument for the *union membership rate* uses data from the United Kingdom on union densities across industries. According to the literature, sector-specific union membership rates are positively correlated across a wide set of industrialized countries (see Riley 1997, Blanchflower 2007) (first stage). Industries which exhibit a high level of work standardization and a clear distinction between managerial and operative tasks are more likely to be unionized, the reason being that these working conditions lead to intra-group homogeneity as well as distinct group boundaries. In addition, it is plausible to assume that UK union membership rates do not directly affect the number of visas in the U.S. (exclusion restriction).

The high values of the two first-stage F statistics for the excluded instruments at the end of Table 4a suggest that the instruments are strong. In regression (1), in the first stage of

log(*lobbying exp/native workers*), the F value of the excluded instruments is equal to 62.66; in the first stage of *union membership rate*, the F value of the excluded instruments is equal to 40.61. In Table 4b, the first stage regressions suggest that lobbying expenditures on immigration are positively and significantly correlated with lobbying expenditures on other issues and with the degree of concentration in the sector.[34] In addition, union membership rates in the US are positively and significantly correlated with the corresponding rates in the UK. The Hansen test for overidentifying restrictions is satisfied at the 1 percent significance level (i.e., we cannot reject the null hypothesis of zero correlation between the estimated residuals and the excluded instruments). In addition, and most importantly, the results in Table 4a from the IV regressions, with and without controls, confirm that the number of visas per native worker is higher in sectors where business lobbies are more active, and lower in sectors where labor unions are more important. The magnitude of the coefficients on both lobbying expenditures and union membership rates increases relative to Table 3. The difference in the magnitudes might be driven by a negative correlation between lobbying expenditures on migration and the unobserved component of the number of visas[35] and by a positive correlation between union membership rates and the unobserved component of the number of visas[36] However, the difference between the magnitudes of the IV and OLS estimates could also be explained by measurement error in the key explanatory variables leading to attenuation bias in the OLS estimates.

To the extent that we do not have a clean natural experiment to identify the effects of lobbying activity on migration restrictions, the instrumental variables' estimates should be interpreted with due caution. For example, it might be the case that lobbying expenditures on policy issues other than immigration draw resources and policymakers' attention away from migration policy and, thus, directly influence (reduce) the number of visas in a given sector. However, in that case, the IV estimate would be biased towards zero and, hence, represent a lower bound of the true effect. Furthermore, as an additional robustness check of the IV results we use an alternative measure of lobbying activity by pro–migration business groups as the explanatory variable, i.e. the number of firms in each sector that list migration as an issue. Using the same instruments as before, we obtain qualitatively similar results,

[34]In Table 4b, columns (1)-(2), log *(lobbying exp on other issues/native workers)* is highly significant. On the other hand, log *(variance of firm size)* is only jointly significant with log *(lobbying exp on other issues/native workers)*. The p-value for the F-test of joint significance (not shown) is equal to 0.00.

[35]I.e., sectors with a higher number of visas contribute less, possibly because they are closer to their ideal number of immigrants.

[36]I.e., in sectors with a higher number of visas, natives feel a stronger threat, which increases their incentive to join unions.

which are available upon request.

To summarize, our estimates suggest that a 10% increase in the size of lobbying expenditures by business groups, per native worker, is associated with a 2.9 – 4.4 percent larger number of visas per native worker, while a one-percentage point increase in the union membership rate is associated with a 2.6 – 5.5 percent lower number of visas per native worker. The results are robust to introducing a number of industry-level control variables and to addressing endogeneity issues with an instrumental variable strategy.

6.2 Additional results

We next investigate how our previous results change when we consider alternative measures of migration restrictions (Table 5). In column (1), we exclude the number of J1 visas from the definition of the dependent variable, as it might be argued that students should not be part of the analysis (J1 visas are given to both temporary lecturers/visiting professors and students). In regression (2), we further restrict the definition of the dependent variable by considering only visas with quotas. Finally, in regression (3), the dependent variable we use is the (log) number of H1B visas approved. Our estimates in Table 5 are indeed remarkably similar to what we previously found in Table 3, and show that the results are robust to using alternative definitions of migration restrictions. The estimates in regression (3) suggest that sectors with 10% higher lobbying expenditures by business groups per native worker are associated with a 1.8% larger number of H1B visas approved, per native worker; in addition, a one percentage point increase in the union membership rate is associated with a 3.6% lower number of H1B visas per native worker.

In Table 6, we use an alternative measure of lobbying expenditures on immigration. As discussed above, in Table 3 $\log(\textit{lobbying exp/native workers})$ is calculated by dividing the total expenditure of a firm – that lists migration as an issue – by the total number of issues listed in the lobbying report; finally, firm expenditures are summed for each sector. In Table 6, instead, we consider firms which list "immigration" as an issue in their reports and take their total lobbying expenditures (as opposed to splitting them). This variable thus represents an upper bound of the true lobbying expenditures on immigration. Using this alternative measure, we find that the estimated impact of lobbying expenditures is very similar and not statistically different from the basic estimates in Table 3.

In Table 7, we explore whether we would have obtained similar results using an alternative measure of political organization of capital, namely campaign contributions from Political Action Committees (PAC). Data on PAC campaign contributions has been used

extensively in the international economics literature, but does not allow researchers to disentangle the different purposes for which a contribution is made (see for example, Goldberg and Maggi 1999, and Gawande and Bandyopadhyay 2000). When we use this proxy for the political organization of capital, we find the estimates of the coefficient on log(*campaign contributions/native workers*) to be either not significant or marginally significant at conventional levels (see first two columns in Table 7). The data on PAC campaign contributions is compiled by two-year election cycles. We average PAC contributions data over the 2001-02 and 2003-04 election cycles. In regressions (3)-(4), for comparison purposes, we look at the impact of log(*lobbying exp/native workers*) using data on lobbying expenditures which is averaged over the same years (2001-2004). The coefficient on log(*lobbying exp/native workers*) is very similar to what we found in Table 3. In addition, the last two columns in Table 7 – where we introduce both measures of political organization of capital – clearly show that it is lobbying expenditures on migration, rather than PAC campaign contributions, that positively affect the number of visas. The results are striking and cast doubt on the use of PAC campaign contributions data as an appropriate indicator to examine the effect of lobbying on policy outcomes.

6.3 Robustness checks

We confirm the findings in Table 3 in a series of robustness checks reported in the Appendix. We estimate the same specifications as in Table 3: dropping agriculture from the sample, which is a sector employing large numbers of illegal immigrants (columns (1)-(2), Table A6); using pooled – as opposed to averaged – data (including year fixed effects) (columns (3)-(4), Table A6); constraining observations in the sample to be the same across regressions (columns (5)-(6), Table A6); including observations corresponding to sectors with zero lobbying expenditures (columns (7)-(8), Table A6).[37] Our results in these robustness checks are very similar to what we found in Table 3.[38]

Furthermore, we carry out the analysis also splitting the sectors between skilled–intensive and unskilled–intensive ones. We find evidence that the magnitude in absolute value of the coefficients on log*(lobbyingexp/native workers)* and *union membership rates* are larger for the skilled–intensive sectors relative to the unskilled–intensive ones. However, the two sets

[37]The log specification in Table 3 drops the sectors with zero contributions. In Table A6, the zero lobbying expenditures are replaced by the minimum positive value of lobbying expenditures in the sample.

[38]In addition the data best fits a log specification (as opposed to one in levels). Also, there is no evidence of non-linear effects in log(*lobbying exp/native workers*) and *union membership rate* (results available upon request).

of coefficients are not significantly different (results available upon request). To conclude, the results are also robust when we control for the capital/labor ratio and skilled/unskilled labor ratio in each sector (see columns (1)-(2), Table A7).

7 Conclusions

To the best of our knowledge, this paper represents the first study that attempts to provide systematic empirical evidence on the political-economy determinants of current US immigration policy, focusing in particular on the role played by interest groups. To this end, we have started our analysis developing a simple theoretical framework that links migration to the intensity of the lobbying activities carried out by pro and anti–immigration pressure groups. Next, we have constructed an industry-level dataset on lobbying expenditures by organized groups, combining it with information on the number of visas issued and on union membership rates. The analysis provides strong evidence that both pro- and anti-immigration interest groups play a statistically significant and economically relevant role in shaping migration across sectors. Barriers to migration are higher in sectors where labor unions are more important, and lower in those sectors in which business lobbies are more active. The estimates suggest that a 10% increase in the size of lobbying expenditures by business groups, is associated with a 2.9 – 4.4 percent larger number of visas, while a one-percentage point increase in the union membership rate (assumed to be a proxy for lobbying expenditures by labor groups) is associated with a 2.6 – 5.5 percent lower number of visas. The results are robust to introducing a number of industry-level control variables and to using an instrumental variable strategy to address the endogeneity of lobbying expenditures and union membership rates.

It is difficult to provide a precise account of all the channels through which U.S. immigration policy works. In particular, the effects we estimate can be result of the use of a variety of policy tools. Besides the quantitative restrictions applied to specific visa types, several regulations substantially affect the number of visas issued and their allocation across sectors. In particular, in addition to "visible" restrictions – like quotas – which clearly have a fundamental impact, the government can use a number of other instruments to manage access to the labor market in specific sectors. An example of "invisible" barrier that acts as a form of protectionism is the set of rules that regulate the entry of foreign medical doctors in the US healthcare system. Indeed, even foreign doctors trained at top international medical schools are not allowed to practice the medical profession in the US unless they complete

their residency in a US hospital, a requirement that involves spending several years in a low–paying job. Another example of "invisible barrier" is represented by the complex procedures that have to be followed by an employer to hire a temporary (often seasonal) agricultural worker under the H2A program. These procedures are similar to those described for the H1B visas in section 3 and require the employer to advertise widely the job, show that the worker will earn at least the Adverse Effect Wage Rate[39] etc. The 'costs' associated to this process represent a large burden and have resulted in an under–utilization of the program.

In addition interest groups can carry out their lobbying activity on both "visible" and "invisible" restrictions, approaching officials at different level of policy making. For instance, for a "statutory change" like increasing a visa cap, interest groups will lobby Congress. This was the case for the increase in the number of H1B visas which was approved by the US Congress in 1998 as part of the broader Omnibus Appropriations Bill (HR 4328). Similarly, agricultural interests played an important role in shaping the HR 371 Bill recently introduced by Congressman Berman to "improve the agricultural job opportunities, benefits, and security for aliens in the United States." For a "regulatory change" instead, like labor certification or the H2A specific wage rate, interest groups lobby an agency in the executive branch such as the Department of Labor.[40]

To conclude, the empirical results suggest that, independently from the channels through which these effects work, policymakers target a given allocation of immigrants across sectors. Moreover, political-economy forces play a quantitatively important role in determining the cross-sectoral allocation of immigrants.

Further empirical work could explore other sources of data to analyze the variation in alternative measures of immigration policy – legal vs illegal, temporary vs permanent, etc. In addition, the paper could also be extended to examine the variation in immigration policy outcomes along occupation and geographical dimensions (for example, across U.S. states). Finally, firm-level data on lobbying expenditures can be exploited to study the importance of political-economy forces in the determination of policies other than immigration – e.g. trade, environment, taxes etc.

[39] Adverse effect wage rates are the minimum wage rates which the Department of Labor has determined must be offered and paid to U.S. and foreign workers by employers of nonimmigrant foreign agricultural workers (H2-A visa holders). Such employers must pay the higher of the AEWR, the applicable prevailing wage, or the statutory minimum wage as specified in the regulations 20 CFR 655.107.

[40] We would like to thank Julia Massimino of the staff of Congressman Berman, for sharing with us this and other very useful information on the working of US immigration policy.

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8 Appendix

Consider a small open economy consisting of $n + 1$ sectors, populated by a unit mass of individuals. The output of sector zero is the numeraire and is produced using sector-specific labor according to an identity production function, i.e. $X_0 = L_0$. The output of all other sectors is produced using sector-specific labor, which we assume to be internationally mobile.[41] The production technology in each non-numeraire sector exhibits diminishing returns

[41]There is substantial evidence supporting this view. For instance Friedberg (2001), among others, finds a significant positive relationship between source and destination country sector employment for Russian immigrants to Israel in the nineties. See also Kambourov and Manovskii (2008).

to labor, and we denote by ω_i the domestic return to labor in sector i. As usual, diminishing returns can be attributed to the presence of a fixed factor in each sector (**?**). We will call this factor capital and denote the overall reward to the specific fixed factor employed in sector i by π_i.

For simplicity, we assume that free trade in goods prevails and we normalize the international price for each commodity, setting it equal to one.[42] In addition, we assume that the country faces an infinitely elastic foreign labor supply curve and that the return in the international market to each type of labor is also equal to one. Any difference between the domestic factor return ω_i and the international return will be explained by the policies implemented by the domestic government.

Consumers are characterized by a separable, quasi–linear utility function that takes the following form:

$$u(\mathbf{x}) = x_0 + \sum_{i=1}^{n} u_i(x_i) \tag{1}$$

An individual maximizing this utility given an income I will have a demand $d_i(p_i)$ for each non-numeraire good, while the demand for the numeraire good is given by $d_0 = I - \sum_{i=1}^{n} p_i d_i(p_i)$. The indirect utility of our representative consumer is thus given by $V = I + \sum_i s_i(p_i)$, where $\sum_i s_i(p_i) = \sum_i [u_i(d_i(p_i)) - p_i d_i(p_i)]$ is the consumer surplus. Notice that, by assuming a small open economy that trades freely in final goods, the consumer surplus of each agent is not going to be affected by changes in factor returns brought about by government policies (i.e., changes in factor returns do not affect goods' prices).

Let ℓ_i denote the total domestic supply of labor of type i, $i \in \{0, 1, ...n\}$ available in the economy, while $L_i(\omega_i)$ is the demand for this factor. Restrictions[43] to the physical relocation of people across countries often take the form of a (binding) quota, accompanied by a tax (i.e., a differential fiscal treatment for immigrants vis a vis natives[44]), resulting in the immigrant retaining only part of the surplus associated with the relocation (i.e., the difference between

[42]This implies that we are abstracting from the potential price effects of immigration. To the best of our knowledge, the only empirical paper on this issue is Cortes (2006), which uses highly disaggregated US data at the city level. Her findings suggest that – across US cities, the average decrease in the cost of living due to immigration in the nineties is fairly small.

[43]Of course, policies could also be used to promote immigration. This has been for instance the case in many labor–scarce economies in the nineteenth century like Brazil and Argentina, as Timmer and Williamson (1996) have pointed out. Within the framework of the model, policies of this type would take the form of immigration subsidies. For simplicity we will not model this type of instruments explicitly as in the recent U.S. experience they have hardly been used.

[44]The US tax code for instance configures a differential treatment between residents and non residents.

the wage prevailing in the country of destination and the country of origin). As a result, the fiscal revenues associated with the presence of binding quotas q_i in sectors $i \in \{1, ..., n\}$ are equal to

$$T(\mathbf{q}) = \sum_i \gamma_i(\omega_i(q_i) - 1)(L_i(\omega_i(q_i)) - \ell_i) \tag{2}$$

where $\omega_i(q_i)$ is the wage that prevails in the Host country as a result of the introduction of a binding quota, and $L_i(\omega_i(q_i))$ is the corresponding employment level. The parameter $\gamma_i \in [0, 1]$ represents instead the share of the rent associated with the immigration quota that is captured by the government of the receiving country, while $(1 - \gamma_i)$ is the fraction of the wage premium $(\omega_i(q_i) - 1)$ associated with migration that is retained by the relocating migrant.

The fiscal revenues associated with the quota *cum* tax introduced by the government are lump sum rebated to all citizens of the country we are considering. Each domestic citizen supplies one unit of labor specific to the numeraire sector and at most one unit of a factor (capital or labor) specific to any non-numeraire sector. Since the size of the domestic population is normalized to one, the welfare of the agents supplying labor in sector i is equal to

$$V_{iL} = \omega_i(q_i)\ell_i + \alpha_{iL}[1 + T(\mathbf{q}) + \sum_i s_i(p_i)], \tag{3}$$

where the first term is the return to sector i specific labor, α_{iL} is the share of the population that owns labor used in the production of output i and, finally, 1 is the return to labor in the numeraire sector. The welfare of agents supplying the fixed factor (capital) is instead given by

$$V_{iK} = \pi_i(q_i) + \alpha_{iK}[1 + T(\mathbf{q}) + \sum_i s_i(p_i)], \tag{4}$$

where $\pi_i(q_i)$ is the return to capital in sector i and α_{iK} is the share of the population that owns sector i specific capital. The first best policy in this model is obtained by maximizing the welfare of all natives, i.e.

$$W(\mathbf{q}) = \sum_i (V_{iK} + V_{iL}) \tag{5}$$

and, as can be easily shown, this involves free labor mobility. Intuitively, starting from a scenario with less than free labor mobility, immigration reduces wages, but the loss to

domestic workers is less than the gains to domestic capital owners (see Borjas 1995 for a graphical exposition). Hence, it is optimal to admit all foreign workers willing to relocate to the country and that domestic firms are willing to hire. In other words, the first-best quota q_i^* set by the government is such that

$$q_i^* \geq m_i(1, p_i) = L_i(1, p_i) - \ell_i \tag{6}$$

If we bring in directly the quantities of the specific factors in the production structure and let k_i be the amount of specific fixed factor employed in sector i, the first best number of migrants $m_i(1, k_i, p_i)$ is *ceteris paribus* an increasing function of the stock of capital k_i available in sector i. Similarly, an increase in the relative price of the good produced in sector i leads to an increase in the first best number of migrants in the sector. In both cases, the increase in the number of migrants is brought about by an outward shift in the labor demand curve in the sector.

Inspired by the pioneering contributions of Findlay and Wellisz (1982), we model measures towards labor mobility in each sector as the result of expenditures by a pro–migration lobby (made up by capital owners) and by an anti–migration lobby (made up by workers). In particular, we will carry out our analysis assuming that $\omega_i(q_i) - 1 = \lambda(E_{iL})^2 - (1-\lambda)(E_{iK})^2$, where λ represents the weight of labor in the protection function and $(1-\lambda)$ the weight of capital. Notice that the protection function is increasing in the expenditures of organized workers and decreasing with the expenditures undertaken by the owners of capital. Furthermore, we assume increasing returns to lobbying, to reflect the real world observation that larger donors command disproportionately greater influence (Eicher and Osang 2002). The two lobby then play a non-cooperative game where they choose the amount to pay in order to maximize their net welfare, given by

$$\begin{aligned} \Omega_{iK}(q_i) &= V_{iK}(q_i) - E_{iK} \\ \Omega_{iL}(q_i) &= V_{iL}(q_i) - E_{iL} \end{aligned}$$

Assuming for simplicity that $\gamma_i = 1$ for all i,[45] the two first–order conditions are given by

$$\left[-L_i + \alpha_{iK}\frac{\partial T(\omega(\mathbf{q}))}{\partial \omega_i}\right]\frac{\partial \omega_i}{\partial q_i}\frac{\partial q_i}{\partial E_{iK}} = 1 \quad (7)$$

$$\left[\ell_i + \alpha_{iL}\frac{\partial T(\omega(\mathbf{q}))}{\partial \omega_i}\right]\frac{\partial \omega_i}{\partial q_i}\frac{\partial q_i}{\partial E_{iL}} = 1 \quad (8)$$

To interpret equations (7) and (8), notice that the first term on the left hand side – in brackets – represents the impact of a change in the return to labor on the welfare of the lobby, and the product of the second and third terms represents the marginal effect of one dollar of expenditure on the return to labor. Thus, the left hand side equals the marginal benefit brought about to the lobby by a dollar of expenditure, and that has to be equal to the marginal cost – equal to 1 – on the right hand side. Assume that the domestic labor demand is linear, i.e. that it takes the form

$$L_i = L - b\omega_i \quad (9)$$

and that, for simplicity, the ownership of capital in the population is highly concentrated ($\alpha_{iK} = 0$ for all i).[46] Solving simultaneously the system of equations given by (7) and (8), the quota chosen by the domestic government is equal to

$$q_i = \frac{L-b}{2} - \frac{\ell_i}{2}\left[\frac{\alpha_{iL}+1}{\alpha_{iL}}\right] + \frac{1}{2\alpha_{iL}}\left[\frac{1-\lambda}{\lambda}\frac{E_{iK}}{E_{iL}}\right] \quad (10)$$

Thus, *ceteris paribus*, sectors in which unions are more active and spend larger amounts have higher protection (i.e., smaller quotas) granted to domestic labor, while sectors where capital's expenditures are higher will have less restrictive migration policies, i.e. larger quotas.

How likely is it that the observed number of migrants is the result of the working of the political-economy forces we have modeled? In other words, could it be the case that the actual number of migrants is the result of shocks occurring on the supply side of migration, rather than of the policy actually implemented by the Host country? To answer this question,

[45] Assuming impartial rent capturing, i.e. $\gamma_i < 1$, complicates the algebra without changing the main result. For an analysis that includes imperfect capturing, see Facchini and Willmann (2005) and Facchini and Testa (2008).

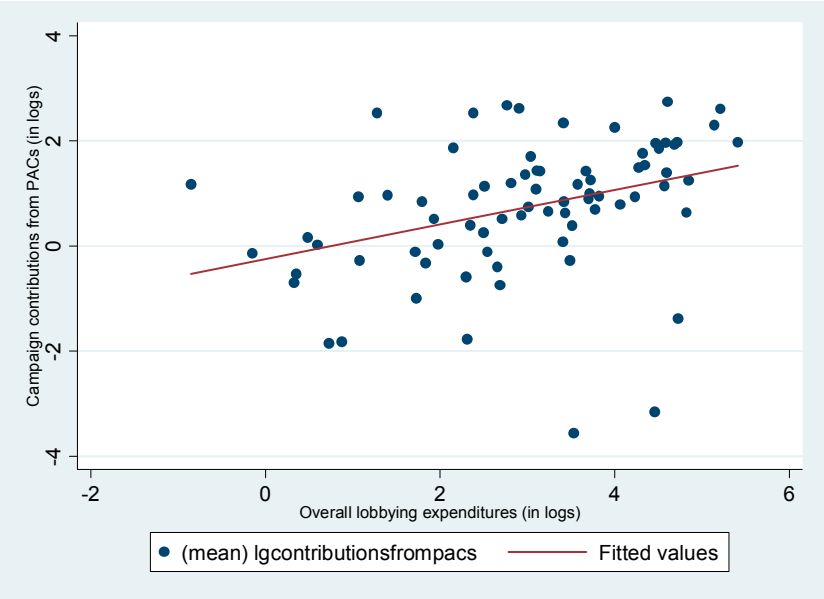
[46] Formally, we are assuming that the production function in each sector takes the form $y_i = \frac{L}{b}L_i - \frac{1}{2b}L_i^2$, where $L, b > 0$. The corresponding profit function (return to the specific factor) is then given by $\pi = \frac{L^2}{2b} + \frac{b}{2}\omega_i^2 - L\omega_i$.

consider the possibility that, after a restrictive quota has been introduced, a supply shock occurs in the international market, that increases the wage prevailing in the rest of the world from 1 to w' (Figure A1). This could be, for example, the result of a technological improvement in the source country that lifts the average wage individuals can earn by staying put. Better opportunities in the rest of the world imply that the potential migrant will need to re–evaluate his decision to relocate. In particular, in our simple model, he will be moving only if the wage he can earn in the destination country is higher or equal to the wage he can secure in the rest of the world. Thus, as a result of the upward shift in the international labor supply (from L_w^S to $L_w^{S'}$) two possible scenarios can arise. They are illustrated in panels (a) and (b) of Figure A1 where L^d and l^S are, respectively, the labor demand and the domestic labor supply in the destination country, and q is the quota set by the government.

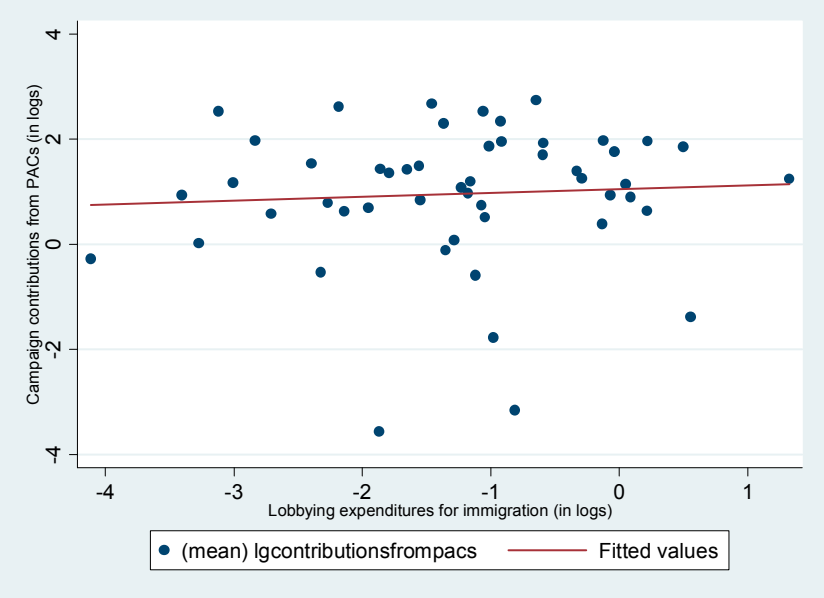
Panel (a) describes the case in which the original quota set by the Host country continues to be binding after the shock. In this situation, the wage w_q determined by the quota is still above the wage prevailing in the rest of the world after the shock, and the number of migrants effectively admitted to the Host country continues to be determined by the Host country's restrictive policy. In panel (b) instead, the shock to the international factor price is substantial and the wage prevailing in the international market is above w_q, the quota determined wage. As a result, the quota is no longer binding: In that case, migrants are willing to relocate to the host country only if the equilibrium wage prevailing in the destination country raises to ω'. If that is the case, the number of migrants actually willing to relocate to the Host country will be lower than the one set by the quota and equal to $L^d(\omega') - \ell^S$. In this case, the political economy forces no longer play a role in shaping the volume of migrants, which is instead purely determined by market forces, i.e. by the intersection between domestic labor demand and international labor supply. Therefore, it is important to point out that, for the supply side considerations to play a role in shaping the equilibrium outcome in this simple model, a very large shock must occur, that makes the policy choice of the host government irrelevant.

Figure 1. Scatter Plots between Lobbying Expenditures and Campaign Contributions from Political Action Committees (PACs)

Campaign contributions from PACs and overall lobbying expenditures
(in millions of US$)



Campaign contributions from PACs and lobbying expenditures on immigration
(in millions of US$)



Notes. The data on campaign contributions and lobbying expenditures are averaged over three election cycles -- 1999-2000, 2001-02 and 2003-04. The correlation between (log) contributions from PACs and (log) overall lobbying expenditures (top panel) is 0.328 (robust standard error=0.099; p-value=0.000); the correlation between (log) contributions from PACs and (log) lobbying expenditures for immigration is 0.074 (robust standard error=0.132; p-value=0.580).

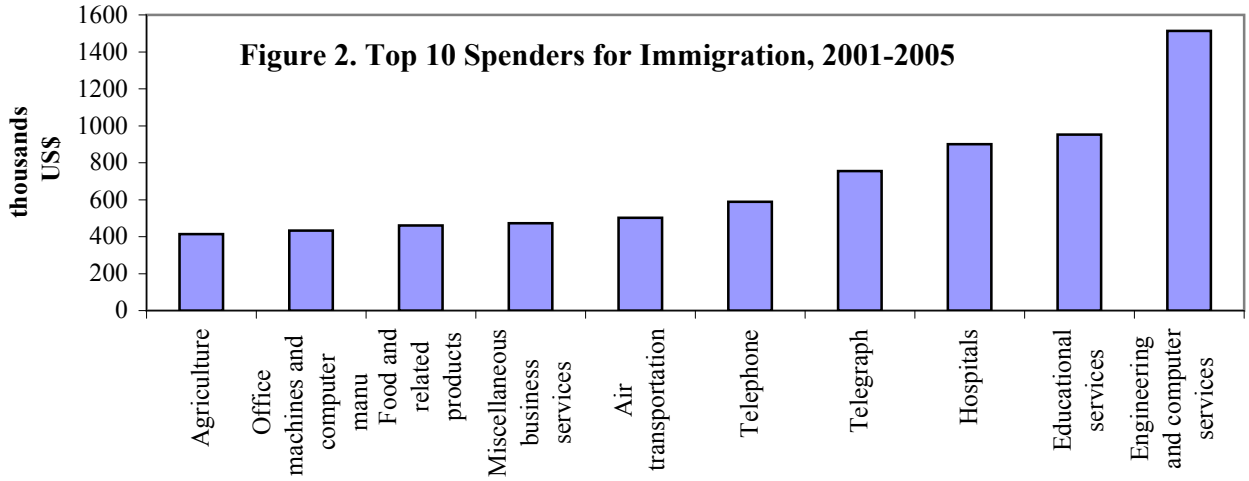


Figure 2. Top 10 Spenders for Immigration, 2001-2005
thousands US$
1600
1400
1200
1000
800
600
400
200
0
Agriculture
Office machines and computer manu
Food and related products
Miscellaneous business services
Air transportation
Telephone
Telegraph
Hospitals
Educational services
Engineering and computer services

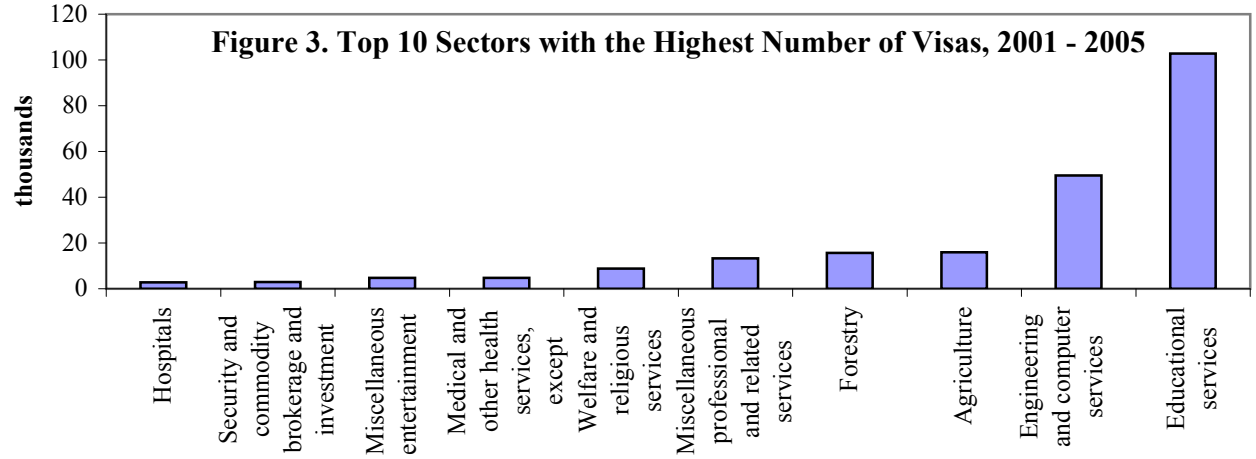


Figure 3. Top 10 Sectors with the Highest Number of Visas, 2001 - 2005
thousands
120
100
80
60
40
20
0
Hospitals
Security and commodity brokerage and investment
Miscellaneous entertainment
Medical and other health services, except
Welfare and religious services
Miscellaneous professional and related services
Forestry
Agriculture
Engineering and computer services
Educational services

Figure 4. Scatter Plot - Lobbying Expenditures for Immigration and Number of Visas

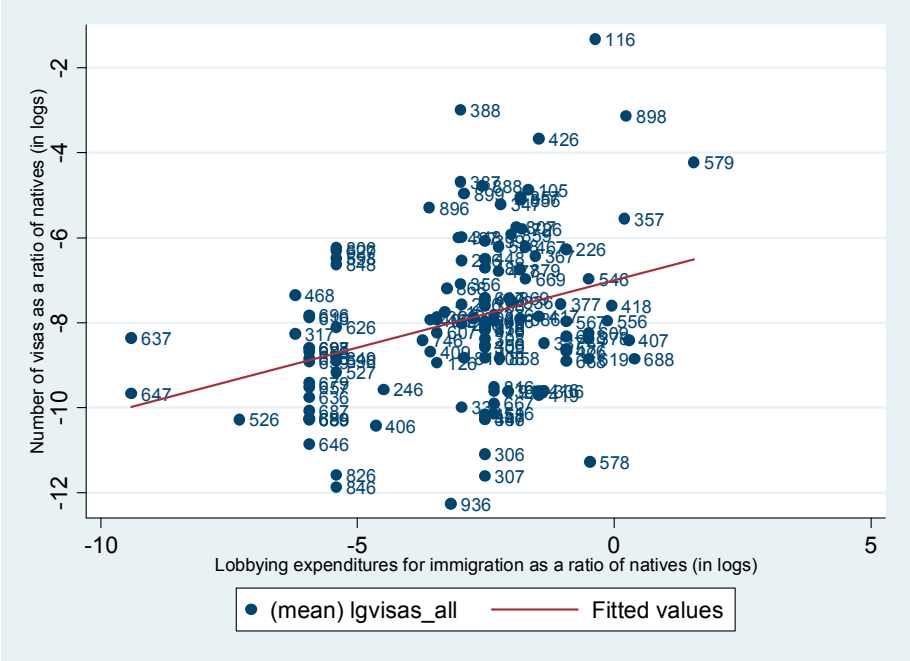
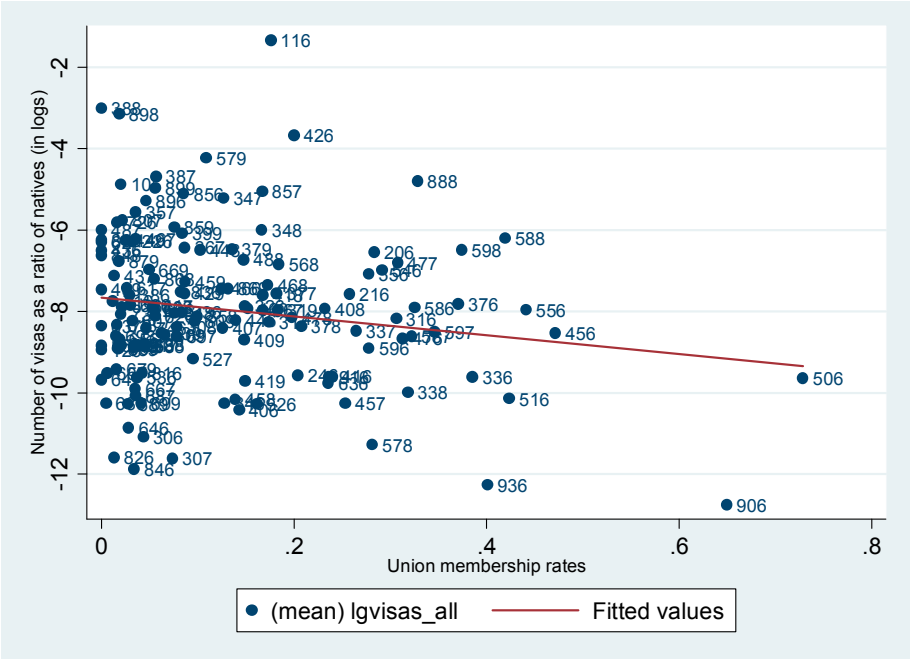


Figure 5. Scatter plot - Union Membership Rates and Number of Visas



Notes. All data are averaged over 2001-2005. The correlation between (log) lobbying expenditures for immigration and (log) number of visas (top panel) is 0.316 (robust standard error=0.080; p-value=0.000); the correlation between union membership rates and (log) number of visas is -2.283 (robust standard error=1.220; p-value=0.063).

Figure 6. Scatter Plot - Lobbying Expenditures for Immigration and Number of H1B Visas

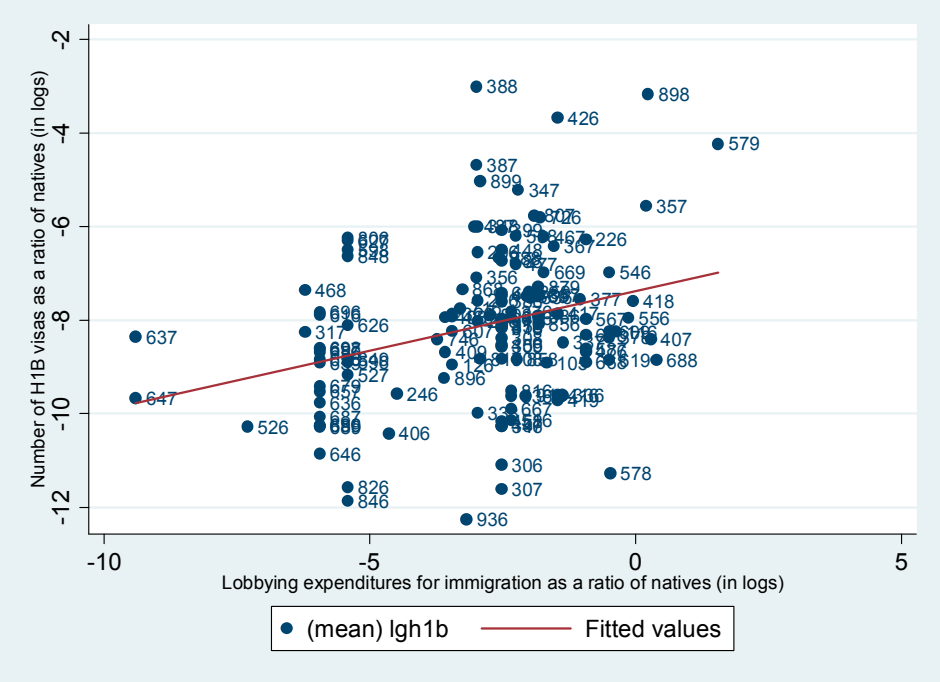
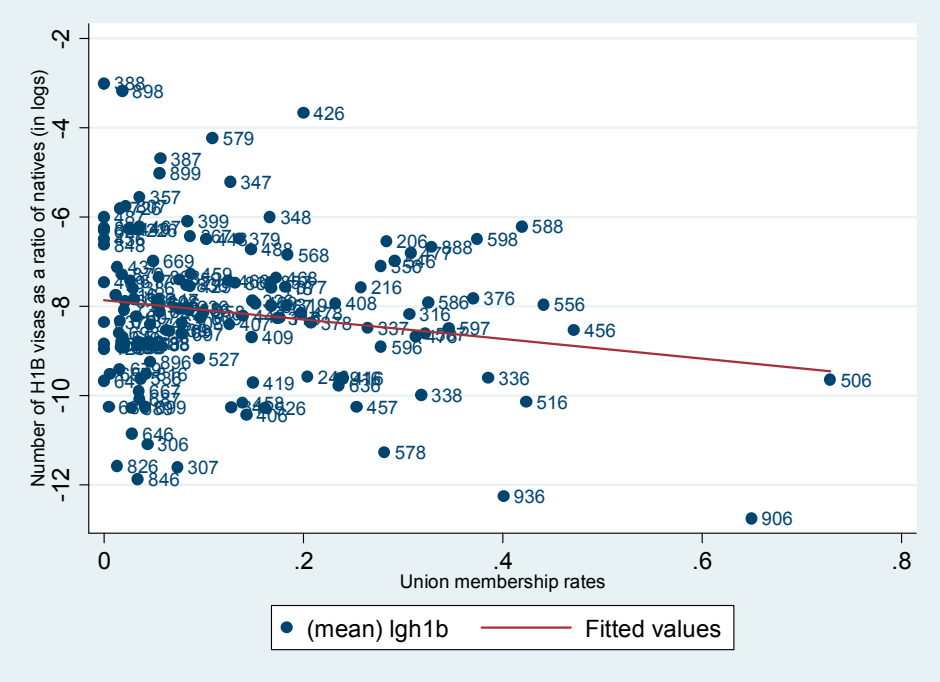


Figure 7. Scatter Plot - Union Membership Rates and Number of H1B Visas



Notes. All data are averaged over 2001-2005. The correlation between (log) lobbying expenditures for immigration and (log) number of H1B visas (top panel) is 0.255 (robust standard error=0.068; p-value=0.001); the correlation between union membership rates and (log) number of H1B visas is -2.180 (robust standard error=1.161; p-value=0.062).

Figure A1. The Effects of a Migration Quota

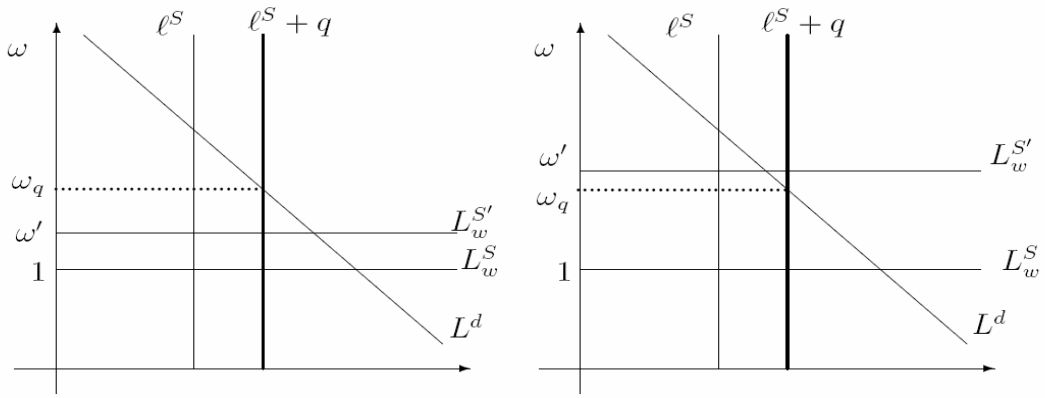


Table 2. Targeted Political Activity
(in millions of US dollars)

Election cycle	1999-2000	2001-02	2003-04
Contributions from PACs	326	348	461
Overall lobbying exp	2949	3330	4048
Total targeted political activity	3275	3678	4509

Source. Center for Responsive Politics

Table 3. Estimated Effect of Politics on Migration, OLS

Dependent variable ⟶ **log (visas/native workers)**			
	[1]	[2]	[3]
log (lobbying exp/native workers)	0.316***	0.356***	0.294***
	[0.076]	[0.080]	[0.084]
union membership rate		-2.594*	-3.232**
		[1.430]	[1.455]
lg (output)			-0.012
			[0.216]
unemployment rate			7.305
			[5.832]
log (price)			1.582
			[2.416]
log (capital)			-0.213
			[0.225]
log (FDI)			0.038
			[0.092]
shocks			-6.834**
			[2.811]
log (lag US wages)			10.318***
			[3.329]
log (number of native workers)			0.077
			[0.237]
N	126	126	120
R-squared	0.11	0.14	0.27

All data are averaged over 2001-2005. Standard errors are corrected for heteroskedasticity, and denoted in parentheses. ***, ** and * denote significance at 1, 5 and 10 percent respectively.

Table 4a. Estimated Effect of Politics on Migration, Instrumental Variables

Dependent variable ⟶	**log (visas/native workers)**	
	[1]	[2]
log (lobbying exp/native workers)	0.439***	0.325**
	[0.126]	[0.124]
union membership rate	-3.671	-5.495**
	[2.253]	[2.193]
lg (output)		-0.045
		[0.244]
unemployment rate		8.132
		[5.977]
log (price)		4.053
		[2.635]
log (capital)		-0.181
		[0.249]
log (FDI)		0.004
		[0.095]
shocks		-6.737**
		[3.190]
log (lag US wages)		10.617**
		[4.268]
log (number of native workers)		0.104
		[0.270]
First-stage F for log(lobbying exp/nat workers)	62.66	47.22
First-stage F for union membership	40.61	16.38
Hansen's J-statistic (p-value)	0.97	0.73
N	109	106
R-squared	0.11	0.24

Lobbying expenditures on issues other than immigration, variance of firm size and union membership rates in the UK are used as instruments for the two endogenous variables -- lobbying expenditures and union membership rates. All data are averaged over 2001-2005. Standard errors are corrected for heteroskedasticity and denoted in parentheses. ***, ** and * denote significance at 1, 5 and 10 percent respectively.

Table 4b. Estimated Effect of Politics on Migration, Instrumental Variables -- First Stage

Dependent variable ⟶	**log (lobbying exp/native workers)**		**union membership rate in the US**	
	[1]	[2]	[3]	[4]
log (lobbying exp on other issues/native workers)	1.017***	1.036***	-0.002	0.001
	[0.077]	[0.090]	[0.007]	[0.005]
log (variance of firm size)	0.098	0.077	0.007	0.001
	[0.059]	[0.057]	[0.005]	[0.006]
union membership rate in the UK	-1.620*	-1.314*	0.514***	0.459***
	[0.853]	[0.790]	[0.104]	[0.106]
lg (output)		-0.05		-0.018
		[0.162]		[0.011]
unemployment rate		-2.513		-0.361
		[4.151]		[0.258]
log (price)		-1.002		-0.004
		[1.144]		[0.169]
log (capital)		-0.026		0.013
		[0.141]		[0.010]
log (FDI)		-0.013		0.004
		[0.064]		[0.005]
shocks		5.109**		0.199
		[2.185]		[0.140]
log (lag US wages)		1.047		0.289*
		[3.235]		[0.173]
log (number of native workers)		0.099		-0.002
		[0.146]		[0.011]
N	109	106	122	118
R-squared	0.69	0.72	0.53	0.56

This table shows the first stage regression corresponding to Table 4a. All data are averaged over 2001-2005. Standard errors are corrected for heteroskedasticity and denoted in parentheses. ***, ** and * denote significance at 1, 5 and 10 percent respectively.

Table 5. Estimated Effect of Politics on Migration, Alternative Dependent Variables

Dependent variable ⟶	**log (visas/native workers)**		
	Visas excluding J1	**Visas with quota**	**H1B visas**
	[1]	[2]	[3]
log (lobbying exp/native workers)	0.287***	0.253***	0.182***
	[0.082]	[0.080]	[0.065]
union membership rate	-3.516**	-3.299**	-3.623***
	[1.350]	[1.376]	[1.292]
lg (output)	0.016	0.032	-0.114
	[0.205]	[0.197]	[0.181]
unemployment rate	7.535	6.884	1.661
	[5.715]	[5.774]	[4.323]
log (price)	1.255	0.615	1.112
	[2.313]	[2.279]	[2.165]
log (capital)	-0.209	-0.233	0.009
	[0.225]	[0.217]	[0.151]
log (FDI)	0.05	0.082	0.107
	[0.090]	[0.071]	[0.066]
shocks	-6.589**	-5.389**	-4.892**
	[2.748]	[2.594]	[2.444]
log (lag US wages)	10.265***	10.193***	9.834***
	[3.295]	[3.173]	[2.951]
log (number of native workers)	0.02	-0.048	-0.169
	[0.209]	[0.206]	[0.198]
N	120	120	120
R-squared	0.29	0.31	0.34

All data are averaged over 2001-2005. Standard errors are are corrected for heteroskedasticity and denoted in parentheses. ***, ** and * denote significance at 1, 5 and 10 percent respectively.

Table 6. Estimated Effect of Politics on Migration
Alternative Measure of Lobbying Expenditures

Dependent variable	log (visas/native workers)	
	[1]	[2]
log (lobbying exp_upper bound/native workers)	0.321***	0.252***
	[0.082]	[0.085]
union membership rate	-2.224	-3.087**
	[1.423]	[1.458]
lg (output)		0.022
		[0.218]
unemployment rate		7.692
		[5.921]
log (price)		1.937
		[2.493]
log (capital)		-0.216
		[0.227]
log (FDI)		0.032
		[0.094]
shocks		-6.563**
		[2.854]
log (lag US wages)		11.124***
		[3.343]
log (number of native workers)		0.062
		[0.240]
N	126	120
R-squared	0.11	0.25

lobbying exp_upper bound represents the total lobbying expenditures by firms within a sector which list immigration as an issue. All data are averaged over 2001-2005. Standard errors are corrected for heteroskedasticity, and denoted in parentheses. ***, ** and * denote significance at 1, 5 and 10 percent respectively.

Table 7. Estimated Effect of Politics on Migration, Campaign Contributions from PAC vs Lobbying Expenditures

Dependent variable	→	**log (number of visas/native workers)**				
	[1]	[2]	[3]	[4]	[5]	[6]
log (PAC contribution / native workers)	0.208*	-0.131			0.163	-0.312
	[0.119]	[0.150]			[0.129]	[0.249]
log (lobbying exp/native workers)			0.326***	0.243***	0.305***	0.237***
			[0.068]	[0.080]	[0.069]	[0.079]
union membership rate	-1.801*	-3.102**	-3.516**	-3.999***	-3.149**	-4.068***
	[1.056]	[1.319]	[1.426]	[1.512]	[1.359]	[1.485]
lg (output)		-0.117		-0.06		-0.127
		[0.181]		[0.225]		[0.222]
unemployment rate		6.372		8.319		7.751
		[5.160]		[5.492]		[5.515]
log (price)		-1.288		0.711		-0.401
		[2.565]		[2.580]		[2.515]
log (capital)		-0.076		-0.122		-0.104
		[0.205]		[0.213]		[0.219]
log (FDI)		0.174**		0.073		0.147**
		[0.076]		[0.087]		[0.073]
shocks		-4.262**		-5.663**		-4.801**
		[2.091]		[2.397]		[2.355]
log (lag US wages)		10.126***		9.098***		8.718***
		[3.112]		[3.247]		[3.177]
log (number of native workers)		-0.204		0.031		-0.287
		[0.226]		[0.245]		[0.295]
N	133	127	119	113	118	112
R-squared	0.06	0.23	0.16	0.28	0.18	0.32

Standard errors are are corrected for heteroskedasticity and denoted in parentheses. ***, ** and * denote significance at 1, 5 and 10 percent respectively. PACs stand for political action committees. The contirbutions by PACs is averaged over election cycles 2001-02 and 2003-04. For comparison, data on lobbying expenditures is averaged over the same period.

Table A1a -- Summary Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Log (Number of visas as a ratio of native workforce)	120	-7.86	1.84	-11.87	-1.34
Log (Number of H1B visas as a ratio of native workforce)	120	-8.06	1.63	-11.87	-3.00
Log (Total number of visas subject to quota as a ratio of native workforce)	120	-7.97	1.76	-11.87	-1.34
Log (Total number of visas excluding J1 as a ratio of native workforce)	120	-7.88	1.82	-11.87	-1.34
Log (Lobbying expenditures for immigration as a ratio of native workforce)	120	-3.03	2.05	-9.41	1.56
Log (Total lobbying expenditures by all firms which lobby for immigration as a ratio of native workforce)	120	-0.65	2.03	-6.01	4.20
Union membership rate in the US	120	0.12	0.12	0.00	0.47
Log (Gross uutput)	120	10.77	1.56	6.00	14.45
Unemployment rate	120	0.06	0.04	0.00	0.28
Log (Price Index)	120	4.66	0.07	4.34	4.87
Log (Capital expenditures)	120	7.67	1.76	2.21	11.51
log (FDI)	120	7.20	2.67	-1.12	11.73
Shocks	120	0.22	0.06	0.00	0.35
Log (US wages)	120	1.83	0.05	1.69	1.93
Log (Number of native workers)	120	12.38	1.68	7.83	16.34
Log (Ratio of skilled to unskilled workers)	120	-0.63	0.69	-2.48	1.12
Log (Contributions by PACs as a ratio of native workforce)	127	2.27	1.66	-3.80	6.59
Log (Lobbying expenditures by firms which do not lobby for immigration as a ratio of native workforce)	106	2.09	1.67	-0.41	5.35
Log (Variance of Annual Payroll)	106	30.44	2.58	23.51	35.84
Union membership rate in the UK	106	0.24	0.16	0.03	0.70

Table A1b -- Summary Statistics (in levels)

Number of visas	120	2,101	10,593	2	102,836
Number of H1B visas	120	955	4,807	2	48,824
Number of visas subject to quota	120	1,217	5,172	2	48,824
Total number of visas excluding J1	120	1,381	5,305	2	49,457
Lobbying expenditures for immigration (in US$)	120	99,811	215,278	0	1,513,108
Total lobbying expenditures by all firms which lobby for immigration (in US$)	120	1,084,469	2,363,724	14	17,800,000
Total lobbying expenditures by all firms for all issues (including immigration) (in US$)	120	11,700,000	20,400,000	2,069	91,400,000
Contributions by PACs (in US$)	127	6,741,956	4,856,364	174,543	28,700,000
Lobbying expenditures by firms which do not lobby for immigration (in US$)	106	11,500,000	20,000,000	2,996	91,200,000
Number of native workers	120	837,067	1,697,717	1,414	12,400,000

All variables are averaged between 2001 and 2005 with the exception of capital, which is averaged between 2001 and 2004. The contributions by PACs are averaged over two election cycles -- 2001-2002, 2003-2004.

Table A2. List of Issues

Code	Issue
ACC	Accounting
ADV	Advertising
AER	Aerospace
AGR	Agriculture
ALC	Alcohol & Drug Abuse
ANI	Animals
APP	Apparel/Clothing Industry/Textiles
ART	Arts/Entertainment
AUT	Automotive Industry
AVI	Aviation/Aircraft/ Airlines
BAN	Banking
BNK	Bankruptcy
BEV	Beverage Industry
BUD	Budget/Appropriations
CHM	Chemicals/Chemical Industry
CIV	Civil Rights/Civil Liberties
CAW	Clean Air & Water (Quality)
CDT	Commodities (Big Ticket)
COM	Communications/ Broadcasting/ Radio/TV
CPI	Computer Industry
CSP	Consumer Issues/Safety/ Protection
CON	Constitution
CPT	Copyright/Patent/ Trademark
DEF	Defense
DOC	District of Columbia
DIS	Disaster Planning/Emergencies
ECN	Economics/Economic Development
EDU	Education
ENG	Energy/Nuclear
ENV	Environmental/Superfund
FAM	Family Issues/Abortion/ Adoption
FIR	Firearms/Guns/ Ammunition
FIN	Financial Institutions/Investments/ Securities
FOO	Food Industry (Safety, Labeling, etc.)
FOR	Foreign Relations
FUE	Fuel/Gas/Oil
GAM	Gaming/Gambling/ Casino
GOV	Government Issues
HCR	Health Issues
HOU	Housing
IMM	Immigration
IND	Indian/Native American Affairs
INS	Insurance
LBR	Labor Issues/Antitrust/ Workplace
LAW	Law Enforcement/Crime/ Criminal Justice
MAN	Manufacturing
MAR	Marine/Maritime/ Boating/Fisheries
MIA	Media (Information/ Publishing)
MED	Medical/Disease Research/ Clinical Labs
MMM	Medicare/Medicaid
MON	Minting/Money/ Gold Standard
NAT	Natural Resources
PHA	Pharmacy
POS	Postal
RRR	Railroads
RES	Real Estate/Land Use/Conservation
REL	Religion
RET	Retirement
ROD	Roads/Highway
SCI	Science/Technology
SMB	Small Business
SPO	Sports/Athletics
TAX	Taxation/Internal Revenue Code
TEC	Telecommunications
TOB	Tobacco
TOR	Torts
TRD	Trade (Domestic & Foreign)
TRA	Transportation
TOU	Travel/Tourism
TRU	Trucking/Shipping
URB	Urban Development/ Municipalities
UNM	Unemployment
UTI	Utilities
VET	Veterans
WAS	Waste (hazardous/ solid/ interstate/ nuclear)
WEL	Welfare

Source: Senate's Office of Public Records (SOPR)

Table A3. Sample Lobbying Report - Morrison Public Affairs Group

Clerk of the House of Representatives	Secretary of the Senate
Legislative Resource Center	Office of Public Records
B-106 Cannon Building	232 Hart Building
Washington, DC 20515	Washington, DC 20510

Secretary of the Senate
Received: Feb 05, 2005

LOBBYING REPORT

Lobbying Disclosure Act of 1995 (Section 5) - **All Filers Are Required To Complete This Page**

1. Registrant Name:

MORRISON PUBLIC AFFAIRS GROUP (MPAG)

2. Address:
6004 ONODAGA ROAD, BETHESDA, MD 20816

3. Principal place of business (if different from line 2):

4. Contact Name: BRUCE A. MORRISON
Telephone: 301-263-1142
E-mail (optional): b.a.m@att.net

Senate ID #: 67193-12
House ID #: 65656000

7. Client Name: ☐ Self

O'GRADY-PEYTON INTL (USA)

TYPE OF REPORT

8. Year 2004 Midyear (January 1 - June 30): ☐ **OR** Year End (July 1 - December 31): ☒

9. Check if this filing amends a previously filed version of this report: ☐

10. Check if this is a Termination Report: ☐ => Termination Date: 11. No Lobbying Activity: ☐

INCOME OR EXPENSES

Complete Either Line 12 **OR** Line 13

12. Lobbying Firms

INCOME relating to lobbying activities for this reporting period was:

Less than $10,000: ☐

$10,000 or more: ☒ => Income (nearest $20,000): 100,000.00

Provide a good faith estimate, rounded to the nearest $20,000, of all lobbying related income from the client (including all payments to the registrant by any other entity for lobbying activities on behalf of the client).

13. Organizations

EXPENSES relating to lobbying activities for this reporting period were:

Less than $10,000: ☐

$10,000 or more: ☐ => Expenses (nearest $20,000): _____

14. Reporting Method.
Check box to indicate expense accounting method. See instructions for description of options.

☐ **Method A.** Reporting amounts using LDA definitions only
☐ **Method B.** Reporting amounts under section 6033(b)(8) of the Internal Revenue Code
☐ **Method C.** Reporting amounts under section 162(e) of the Internal Revenue Code

Registrant Name: MORRISON PUBLIC AFFAIRS GROUP (MPAG) Client Name: O'GRADY-PEYTON INTL (USA)

LOBBYING ACTIVITY.

Select as many codes as necessary to reflect the general issue areas in which the registrant engaged in lobbying on behalf of the client during the reporting period. Using a separate page for each code, provide information as requested. Attach additional page(s) as needed.

15. General issue area code: IMM (one per page)

16. Specific lobbying issues:

1. Processing policies for immigrant nurses. 2. Department of Homeland security regulations. 3. English requirements for immigrant nurses. 4. EB-3 visa retrogression.

17. House(s) of Congress and Federal agencies contacted:
HOUSE OF REPRESENTATIVES
Health & Human Services, Dept of (HHS)
Homeland Security, Dept of (DHS)
SENATE
State, Dept of (DOS)

18. Name of each individual who acted as a lobbyist in this issue area:

Name: HUDAK, STEPHEN P
Covered Official Position (if applicable): N/A
Name: MORRISON, BRUCE A.
Covered Official Position (if applicable): FEDERAL HOUSING FINANCE BOARD

19. Interest of each foreign entity in the specific issues listed on line 16 above.**None**

Signature: ON FILE Date: Feb 05, 2005

Printed Name and Title: BRUCE A. MORRISON - CHAIRMAN

Table A4. Sample Lobbying Report - Microsoft Corporation

00000343475

Clerk of the House of Representatives
Legislative Resource Center
B-106 Cannon Building
Washington, DC 20515

Secretary of the Senate
Office of Public Records
232 Hart Building
Washington, DC 20510

RECEIVED
SECRETARY OF THE SENATE
PUBLIC RECORDS
05 AUG 15 PM 12:53

LOBBYING REPORT

Lobbying Disclosure Act of 1995 (Section 5) - **All Filers Are Required to Complete This Page**

1. Registrant Name
Microsoft Corporation

2. Registrant Address ☐ Check if different than previously reported
Address **1401 Eye Street, NW** **Suite 500**
City **Washington** State/Zip (or Country) **DC 20005**

3. Principal Place of Business (if different from line 2)
City **Redmond** State/Zip (or Country) **WA 98052**

4. Contact Name	Telephone	E-mail (optional)	5. Senate ID #
Karin Gess	(202) 263-5900	kgess@microsoft.com	25204-12

7. Client Name ☒ Self	6. House ID #
	31174000

TYPE OF REPORT 8. Year **2005** Midyear (January 1-June 30) ☒ **OR** Year End (July 1-December 31) ☐

9. Check if this filing amends a previously filed version of this report ☐

10. Check if this is a Termination Report ☐ >> Termination Date _____ 11. No Lobbying Activity ☐

INCOME OR EXPENSES - Complete Either Line 12 **OR** Line 13

12. Lobbying Firms

INCOME relating to lobbying activities for this reporting period was:

Less than $10,000 ☐

$10,000 or more ☐ >> $ _____
(income (nearest $20,000))

Provide a good faith estimate, rounded to the nearest $20,000 of all lobbying related income from the client (including all payments to the registrant by any other entity for lobbying activities on behalf of the client).

13. Organizations

EXPENSES relating to lobbying activities for this reporting period were:

Less than $10,000 ☐

$10,000 or more ☒ >> $ **$4,540,000.00**
Expenses (nearest $20,000)

14. **REPORTING METHOD.** Check box to indicate expense accounting method. See instructions for description of options.

☐ Method A. Reporting amounts using LDA definitions only

☐ Method B. Reporting amounts under section 6033(b)(8) of the Internal Revenue Code

☒ Method C. Reporting amounts under section 162(e) of the Internal Revenue Code

Signature _____ Date **8/12/2005**

Printed Name and Title **Jack Krumholtz - Managing Dir. of Federal Gov't Affairs** Page 1 of 19

00000343484

Registrant Name: **Microsoft Corporation**

Client Name: **Microsoft Corporation**

LOBBYING ACTIVITY. Select as many codes as necessary to reflect the general issue areas in which the registrant engaged in lobbying on behalf of the client during the reporting period. **Using a separate page for each code,** provide information as requested. Attach additional page(s) as needed.

15. General issue area code **IMM** (one per page)

16. Specific Lobbying issues
H-1B visas
L-1 visas
Program Electronic Review Management System (PERM) regulations

17. House(s) of Congress and Federal agencies contacted ☐ Check if None
Department of Commerce
Department of Labor
Executive Office of the President
House of Representatives
Senate

18. Name of each individual who acted as a lobbyist in this issue area

Name	Covered Official Position (if applicable)	New
Buckner, Marland		No
Corley, Scott		Yes
Gelman, Matt		No
Houton, James		No
Ingle, Ed	White House	No
Krumholtz, Jack		No
Otto, Lori	Senate Republican Policy Committee	No

19. Interest of each foreign entity in the specific issues listed on line 16 above ☒ Check if None

Signature _____ Date 8/12/2005

Printed Name and Title Jack Krumholtz - Managing Dir. of Federal Gov't Affairs

Source. Senate's Office of Public Records (SOPR)

Table A5. List of CPS Industries (Census Bureau classification)

CPS Industry Code	CPS Industry Name	CPS Industry Code	CPS Industry Name
105	Agriculture	567	Petroleum and gasoline pipe lines
116	Forestry	568	Services incidental to transportation
126	Fisheries	578	Telephone
206	Metal mining	579	Telegraph
216	Coal mining	586	Electric light and power
226	Crude petroleum and natural gas extraction	587	Gas and steam supply systems
236	Nonmetallic mining and quarrying, except fuel	588	Electric-gas utilities
246	Construction	596	Water supply
306	Logging	597	Sanitary services
307	Sawmills, planing mills, and millwork	598	Other and not specified utilities
308	Misc wood products	606	Motor vehicles and equipment
309	Furniture and fixtures	607	Drugs, chemicals, and allied products
316	Glass and glass products	608	Dry goods apparel
317	Cement, concrete, gypsum and plaster products	609	Food and related products
318	Structural clay products	616	Electrical goods, hardware, and plumbing equipment
319	Pottery and related products	617	Machinery, equipment, and supplies
326	Miscellaneous nonmetallic mineral and stone products	618	Petroleum products
336	Blast furnaces, steel works, & rolling mills	619	Farm products--raw materials
337	Other primary iron and steel industries	626	Miscellaneous wholesale trade
338	Primary nonferrous industries	627	Not specified wholesale trade
346	Fabricated steel products	636	Food stores, except dairy products
347	Fabricated nonferrous metal products	637	Dairy products stores and milk retailing
348	Not specified metal industries	646	General merchandise stores
356	Agricultural machinery and tractors	647	Five and ten cent stores
357	Office and store machines and devices	656	Apparel and accessories stores, except shoe
358	Miscellaneous machinery	657	Shoe stores
367	Electrical machinery, equipment, and supplies	658	Furniture and house furnishing stores
376	Motor vehicles and motor vehicle equipment	659	Household appliance and radio stores
377	Aircraft and parts	667	Motor vehicles and accessories retailing
378	Ship and boat building and repairing	668	Gasoline service stations
379	Railroad and miscellaneous transportation equipmen	669	Drug stores
386	Professional equipment and supplies	679	Eating and drinking places
387	Photographic equipment and supplies	686	Hardware and farm implement stores
388	Watches, clocks, and clockwork-operated devices	687	Lumber and building material retailing
399	Miscellaneous manufacturing industries	688	Liquor stores
406	Meat products	689	Retail florists
407	Dairy products	696	Jewelry stores
408	Canning and preserving fruits, vegetables, and seafoods	697	Fuel and ice retailing
409	Grain-mill products	698	Miscellaneous retail stores
416	Bakery products	699	Not specified retail trade
417	Confectionery and related products	716	Banking and credit agencies
418	Beverage industries	726	Security and commodity brokerage and investment companies
419	Miscellaneous food preparations and kindred products	736	Insurance
426	Not specified food industries	746	Real estate
429	Tobacco manufactures	806	Advertising
436	Knitting mills	807	Accounting, auditing, and bookkeeping services
437	Dyeing and finishing textiles, except knit goods	808	Miscellaneous business services
438	Carpets, rugs, and other floor coverings	816	Auto repair services and garages
439	Yarn, thread, and fabric mills	817	Miscellaneous repair services
446	Miscellaneous textile mill products	826	Private households
448	Apparel and accessories	836	Hotels and lodging places
449	Miscellaneous fabricated textile products	846	Laundering, cleaning, and dyeing services
456	Pulp, paper, and paperboard mills	847	Dressmaking shops
457	Paperboard containers and boxes	848	Shoe repair shops
458	Miscellaneous paper and pulp products	849	Miscellaneous personal services
459	Printing, publishing, and allied industries	856	Radio broadcasting and television
466	Synthetic fibers	857	Theaters and motion pictures
467	Drugs and medicines	858	Bowling alleys, and billiard and pool parlors
468	Paints, varnishes, and related products	859	Miscellaneous entertainment and recreation services
469	Miscellaneous chemicals and allied products	868	Medical and other health services, except hospitals
476	Petroleum refining	869	Hospitals
477	Miscellaneous petroleum and coal products	879	Legal services
478	Rubber products	888	Educational services
487	Leather: tanned, curried, and finished	896	Welfare and religious services
488	Footwear, except rubber	897	Nonprofit membership organizations
489	Leather products, except footwear	898	Engineering and architectural services
499	Not specified manufacturing industries	899	Miscellaneous professional and related services
506	Railroads and railway express service	906	Postal service
516	Street railways and bus lines	916	Federal public administration
526	Trucking service	926	State public administration
527	Warehousing and storage	936	Local public administration
536	Taxicab service		
546	Water transportation		
556	Air transportation		

Source. Cenus Population Survey (www.ipums.org)

Table A6. Estimated Effect of Politics on Migration OLS, Robustness checks

Dependent variable →	log (visas/native workers)							
	Drop agriculture		Pooled OLS		Balanced observations		Zero lobbying exp. included	
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
log (lobbying exp/native workers)	0.347***	0.272***	0.337***	0.282***	0.339***	0.294***	0.163***	0.137**
	[0.080]	[0.082]	[0.044]	[0.054]	[0.079]	[0.084]	[0.055]	[0.055]
union membership rate	-2.419*	-3.059**	-2.116***	-1.941**	-2.112	-3.232**	-2.493**	-2.952**
	[1.432]	[1.439]	[0.793]	[0.903]	[1.366]	[1.455]	[1.121]	[1.195]
lg (output)		-0.05		-0.193		-0.012		-0.044
		[0.213]		[0.162]		[0.216]		[0.170]
unemployment rate		6.654		3.123		7.305		6.215
		[5.679]		[3.264]		[5.832]		[5.302]
log (price)		1.134		3.290**		1.582		0.85
		[2.385]		[1.401]		[2.416]		[2.412]
log (capital)		-0.154		-0.028		-0.213		-0.189
		[0.224]		[0.150]		[0.225]		[0.210]
log (FDI)		0.033		0.028		0.038		0.051
		[0.092]		[0.046]		[0.092]		[0.091]
shocks		-7.498***		-2.005		-6.834**		-5.245**
		[2.792]		[1.352]		[2.811]		[2.448]
log (lag US wages)		11.183***		5.765***		10.318***		11.791***
		[3.272]		[1.695]		[3.329]		[3.192]
log (number of native workers)		0.04		0.205*		0.077		0.044
		[0.240]		[0.120]		[0.237]		[0.228]
N	125	119	470	334	120	120	141	134
R-squared	0.13	0.29	0.14	0.18	0.13	0.27	0.08	0.22

In Columns [1] and [2], agriculture sector (industry code = 105) is dropped. Year fixed effects and included in columns [3] and [4]. Columns [5] and [6] restrict the number of observations to be the same across the regressions. In columns [7] and [8], industries with zero lobbying expenditures are included replacing log (0) with logs of the minimum values. All data are averaged over 2001-2005. Standard errors are corrected for heteroskedasticity, and denoted in parentheses. ***, ** and * denote significance at 1, 5 and 10 percent respectively.

Table A7. Estimated Effect of Politics on Migration OLS, Robustness checks

Dependent variable	→ **log (visas/native workers)**	
	Control for capital-labor ratio [1]	**Control for skilled-unskilled labor ratio** [2]
log (lobbying exp / native workers)	0.294***	0.235***
	[0.084]	[0.072]
union membership rate	-3.232**	-1.139
	[1.455]	[1.255]
lg (output)	-0.213	
	[0.225]	
unemployment rate	-0.012	-0.032
	[0.216]	[0.170]
log (price)	7.305	6.262
	[5.832]	[4.574]
log (FDI)	1.582	2.961
	[2.416]	[2.011]
shocks	0.038	-0.005
	[0.092]	[0.079]
log (lag US wages)	-6.834**	-1.929
	[2.811]	[2.381]
log (number of native workers)	10.318***	1.04
	[3.329]	[3.240]
log (capital-labor intensity)	-0.136	-0.248
	[0.241]	[0.159]
log (skilled-unskilled labor intensity)		1.469***
		[0.266]
N	120	120
R-squared	0.27	0.46

In Columns [1] and [2], the regressions control for capital-labor and skilled-unskilled labor intensities. All data are averaged over 2001-2005. Standard errors are corrected for heteroskedasticity, and denoted in parentheses. ***, ** and * denote significance at 1, 5 and 10 percent respectively.