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Non-Technical 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.

Keywords: Immigration, Immigration Policy, Interest Groups, Political Economy

JEL Classification: F22, J61

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Giovanni Facchini[†], Anna Maria Mayda[‡] and Prachi Mishra[§]

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Abstract

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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 has 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 policy in 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 understand the forces that work against free trade.[1] In contrast, the literature on the political economy of migration policy is very thin and mainly theoretical.[2] 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.[3] This gap in the literature is very

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[1]See Rodrik (1995), Helpman (1997), and Gawande and Krishna (2003) for excellent surveys of the trade literature.

[2]Benhabib (1996) and Ortega (2005) develop models in which immigration policy is the outcome of majority voting, while Facchini and Willmann (2005) focus on the role played by pressure groups. The only paper that provides *indirect* empirical evidence on the political-economy determinants of current migration policy is Hanson and Spilimbergo (2001). Hanson and Spilimbergo (2001) focus on U.S. border enforcement and show 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.

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

surprising and can be partly explained by 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 the 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 documented by Timmer and Williamson (1996). In her pioneering study of the political economy of the introduction of the 1917 Literacy Test provision, Goldin (1994) has pointed out how capital owners have been against this restrictive measure. 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.[4] This industry started heavy lobbying of the Maryland senator Barbara A. Mikulski, who was able to add a last-minute

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[4]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 carry out our analysis, we use a new, U.S. industry–level dataset that we create by combining information on the number of temporary work 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 significant 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.

To motivate our empirical analysis, we develop a simple theoretical framework. We show that, 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.

Our empirical 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 3.1% 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 3.1%. The results are robust to the introduction of a number of industry-level control variables (e.g. output, prices, origin country effects, etc.) and to potential endogeneity issues, which we address with an instrumental-variable estimation strategy.

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

2   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 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.[5] 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 were 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 were assigned to, for example, "workers with extraordinary ability in the sciences, arts, education, business, or athletics " (O1, O2), "internationally recognized athletes or entertainers" (P1, P2, P3), "religious workers" (R1) and "exchange visitors" (J1). See Table 1 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 (US-CIS). 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

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

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 have, according to the USCIS "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.[6] 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).

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 and 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.

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

The existence of 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.[7] 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 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.

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, such as 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.)[8]

3 Theoretical framework

Recent contributions have pointed out how interest groups can directly participate in the political process in at least two ways. First, they provide substantive information to policy makers. Second, they offer financial incentives to influence policy outcomes. We use a "protection formation function" approach (Findlay and Wellisz 1982, Eicher and Osang 2002), which takes into account both channels. According to this approach, government policy is simply a function of the expenditures undertaken by pro and anti–immigration groups.

In the international economics literature the most influential approach, pioneered by Grossman and Helpman (1994), has emphasized the second "quid pro quo" channel and, in particular, the role of direct campaign contributions in shaping policies.[9] While this approach

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[7]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".

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

[9]The reward to a politician for a political favor may take much more complicated forms than direct

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).[10] Furthermore, the Grossman and Helpman (1994) model does not incorporate 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 (Milyo, Primo, and Groseclose 2000). To characterize the link between equilibrium policy outcomes and contributions and to allow for a more general role of lobbies, we use the protection formation function approach.[11]

We develop the theoretical framework of the paper in the Appendix. Our model 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.[12] We assume that restrictions to the physical relocation of people across countries take the form of a (binding) quota.[13] Expenditures by a pro–migration lobby (made up by capital owners) and by an anti–migration lobby (made up by workers) affect policies towards labor mobility in each sector through a protection formation function. 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 immi-

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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."

[10]In the protection-for-sale approach, the relationship between equilibrium policy outcomes 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 Grossman and Helpman 1994).

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

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

[13]We can reinterpret the policy tool more broadly as the result of quotas on sector–specific visas or the allocation to a given sector of visas which are not sector-specific (e.g. H1B visas) or regulations that affect the inflow of foreign workers in specific sectors.

grants. 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.

4 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.

4.1 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.[14]

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 can influence policy makers and, given the existing limits on the size of PAC contributions, 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.[15]

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 must 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

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[14]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."

[15]To the best of our knowledge, the only exception is a recent article by de Figueiredo and Silverman (2006). 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.

them. At the same time, all firms with in-house lobbying departments are required to file similar reports stating the *total* dollar amount they have spent.

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 A1 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 Figure A1. 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 (Figure A2). 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, in particular visas, we restrict the analysis in this paper to the period 2001-2005.[16] Annual lobbying expenditures and incomes (of lobbying firms) are calculated by adding mid-year totals and year-end totals. CRP also matches each firm to an industry using its own classification, which is similar to the SIC classification.[17]

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.[18] Second, the total expenditure of these firms is split *equally* between the issues they lobbied 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 expenditures on migration which is equal to the total lobbying expenditures of firms who write down

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[16]We are concerned that our sample covers the period right after the September 11 terrorist attacks. In the section on robustness checks, we drop the year 2001 and security-sensitive sectors from the analysis (Table 5a, columns 4 and 5). In addition, we are also concerned that the quota on H1B visas was not binding.

[17]For details on matching of firms to sectors by CRP, see a description of their methodology at http://www.opensecrets.org/lobby/methodology.php.

[18]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.

migration as an issue in their report.

As shown in Table 2, between 1999 and 2004,[19] 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.[20] Lobbying expenditures represent by far the bulk of all interest groups money (close to ninety percent). Therefore, there are two advantages in using lobbying expenditures rather than PAC contributions to capture the intensity of the activity of pressure groups. 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 averages over three election cycles – where in the left panel we have a scatter plot of overall lobbying expenditures and PAC contributions, while in the right panel we have a scatter plot of lobbying expenditures associated with immigration policy and PAC contributions. In the left 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 right panel, is striking. It suggests that, if we were to use the data on PAC contributions, we could obtain misleading results. Hence the use of our new dataset is fundamental in order to study how lobbying affects migration policy.

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[19]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 those years.

[20]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 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.

4.2 Other Data

The information on lobbying expenditures is merged with data on visas and on a number of additional 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, data on these visas is not available *by sector*. We obtain information on the number of H1B visas approved by sector from the USCIS. The USCIS uses data at the firm level and aggregates it according to the NAICS industrial classification. Finally, the figures for the other types of work visas 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 is coded according to the 1950 Census Bureau industrial classification system. The list of CPS industries is shown in Table A2.

We aggregate the individual-level information available in the IPUMS-CPS dataset 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 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 provides information on lobbying expenditures by unions mostly at the aggregate level.[21] Therefore, we use the fraction of

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[21]There are 25 worker unions during the period 2001-2005 which lobby for immigration, some of them are

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. Although our measure is indirect, notice that, using data on lobbying expenditures by unions which can be clearly identified with a sector, we find that the correlation between union density rates and lobbying expenditures is positive and significant (see Figure 2). Finally, 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 in 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. Finally, we also obtain data on end-of-the-year stock prices at the firm level between 2001 and 2005 from Standard and Poor's Compustat North America and aggregate it to compute measures of stock returns at the industry-level. The data on output and price follow the 6-digit input-output classification of the BEA, whereas FDI, domestic capital and stock prices follow the 1997 NAICS classification.

In order 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

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national and spread across many 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. However, in one of our robustness checks, we use lobbying expenditures of the few sector-specific unions to confirm the evidence based on union membership rates (Table 5b).

origin country, with weights equal to the share of immigrants in that industry from each origin country.[22]

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.[23] As a result, we obtain a dataset that covers 120 3-digit industries that follow the 1950 Census Bureau industrial classification (CPS classification).

4.3   Summary statistics

Table A6 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 3, 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 4 shows instead the top 10 sectors receiving the highest number of visas. Educational services and Engineering and computer services are, not surprisingly, at the top of this list. Agriculture, Medical and other health services also appear in this list. Thus, three 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 5 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

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

[23]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.

and scaled by the number of natives in each sector). Thus, these basic scatter plots suggest 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 6).[24]

5 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.[25]

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 expenditures 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 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

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[24]This pattern continues to hold also when we consider individual visa categories, as is shown in Figures A3 and A4 for the case of H1B visas.

[25]Unfortunately, it is not possible to carry out a structural estimation of our model since, as pointed out above, data on lobbying activity on behalf of labor is not available *by sector* (see footnote 21). 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.

sector.[26] This is to control for differences in the sizes of industries, which could bias the estimated coefficients. For example, larger sectors which employ a higher number of native workers, also tend to hire more immigrants and can spend larger sums on lobbying activity as well. 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.

5.1 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 least at the 10% level) coefficient on *union membership rate*.[27] 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 13% 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 (0.367 for log(*lobbying exp/native workers*) and −2.576 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 3.7%. 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 of factors other than labor.

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

[27]The sign and significance level of the coefficient on *union membership rate* is unchanged if we drop sectors 506 (railroads and railway express service) and 906 (postal service), which appear as outliers in Figure 6.

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 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 the assumption of binding quotas 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 political-economy 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. To conclude, as regression (3) shows, our results on the key variables are robust to the introduction of these additional regressors.

In the remainder of Table 3, we break down our dependent variable, log(*visas/native workers*), and consider its numerator and denominator as separate dependent variables. In particular, in columns (4), (5), (6), we investigate whether our main results continue to hold if we do not scale the number of visas: we show that our estimates are unaffected. Second, we carry out a falsification exercise and consider the impact of the regressors on the number of *native* workers. If our two key explanatory variables had the same effect on the number of native workers as we find for the number of visas, our previous results could be driven by omitted variables that explain labor demand in general. Instead, columns (7), (8), (9) show that neither lobbying expenditures nor union membership rates are significant drivers of the number of native workers employed in an industry.

5.2 Instrumental Variables Estimation

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 the endogeneity of our two key variables, as lobbying expenditures by capital and labor are endogenous in the theoretical model itself. In particular, 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. As a benchmark instrument for $\log(lobbying\ exp/native\ workers)$, 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 literature on the political economy 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).

Next, our benchmark 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). A similar identification strategy has been used by Ellison,

Gleaser, and Kerr (2008), who exploit variation across sectors in the UK to identify the determinants of conglomeration between industries in the United States.

We use the above two instruments in regressions (1) and (2) in Table 4. The high values of the two first-stage F statistics for the excluded instruments at the end of Table 4 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 90.73; in the first stage of *union membership rate*, the F value of the excluded instruments is equal to 55.83. In Table A3, the first stage regressions suggest that lobbying expenditures on immigration are positively and significantly correlated with lobbying expenditures on other issues. In addition, union membership rates in the US are positively and significantly correlated with the corresponding rates in the UK. Most importantly, the results in Table 4 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.[28]

To assess the robustness of the IV results, we consider a series of additional, alternative sets of instruments. The idea underlying the additional instruments in columns (3)-(6), Table 4 is to exploit plausibly exogenous sources of variation in politics across states in the US (taking into account in which states each industry tends to locate). In regressions (3) and (4), we retain our benchmark instruments for *union membership rate* and log(*lobbying exp/native workers*) and add two additional instruments for the latter variable. The first additional instrument is based on a measure of "corruption culture" across US states. The assumption is that the culture of corruption is exogenous with respect to policy regarding legal immigrants across sectors. In addition, in more corrupt states, policy makers are more sensitive to lobbying, hence lobbying groups make higher expenditures. We construct the instrument using data on the determinants of federal corruption convictions at the state level assembled by Glaeser and Saks (2006). We measure corruption culture as the residual from a regression of convictions on economic and social characteristics of the state.[29] The second additional instrument is a measure based on information by state on senior membership in

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[28]Since we split lobbying expenditures equally across issues to construct log(*lobbying exp/native workers*), it might be the case that the first stage is driven by common variation – across firms which do and do not lobby for migration – in lobbying expenditures on other issues, and not by intrinsic sector-level factors. To address this issue, 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 above, we obtain qualitatively similar results, which are available upon request.

[29]We construct the residual by replicating the IV specifications, Table 2 in Glaeser and Saks (2006), who regress convictions on income, education, population, unionization, share of manufacturing, and region dummies.

Senate and House committees overlooking immigration policy.[30] To construct our measure of senior membership, we use data on the fraction of committee-Congress pairs (over the period 2001-2005) in which a state had a chairman, vice–chairman or ranking member (senior-most member of the opposition party). We expect this instrument to be correlated with lobbying expenditures as the effectiveness of the lobbying activity of an interest group from a given state is likely to be enhanced by its representative being in a senior position on an immigration policy-relevant committee. In addition, the relative position in the committee is likely to be exogenous with respect to immigration policy as it is driven by seniority in Congress. Finally, to obtain our two *sector–varying* instruments, we construct a weighted average of state-level corruption culture and senior membership, where the weights are each state's employment share in an industry in 1950. The results shown in columns (3) and (4), based on this alternative set of instruments, are not significantly different from our main results in Table 3. The coefficients on log(*lobbying exp/native workers*) and *union membership rate* are still positive and negative, respectively, and statistically significant.

In columns (5) and (6) we have retained our benchmark instruments for log(*lobbying exp/native workers*) and *union membership rate*, and we have introduced two additional instruments for the latter variable. The first additional instrument is based on a measure at the state level of the strength of traditional party organization in the fifties and sixties from Mayhew (1986).[31] The idea behind this instrument is that – as has been argued in the political science literature – whenever traditional party organization has been strong at the state level, unions have encountered difficulties in influencing candidate nominations and in making their voice heard in the policy-making arena.[32] This implies that, in states with strong party organization, workers have less incentive to join unions. At the same time, since the measure of traditional party organization dates back to the fifties and sixties, i.e. before the immigration surge following the introduction of the 1965 immigration policy reform, it

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[30]In particular, we consider the following committees: Senate Subcommittee on Immigration of the Judiciary Committee (107th Congress, 2001-2002; 108th Congress, 2003-2004; 109th Congress, 2005-2006); Senate Subcommittee on Homeland Security of the Appropriations Committee (108th and 109th Congress); Senate Subcommittee on Terrorism, Technology and Homeland Security of the Judiciary Committee (108th Congress); Senate Committee on Homeland Security and Government Affairs (109th); House Subcommittee on Immigration and Claims of the Judiciary Committee (107th Congress); House Subcommittee on Homeland Security of the Appropriations Committee (108th and 109th Congress); House Subcommittee on Crime, Terrorism and Homeland Security of the Judiciary Committee (108th Congress); House Subcommittee on Immigration, Border Security, and Claims of the Judiciary Committee (108th and 109th Congress); House Committee on Homeland Security (109th Congress).

[31]The score ranges from 1 (weak) through 5 (strong).

[32]Mayhew (1986) page 242 suggests that "The basic and unsurprising generalization about labor unions and parties is that unions have had a difficult time influencing nominating processes in environments supporting traditional party organizations."

is likely to be exogenous with respect to current immigration policy. The second additional instrument uses data on union membership rates by state in 2001-2005. State laws affect the ability of workers to unionize in each state, but are unlikely to be correlated with immigration policy, which we measure at the sectoral level. Once again, to obtain the two sector–varying instruments for union membership rates, we construct weighted averages of state-level party organization and union membership, using as weights each state's employment share in the sector in 1950.[33] Regressions (5) and (6), Table 4 show that, when we add these additional instruments, our main results are not affected.

Columns (7), (8) and (9), (10) represent our last set of robustness checks. Following the literature on the political economy of trade policy, in columns (7) and (8), we replace our benchmark instrument for lobbying expenditures with instruments used by Goldberg and Maggi (1999) and Gawande and Bandyopadhyay (2000). In particular, we use geographical concentration, four-firms concentration ratio, minimum efficient scale and number of firms in an industry. We update the data in Trefler (1993) to 2001-2005, using the Economic Census, 2002, and the Annual Survey of Manufactures, 2005. In columns (9) and (10), instead, we replace our benchmark instrument for union density in the US with US union membership lagged back to 1994. The results in regressions (7)-(10) are again consistent with the estimates in Table 3. This last set of robustness checks proves that our benchmark instruments - used in column (1) and (2) - are not necessary to obtain our main findings.[34]

Notice that, in all the IV regressions in Table 4, the magnitude of the coefficients on both $\log(lobbying\ exp/native\ workers)$ and $union\ membership\ rate$ 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

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[33]In constructing the instrument based on state-level union membership rates, for a particular industry, we exclude the union members in that industry in every state. More precisely, the instrument is defined as $I_i = \sum_s \frac{U_s - U_{i,s}}{N_s} e_{i,s}$ where i is the industry, s is the state, U is the number of union members, N is the number of workers, and e is the employment share.

[34]The first-stage F-stats for the excluded instruments are remarkably high in all the regressions (3)-(10), except for column (8) corresponding to the instruments from Trefler (1993) (in this last case, our results are qualitatively similar if we use Limited Information Maximum Likelihood estimation to address the weak first stage). The signs of the coefficients in the first stage regressions (Table A3) are also consistent with our expectations.

[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.

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 the exclusion restriction is not satisfied for our benchmark instrument for log(*lobbying exp/native workers*). In particular, it could be 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. Most importantly, our results using several alternative instruments for both log(*lobbying exp/native workers*) and *union membership rate* show a very consistent picture.

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 2.3 – 7.4 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 – 10.4 percent lower number of visas per native worker. The results are robust to introducing a number of industry-level control variables and, most importantly, to addressing endogeneity issues with several instrumental variables.

5.3   Additional results

We next investigate how our previous results change when we consider alternative dependent variables and different data samples (Table 5a). All specifications include the additional controls used in Table (3), column (3).

We start by looking at alternative measures of immigration restrictions. 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 regressions (1)-(3) are indeed remarkably similar to what we previously found in Table 3.

In the remainder of the table, we study whether changes in the sample affect our results. In particular, in columns (4) and (5), we are concerned that immigration policy might have been affected by the September 11 terrorist attacks. For this reason, we first drop 2001 from

our sample (column 4) and next we exclude security-sensitive sectors[37] (column 5). In column (6) we drop sectors which use intensively unskilled immigrants: agriculture, construction, meat production, apparel (Hanson and Spilimbergo, 2001). In column (7) we use pooled – as opposed to averaged – data (including year fixed effects), while in column (8) we include observations corresponding to sectors with zero lobbying expenditures.[38] Our results are very similar to what we found in our preferred specification, i.e. column (3) of Table 3.

Next, in Table 5b we turn to evaluate the robustness of our main findings to different definitions of our key explanatory variables and to adding additional controls. We start by introducing changes in the definition of our key explanatory variables (columns (1)-(3)). As discussed above, in Table 3 log($lobbying\ exp/native\ workers$) 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 column (1) 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 column (2), instead, we replace log($lobbying\ exp/native\ workers$) with log($lobbying\ exp$), i.e. we do not scale the main regressor, and find similar results. Finally, in column (3), we restrict the sample to those sectors for which we could clearly identify lobbying expenditures *by unions* in the CRP dataset. Thus, in this specification, we use a *direct* measure of labor lobbying expenditures instead of the union membership rate. While this substantially reduces the sample size, the results are remarkably consistent with Table 3.

In regression (4), we address the possibility that more visas as well as larger lobbying expenditures might be driven by positive expectations about *future* labor demand. For example, a firm is likely to sponsor an H1-B visa application only if it anticipates being able to employ the actual worker for an extended period of time. Hence, in column (4), we include a measure of expected industry profitability, namely the stock price return ($log(1 + stock\ market\ return)$).[39] Similarly, our results on unionization could simply mean that firms in

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[37]The security-sensitive sectors are as follows: (i) Aircraft and parts (377) (ii) Miscellaneous chemicals and allied products (469) (iii) Drugs, chemicals, and allied products (607) (iv) Engineering and architectural services (898).

[38]The log specification in Table 3 drops the sectors with zero contributions. In Table 5a, the zero lobbying expenditures are replaced by the minimum positive value of lobbying expenditures in the sample.

[39]See Table A4 for alternative measures of stock market returns (abnormal, mean and market adjusted). Notice that the coefficients on *union membership rate* in column (4), Table 5b, as well as in Table A4, are

declining industries, which tend to have higher unionization rates, are less likely to apply for employment visas. Therefore, in column (5), as a proxy for whether an industry is declining, we control for sectoral output growth. Once again, in both regressions, we find that our main results are robust.

A large literature has suggested that network effects play an important role in driving immigration (see, for example, Munshi (2003)). Industries which employ a large stock of immigrants are likely to lobby for more visas. Therefore, in column (6), we control for the lagged stock of immigrants using the 2000 Census. We find results which are qualitatively similar to Table 3. Finally in columns (7) and (8), we also control for the capital/labor ratio and skilled/unskilled labor ratio in each sector, to account for the factor intensity in a sector, and the results are not affected.[40]

5.4   PAC vs lobbying contributions

In Table 6, we use an alternative measure of lobbying expenditures on immigration, 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 not significant at conventional levels (see first two columns in Table 6). The data on PAC campaign contributions is compiled by two-year election cycles. In particular, we average PAC campaign 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 6 – 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

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significant at approximately 15%: this is due to the fact that, while the coefficients are not different from Table 3, the estimates are less precise.

[40]We also run IV regressions with the same regressors as in Tables 5a and 5b (see Tables A5a and A5b). We get very similar results.

to examine the effect of lobbying on policy outcomes.

6   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 2.3 – 7.4 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 – 10.4 percent lower number of visas. The results are robust to introducing a number of industry-level control variables and to using several instrumental variables 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.[41]

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[42] 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 approach officials at different levels of policy making, depending on the nature of the measure they want to affect, i.e. they can carry out their lobbying activity on both "visible" and "invisible" restrictions. 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.

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.

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[41]For a very interesting analysis of the role played by a professional society in shaping skilled migration to the United States, in particular in the medical field, see Glied and Sarkar (2009). As the authors show, "the profession of medicine exerts a significant influence on the rate of skilled migration of foreign physicians."

[42]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.

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7   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.[43] The production technology in each non-numeraire sector exhibits diminishing returns to labor, and we denote by ω_i the domestic return to labor in sector i. Diminishing returns can be attributed to the presence of a fixed factor in each sector, which we will call capital and whose reward in sector i is given by π_i.

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[43]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).

For simplicity, we assume that free trade in goods prevails and we normalize to one the international price for each commodity. [44] 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 form $u(\mathbf{x}) = x_0 + \sum_{i=1}^{n} u_i(x_i)$. 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[45] 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[46]), resulting in the immigrant retaining only part of the surplus associated with the relocation (i.e., the difference between 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 $T(\mathbf{q}) = \sum_i \gamma_i(\omega_i(q_i) - 1)(L_i(\omega_i(q_i)) - \ell_i)$, 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 policy are lump sum rebated to all citizens. Each

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[44]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 (2008), 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.

[45]Of course, policies could also be used to promote immigration. For simplicity we will not model this type of instruments explicitly as in the recent U.S. experience they have hardly been used.

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

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 $V_{iL} = \omega_i(q_i)\ell_i + \alpha_{iL}[1 + T(\mathbf{q}) + \sum_i s_i(p_i)]$, 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 $V_{iK} = \pi_i(q_i) + \alpha_{iK}[1 + T(\mathbf{q}) + \sum_i s_i(p_i)]$, 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. $W(\mathbf{q}) = \sum_i (V_{iK} + V_{iL})$ 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. 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 $q_i^* \geq m_i(1, p_i) = L_i(1, p_i) - \ell_i$. 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.

Measures towards labor mobility in each sector are the result of expenditures by a pro–migration lobby and by an anti–migration lobby. 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 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,[47] the two first–order conditions are given by

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

$$\left[\ell_i + \alpha_{iL}\frac{\partial T(\omega(\mathbf{q}))}{\partial \omega_i}\right]\frac{\partial \omega_i}{\partial q_i}\frac{\partial q_i}{\partial E_{iL}} = 1 \tag{2}$$

The first term on the left hand side of each equation (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 $L_i = L - b\omega_i$ and that, for simplicity, the ownership of capital in the population is highly concentrated ($\alpha_{iK} = 0$ for all i).[48] Solving simultaneously the system of equations given by (1) and (2), the quota chosen by the domestic government is equal to

$$q_i = \frac{L-b}{2} - \frac{\ell_i}{2}\left[\frac{\alpha_{iL}+1}{\alpha_{iL}}\right] + \frac{1}{2\alpha_{iL}}\left[\frac{1-\lambda}{\lambda}\frac{E_{iK}}{E_{iL}}\right] \tag{3}$$

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

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[47]Assuming impartial rent capturing ($\gamma_i < 1$), complicates the algebra without changing the main result.

[48]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 $\pi = \frac{L^2}{2b} + \frac{b}{2}\omega_i^2 - L\omega_i$.

Figure 1. Scatter Plots between Lobbying Expenditures and Campaign Contributions from Political Action Committees (PACs), 2001-2005

Campaign contributions from PACs and overall lobbying expenditures
(in millions of US$)
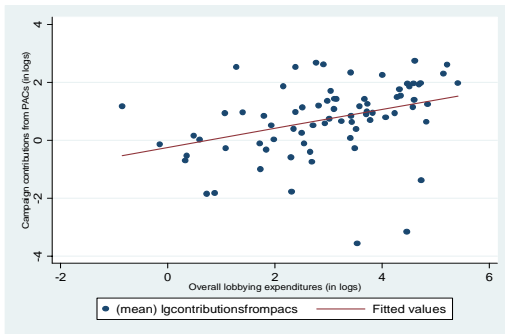
Campaign contributions from PACs and lobbying expenditures on immigration
(in millions of US$)
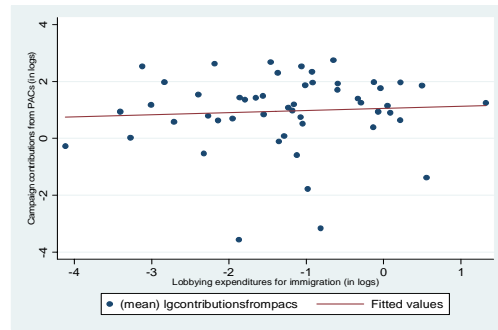
Figure 2. Scatter Plot between Lobbying Expenditures by Unions and Union Membership Rates, 2001-2005

Figure 3. Top 10 Spenders for Immigration, 2001-2005

Figure 4. Top 10 Sectors with the Highest Number of Visas, 2001 - 2005
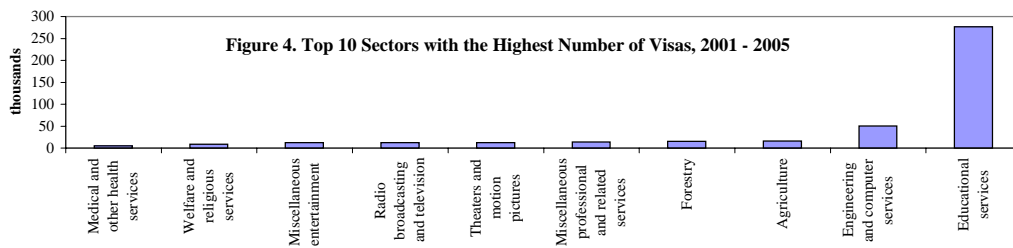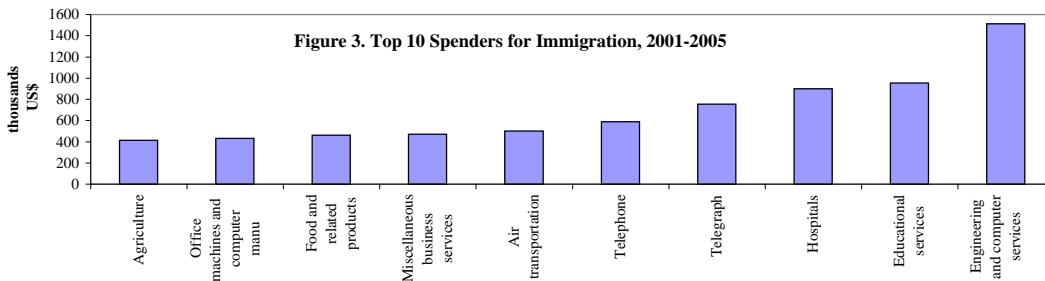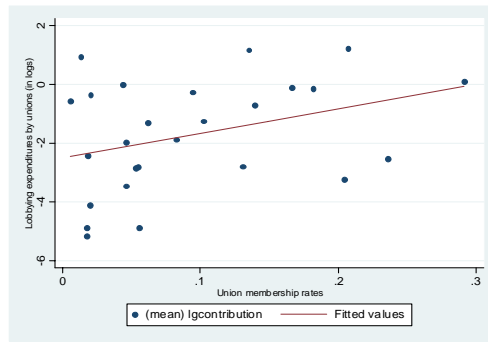
Notes to Figure 1. The data on campaign contributions and lobbying expenditures are averaged over three election cycles -- 1999-2000, 2001-02 and 2003-04. The regression coefficient between (log) contributions from PACs and (log) overall lobbying expendit

Figure 5. Lobbying Expenditures for Immigration and Visas **Figure 6. Union Membership Rates and Visas**
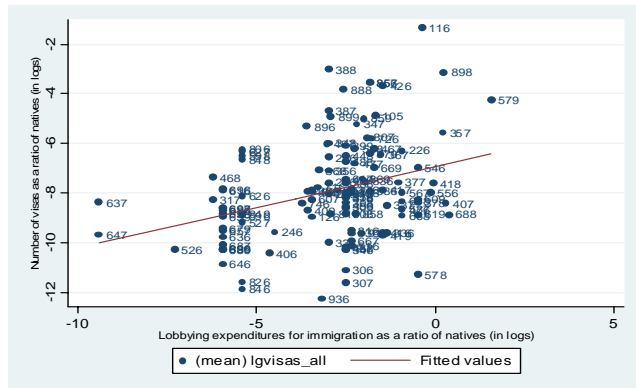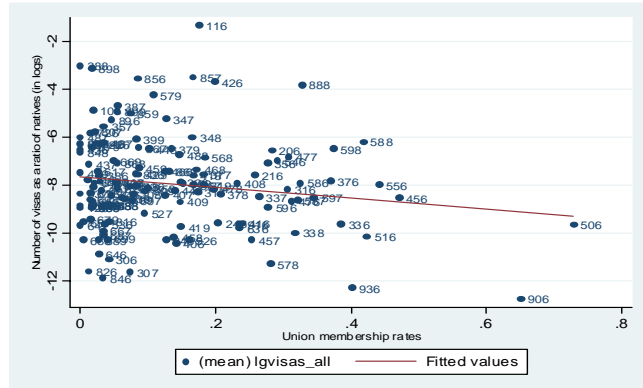
Notes. All data are averaged over 2001-2005. The correlation between (log) lobbying expenditures for immigration and (log) number of visas (top panel) is 0.327 (robust standard error=0.077; p-value=0.000); the correlation between union membership rates and (log) number of visas is -2.250 (robust standard error=1.252; p-value=0.074).

Table 1. Number and Types of Non-Immigrant Visa Isuuances, 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.

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
Of which exp for immigration	32	24	33
Total targeted political activity	3275	3678	4509

Source: Center for Responsive Politics

Table 3. Estimated Effect of Politics on Migration

Dependent variable ⟶	log (visas/native workers)			log (visas)			log (native workers)		
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]
log (lobbying exp/native workers)	0.327*** [0.077]	0.367*** [0.081]	0.312*** [0.087]	0.301*** [0.084]	0.346*** [0.091]	0.315*** [0.087]	-0.033 [0.069]	-0.027 [0.073]	-0.058 [0.046]
union membership rate		-2.576* [1.477]	-3.129** [1.546]		-2.908* [1.688]	-3.146** [1.529]		-0.366 [1.336]	-0.448 [0.787]
lg (output)			-0.047 [0.226]			-0.042 [0.225]			0.450*** [0.114]
unemployment rate			7.609 [5.856]			7.734 [5.667]			-0.56 [3.084]
log (price)			2.061 [2.519]			1.901 [2.482]			-2.722** [1.084]
log (capital)			-0.232 [0.229]			-0.214 [0.224]			0.469*** [0.104]
log (FDI)			0.045 [0.096]			0.042 [0.093]			-0.019 [0.044]
shocks			-7.532** [2.948]			-7.576*** [2.871]			3.554* [1.861]
log (lag US wages)			10.186*** [3.423]			10.610*** [3.329]			-5.994*** [2.248]
log (number of native workers)			0.145 [0.258]			1.133*** [0.254]			
N	126	126	120	126	126	120	126	126	120
R-squared	0.11	0.13	0.26	0.07	0.09	0.52	0.00	0.00	0.76

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 4. Estimated Effect of Politics on Migration, Instrumental Variables

Dependent variable ⟶	log (visas/native workers)									
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]
log (lobbying exp/native workers)	0.481***	0.358***	0.489***	0.361***	0.489***	0.366***	0.737**	0.233	0.619***	0.430***
	[0.133]	[0.133]	[0.135]	[0.124]	[0.130]	[0.127]	[0.332]	[0.281]	[0.135]	[0.131]
union membership rate	-3.76*	-5.594**	-3.609*	-4.571*	-4.327*	-5.949***	-7.289*	-10.389***	-5.901***	-6.334**
	[2.276]	[2.198]	[2.208]	[2.321]	[2.286]	[2.143]	[4.105]	[3.531]	[2.233]	[2.539]
lg (output)		-0.098		-0.335		-0.101		-0.099		-0.21
		[0.257]		[0.268]		[0.261]		[0.283]		[0.268]
unemployment rate		8.231		6.912		8.167		-0.452		6.94
		[6.021]		[5.922]		[6.092]		[5.035]		[5.940]
log (price)		4.653*		3.853		4.757*		2.213		3.781
		[2.772]		[3.043]		[2.850]		[4.433]		[2.661]
log (capital)		-0.196		-0.061		-0.19		-0.128		-0.194
		[0.253]		[0.295]		[0.259]		[0.298]		[0.249]
log (FDI)		0.015		-0.017		0.014		0.312**		0.028
		[0.098]		[0.100]		[0.099]		[0.130]		[0.099]
shocks		-7.467**		-9.994***		-7.450**		-6.581*		-8.279**
		[3.345]		[3.401]		[3.372]		[3.305]		[3.482]
log (lag US wages)		10.354**		13.114***		10.552**		13.453		12.468***
		[4.324]		[4.419]		[4.278]		[10.777]		[4.367]
log (number of native workers)		0.183		0.265		0.181		-0.575**		0.304
		[0.295]		[0.342]		[0.297]		[0.224]		[0.285]
Instruments for log (lobbying exp/native workers) Additional instruments	log(lobbying exp other issues)		log(lobbying exp other issues) immigration committee; corruption		log(lobbying exp other issues)		Trefler's instruments		log(lobbying exp other issues)	
Instruments for union membership rate Additional instruments	union rate UK		union rate UK		union rate UK party org; state union		union rate UK		Lag union membership rate	
First-stage F for log(lobbying exp/nat workers)	90.73	71.51	44.42	37.3	52.89	37.4	2.57	1.41	106.37	78.35
p-value	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.25	0.00	0.00
First-stage F for union membership	55.83	19.34	34.53	14.63	30.18	10.57	9.09	3.15	39.61	11.47
p-value	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00
Hansen's J-statistic (p-value)			0.98	0.95	0.13	0.81	0.08	0.17		
N	111	106	99	94	111	106	45	42	121	115
R-squared	0.11	0.24	0.13	0.33	0.10	0.24	-0.08	0.51	0.08	0.24

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 5a. Estimated Effect of Politics on Migration OLS,
Robustness checks

| Dependent variable ⟶ | | | | log (visas/native workers) | | | | |

	ALTERNATIVE DEPENDENT VARIABLES				ALTERNATIVE SAMPLES			
	Visas w/o J1	Visas with quota	H1B visas	Drop 2001	Drop security-sensitive sectors	Drop illegal migrant int sectors	Pooled OLS	Include zero lobby exp.
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
log (lobbying exp/native workers)	0.302***	0.253***	0.182***	0.305***	0.286***	0.277***	0.296***	0.149**
	[0.085]	[0.080]	[0.065]	[0.088]	[0.086]	[0.086]	[0.055]	[0.057]
union membership rate	-3.562**	-3.299**	-3.623***	-2.663*	-2.841*	-2.896*	-1.843**	-2.875**
	[1.376]	[1.376]	[1.292]	[1.546]	[1.518]	[1.539]	[0.922]	[1.261]
N	120	120	120	119	116	116	334	134
R-squared	0.29	0.31	0.34	0.24	0.26	0.27	0.17	0.21

Table 5b. Estimated Effect of Politics on Migration OLS,
Additional Robustness checks

| Dependent variable ⟶ | | | | log (visas/native workers) | | | | |

	ALTERNATIVE EXPLANATORY VARIABLES			ADDITIONAL CONTROLS				
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
log (lobbying exp/native workers)			0.661***	0.289***	0.310***	0.259***	0.312***	0.250***
			[0.194]	[0.088]	[0.087]	[0.092]	[0.087]	[0.074]
log (lobbying exp_upper bound/native workers)	0.268***							
	[0.088]							
log (lobbying exp)		0.315***						
		[0.088]						
union membership rate	-2.976*	-3.085*		-2.722	-3.118**	-2.469	-3.129**	-0.923
	[1.550]	[1.557]		[1.812]	[1.557]	[1.578]	[1.546]	[1.351]
log (lobbying expenditures by unions)			-1.028***					
			[0.224]					
log (1+stock market return)				1.848*				
				[0.940]				
output growth					0.121			
					[0.788]			
log (immigrants/natives) in 2000						0.285		
						[0.287]		
log (capital-labor intensity)							-0.232	
							[0.229]	
log (skilled-unskilled labor intensity)								1.551***
								[0.282]
N	120	120	20	108	120	112	120	120
R-squared	0.24	0.27	0.87	0.29	0.26	0.25	0.26	0.46

Notes to Tables 5a and 5b: 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. All regressions include the same controls as in Table 3, column [3]. Table 5a: In column [5], we drop the following security-intensive sectors: (i) Aircraft and parts (377) (ii) Miscellaneous chemicals and allied products (469) (iii) Drugs, chemicals, and allied products (607) (iv) Engineering and architectural services (898). In column [6], we drop the following sectors which use illegal immigrants intensively: (i) agriculture (105) (ii) construction (246) (iii) meat products (406) (iv) apparel (448). Year fixed effects are included in columns [7]. In column [8], industries with zero lobbying expenditures are included replacing log (0) with log of the minimum values.

Table 6. 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)	0.191 [0.129]	-0.133 [0.164]			0.14 [0.139]	-0.322 [0.275]
log (lobbying exp/native workers)			0.330*** [0.068]	0.252*** [0.083]	0.313*** [0.070]	0.247*** [0.083]
union membership rate	-1.755 [1.102]	-3.000** [1.395]	-3.463** [1.478]	-3.887** [1.607]	-3.135** [1.403]	-3.964** [1.559]
lg (output)		-0.141 [0.190]		-0.092 [0.237]		-0.16 [0.236]
unemployment rate		6.779 [5.277]		8.689 [5.603]		8.096 [5.681]
log (price)		-0.902 [2.661]		1.163 [2.694]		0.025 [2.596]
log (capital)		-0.087 [0.209]		-0.133 [0.216]		-0.113 [0.224]
log (FDI)		0.180** [0.081]		0.08 [0.092]		0.154* [0.078]
shocks		-4.578** [2.155]		-6.010** [2.479]		-5.135** [2.458]
log (lag US wages)		10.063*** [3.188]		8.966*** [3.332]		8.579*** [3.264]
log (number of native workers)		-0.156 [0.236]		0.09 [0.264]		-0.237 [0.311]
N	133	127	119	113	118	112
R-squared	0.05	0.21	0.15	0.26	0.17	0.30

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 contributions by PACs are averaged over election cycles 2001-02 and 2003-04. For comparison, data on lobbying expenditures is averaged over the same period.

Figure A1. 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 ONONDAGA 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

Figure A2. Sample Lobbying Report - Microsoft Corporation

Page 1

00000343475

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

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	13. Organizations
INCOME relating to lobbying activities for this reporting period was:	EXPENSES relating to lobbying activities for this reporting period were:
Less than $10,000 ☐	Less than $10,000 ☐
$10,000 or more ☐ >> $ _____ Income (nearest $20,000)	$10,000 or more ☒ >> $ $4,540,000.00 Expenses (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).	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

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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   Page 10 of 19

Figure A3. Scatter Plot - Lobbying Expenditures for Immigration and Number of H1B Visas

Figure A4. 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).

Table A1. 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 A2. 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 equipment	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)

Dependent variable ⟶	log (lobbying exp/native workers)									
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]
log (lobbying exp on other issues/native workers)	1.049***	1.036***	1.052***	1.034***	1.051***	1.049***			0.968***	1.025***
	[0.080]	[0.088]	[0.085]	[0.092]	[0.080]	[0.093]			[0.067]	[0.082]
union membership rate in the UK	-0.808	-0.759	-0.48	-0.397	-0.822	-0.949	0.756	1.659		
	[0.692]	[0.712]	[0.786]	[0.838]	[0.688]	[0.763]	[1.267]	[1.320]		
lg (output)		-0.038		-0.064		-0.029		0.078		-0.085
		[0.162]		[0.172]		[0.155]		[0.254]		[0.158]
unemployment rate		-3.055		0.003		-4.372		-2.883		-2.435
		[4.260]		[4.318]		[3.970]		[6.516]		[3.629]
log (price)		-1.313		-2.105		-1.459		-4.576		-2.195*
		[1.192]		[1.403]		[1.404]		[3.451]		[1.127]
log (capital)		-0.001		0.011		0.019		-0.447		0.09
		[0.140]		[0.163]		[0.135]		[0.400]		[0.143]
log (FDI)		0.002		-0.008		-0.004		0.118		0.013
		[0.066]		[0.074]		[0.070]		[0.190]		[0.057]
shocks		5.368**		7.658***		5.897***		1.877		3.287
		[2.210]		[2.778]		[2.198]		[3.665]		[2.066]
log (lag US wages)		1.782		3.946		1.615		3.52		-3.007
		[3.068]		[3.211]		[3.022]		[8.731]		[3.310]
log (number of native workers)		0.06		0.11		0.106		0.183		0.003
		[0.143]		[0.167]		[0.157]		[0.286]		[0.149]
Immigration committee membership			9.475	18.057						
			[11.028]	[18.515]						
Corruption			0.081	0.175*						
			[0.086]	[0.091]						
Party organization					0.02	0.319				
					[0.189]	[0.243]				
State union membership					3.679	-3.291				
					[3.722]	[4.936]				
Geographic concentration							1.06	3.709		
							[1.416]	[2.483]		
log(four firm concentration ratio)							0.477	-0.683		
							[1.096]	[1.205]		
log (minimum efficient scale)							-0.011	-0.135		
							[0.234]	[0.350]		
Number of firms							0.012	0.011		
							[0.008]	[0.009]		
Lagged union membership rate in 1994									0.545	0.657
									[0.486]	[0.490]
N	111	106	99	94	111	106	45	42	121	115
R-squared	0.69	0.72	0.69	0.74	0.69	0.72	0.24	0.33	0.68	0.70

This table shows the first-stage regressions corresponding to Table 4. 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.

Dependent variable ⟶	union membership rate in the US									
	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]
log (lobbying exp on other issues/native workers)	0.006	-0.001	0.003	-0.003	0.006	-0.003			0.018***	0.011**
	[0.004]	[0.005]	[0.004]	[0.005]	[0.004]	[0.005]			[0.004]	[0.005]
union membership rate in the UK	0.491***	0.480***	0.515***	0.510***	0.496***	0.502***	0.439***	0.410**		
	[0.059]	[0.079]	[0.067]	[0.096]	[0.060]	[0.079]	[0.108]	[0.153]		
lg (output)		0.003		0		0.002		0.01		0.009
		[0.009]		[0.009]		[0.008]		[0.016]		[0.013]
unemployment rate		-0.059		-0.068		0.071		-0.425		-0.169
		[0.230]		[0.268]		[0.246]		[0.496]		[0.296]
log (price)		-0.019		-0.086		-0.017		0.238		0.121
		[0.177]		[0.192]		[0.167]		[0.294]		[0.139]
log (capital)		-0.003		0		-0.005		0.005		0
		[0.009]		[0.010]		[0.009]		[0.026]		[0.011]
log (FDI)		0.003		0.001		0.004		0.005		-0.003
		[0.005]		[0.005]		[0.005]		[0.010]		[0.005]
shocks		0.122		0.029		0.067		-0.105		-0.22
		[0.128]		[0.147]		[0.143]		[0.254]		[0.184]
log (lag US wages)		0.370**		0.418**		0.408**		0.960*		0.367*
		[0.173]		[0.188]		[0.198]		[0.494]		[0.200]
log (number of native workers)		-0.006		-0.003		-0.009		0.002		-0.005
		[0.010]		[0.012]		[0.013]		[0.020]		[0.011]
Immigration committee membership			-0.9	0.026						
			[1.178]	[1.426]						
Corruption			-0.012**	-0.009						
			[0.006]	[0.006]						
Party organizatior					-0.015	-0.036				
					[0.016]	[0.023]				
State union membership					0.126	0.271				
					[0.163]	[0.370]				
Geographic concentration							-0.127	0.043		
							[0.123]	[0.143]		
log(four firm concentration ratio)							0.066	-0.007		
							[0.053]	[0.073]		
log (minimum efficient scale)							0.009	0.018		
							[0.019]	[0.021]		
Number of firms							-0.001*	-0.001**		
							[0.000]	[0.001]		
Lagged union membership rate in 1994									0.436***	0.407***
									[0.087]	[0.098]
N	111	106	99	94	111	106	45	42	121	115
R-squared	0.55	0.58	0.60	0.62	0.55	0.60	0.45	0.59	0.51	0.54

This table shows the first-stage regressions corresponding to Table 4. 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

Table A4. Estimated Effect of Politics on Migration: Measures of Stock Returns

Dependent variable ⟶	log (visas/native workers)			
	[1]	[2]	[3]	[4]
log (lobbying exp/native worke	0.306***	0.289***	0.304***	0.289***
	[0.089]	[0.088]	[0.093]	[0.088]
union membership rate	-2.507	-2.723	-2.557	-2.722
	[1.829]	[1.812]	[1.772]	[1.812]
lg (output)	-0.041	-0.064	-0.036	-0.064
	[0.221]	[0.229]	[0.224]	[0.229]
unemployment rate	7.836	7.368	7.834	7.365
	[6.268]	[6.216]	[6.348]	[6.216]
log (price)	2.744	2.413	2.652	2.416
	[2.653]	[2.587]	[2.642]	[2.588]
log (capital)	-0.399*	-0.392	-0.395	-0.392
	[0.240]	[0.240]	[0.240]	[0.240]
log (FDI)	0.114	0.11	0.111	0.11
	[0.094]	[0.092]	[0.096]	[0.092]
shocks	-7.267**	-7.154**	-7.331**	-7.155**
	[3.180]	[3.228]	[3.269]	[3.228]
log (lag US wages)	8.843**	8.939**	8.760**	8.936**
	[3.544]	[3.480]	[3.528]	[3.480]
log (number of native workers)	0.205	0.22	0.204	0.22
	[0.272]	[0.280]	[0.277]	[0.280]
log (1+abnormal returns)	-0.085			
	[0.144]			
log (1+market adjusted returns)		1.833*		
		[0.934]		
log (1+mean adjusted returns)			-0.002	
			[0.546]	
log (1+return)				1.848*
				[0.940]
N	108	108	107	108
r2	0.28	0.29	0.27	0.29

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.

Dependent variable ⟶	log (visas/native workers)							
	ALTERNATIVE DEPENDENT VARIABLES				**ALTERNATIVE SAMPLES**			
	Visas w/o J1 [1]	Visas with quota [2]	H1B visas [3]	Drop 2001 [4]	Drop security-sensitive sectors [5]	Drop illegal migrant int sectors [6]	Pooled OLS [7]	Include zero lobby exp. [8]
log (lobbying exp/native workers)	0.354***	0.285**	0.178**	0.390***	0.341**	0.317**	0.425***	0.350**
	[0.133]	[0.121]	[0.084]	[0.133]	[0.132]	[0.136]	[0.092]	[0.137]
union membership rate	-6.164***	-5.841***	-5.842***	-5.114**	-4.846**	-5.648***	-3.977***	-2.614
	[2.029]	[2.099]	[2.141]	[2.250]	[2.145]	[2.134]	[1.344]	[2.231]
N	106	106	106	105	102	102	296	118
R-squared	0.26	0.28	0.31	0.24	0.24	0.24	0.10	0.14

Table A5b. Estimated Effect of Politics on Migration OLS,
Additional Robustness checks

Dependent variable ⟶	log (visas/native workers)							
	ALTERNATIVE EXPLANATORY VARIABLES			**ADDITIONAL CONTROLS**				
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
log (lobbying exp/native workers)			0.391	0.386***	0.363***	0.338**	0.358***	0.250**
			[0.446]	[0.135]	[0.129]	[0.141]	[0.126]	[0.110]
log (lobbying exp_upper bound/native workers)	0.366***							
	[0.137]							
log (lobbying exp)		0.364***						
		[0.135]						
union membership rate	-5.280**	-5.540**		-6.207**	-5.130**	-3.787	-5.594***	-2.654
	[2.212]	[2.193]		[2.513]	[2.255]	[2.432]	[2.081]	[1.883]
log (lobbying expenditures by unions)			-0.765**					
			[0.308]					
log (1+stock market return)				1.847*				
				[0.936]				
output growth					-2.092**			
					[0.943]			
log (immigrants/natives) in 2000						0.689*		
						[0.386]		
log (capital-labor intensity)							-0.196	
							[0.240]	
log (skilled-unskilled labor intensity)								1.460***
								[0.272]
N	106	106	19	98	106	99	106	106
R-squared	0.22	0.25	0.80	0.25	0.27	0.28	0.24	0.46

Notes to Tables A5a and A5b: 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. The instruments used in all regressions are the same as in columns [1] and [2] of Table 4. All regressions include the same controls as in Table 3, column [3]. Table A5a: In column [5], we drop the following security-intensive sectors: (i) Aircraft and parts (377) (ii) Miscellaneous chemicals and allied products (469) (iii) Drugs, chemicals, and allied products (607) (iv) Engineering and architectural services (898). In column [6], we drop the following sectors which use illegal immigrants intensively: (i) agriculture (105) (ii) construction (246) (iii) meat products (406) (iv) apparel (448). Year fixed effects are included in columns [7]. In column [8], industries with zero lobbying expenditures are included replacing log (0) with log of the minimum values.

Table A6a -- Summary Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Log (Number of visas as a ratio of native workforce)	120	-7.82	1.92	-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	-7.84	1.89	-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
Union membership rate in the UK	106	0.24	0.16	0.03	0.70

Table A6b -- Summary Statistics (in levels)

Variable	Obs	Mean	Std. Dev.	Min	Max
Number of visas	120	3,790	25,726	2	276,899
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	1,625	5,640	2	50,091
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.