Corporate Lobbying and Immigration Policies in Canada

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Do special interest groups affect the behaviour of politicians? The question lies at the heart of the idea of representativeness and has spurred a wide range of views, from the most censorious (Schattschneider, 1975) to the most optimistic (Dahl, 1961). This debate is especially relevant to understand immigration policies. Indeed, scholars have emphasized and disputed the existence of a discrepancy between the restrictive preferences of the public and the apparent openness to immigration in Western countries (Freeman, 1998, 2002; Joppke, 1998; Lahav, 2004; Statham and Geddes, 2006). The usual suspects behind expansive immigration policies are private firms, who would benefit from the depressive impact of foreign labour on wages. Even so, the channels through which interest groups allegedly contrive to secure policy concessions from elected officials remain for the most part concealed, and so far there has been little quantitative evidence supporting the view that corporate interests exert influence on immigration policy outcomes.

This paper's objective is precisely to examine the impact of corporate lobbying on the levels of immigration in Canada. To begin with, I argue that national industries are unequally affected by changes in the skill composition of labour. As a result, rather than advocating an uncon-

ditional expansion of immigration levels, the business community is more likely to agree on the desirability of policy tools allowing the selection of migrants with specific skills and backgrounds. I focus on the two most relevant instruments serving this purpose in Canada, namely, economic permanent immigration (that is, immigrants selected using a point system accounting for educational attainment) and temporary workers (who are selected based on their intended occupation). The theoretical section emphasizes that even if special interests can exert a significant influence on policy makers motivated by re-election, the equilibrium response of governments depends on the complementarity between those two types of immigration. Using quarterly data on corporate lobbying, temporary workers and economic migrants in Canada (from 1996-Q1 to 2011-Q4), I implement a vector autoregression (VAR) model taking into account the full nature of the interrelations between those three series.

The idea that businesses play a key role in the shaping of immigration policies has been discussed several times before (see, for example, Borjas, 2001; Freeman, 1995; Menz, 2009; Tichenor, 2002). However, quantitative evidence is limited by the difficulty of measuring the process of influence. In a large-scale study including an extended set of interviews, Baumgartner and colleagues (2009) conclude that lobbies are in general unsuccessful at securing policy concessions, although their study does not address the issue of immigration in particular. In Nicholson-Crotty and Nicholson-Crotty (2011), the authors examine the relationship between business interests and immigration in the United States. They find an association between shares of labour-intensive industries and the openness to immigration, and they also consider corporate donations at the state level. However, they do not have a direct measure of business influence on the specific issue of immigration. Another recent quantitative study is Facchini and colleagues (2011), in which the authors examine the relationship between lobbying expenditures from US industries and the number of temporary work visas. The present study contributes to this literature by making use of detailed Canadian lobbying data over time and by considering both permanent and temporary immigration. The empirical findings show that an increase in the intensity of corporate lobbying on the issue of immigration has a positive impact on the levels of temporary workers admitted to Canada. This relationship appears robust and is supported by causality tests. As for the levels of permanent immigrants, they appear less responsive to lobbying pressures. Those findings lead to new insights regarding the politics of immigration in Canada, suggesting that temporary immigration represents a coveted source of foreign labour for national industries.

In the following section, I introduce the theoretical background. I first proceed with an argument about the preferences of corporations over

Abstract. This study examines the enduring claim that firms exert influence on immigration policies, prompting governments to open the doors to foreign labour. Although intuitively appealing, this claim has received little empirical support so far, the actual channels of influence from special interests to policy makers being usually opaque to public scrutiny. To address this problem, I rely upon the vector autoregression methodology and make use of fine-grained quarterly data on lobbying, skills-based immigration and temporary workers in Canada, between 1996 and 2011. A key result is the positive and robust response of temporary worker inflows to the intensity of corporate lobbying, even after accounting for labour market conditions. In contrast, there is no conclusive evidence that lobbyists carry weight when it comes to permanent migrants.

Résumé. Cette étude examine la thèse voulant que le secteur privé exerce une influence sur les politiques d'immigration, poussant les gouvernements à accroître le nombre d'immigrants. Malgré son attrait, cette thèse n'a reçu qu'un soutien empirique très limité à ce jour, notamment puisque l'influence des groupes d'intérêt s'exerce souvent à huis clos. Afin de surmonter ce problème, je recours à la méthode des vecteurs autorégressifs et utilise des données trimestrielles détaillées sur le lobbying, l'immigration économique et les travailleurs temporaires au Canada entre 1996 et 2011. Un résultat clé est la réponse positive des influx de travailleurs temporaires à l'intensité du lobbying des entreprises, même après avoir pris en compte les conditions du marché du travail. En comparaison, la conclusion que les lobbyistes influencent les niveaux d'immigration permanente apparaît peu robuste.

immigration before looking at the influence of lobbying in the policy-making process. Next, I introduce the data and address important substantive issues. Then, an empirical section proceeds with a multiple time series analysis, and discusses the results. A final section concludes.

1. Theoretical Framework

A persistent claim in the literature is that, generally speaking, businesses are proponents of expansive immigration policies. Before treating this claim as an assumption, I discuss its relevance and raise an important qualification along the following lines. I contend that the preferences of businesses over the skill composition of immigration are conflicting, depending on which type of skills are used most intensively in each industry. Therefore, the corporate sector as a whole benefits from immigration only inasmuch as policies are designed to match the skills of newcomers with the specific needs of each industry.

To begin, empirical evidence from Canada brings support to the view that businesses care about the issue of immigration. Indeed, public data archived by the Office of the Commissioner of Lobbying reveal that the business sector has been actively lobbying on the specific subject matter of immigration. Between 1996 and 2011, 2462 registration records were filed either by individual firms or by interest groups representing business interests to address the topic of immigration with public officials. Moreover, the preference of the Canadian Chamber of Commerce (CCC), a major association representing industries, has been stated openly. In its

recent publication titled *Top 10 Barriers to Competitiveness*, the CCC explains that the very first such barrier to competitiveness in Canada is a skills crisis, caused by a "growing labour shortage," and to which one desirable response would consist of "improving access to foreign workers" (CCC, 2012: 2). But the organization clearly emphasizes the role of skills, with a preference for foreign workers whose skills would match the requirements of the Canadian economy. For instance, they argue that "the country falls short in addressing the current and future skills needs of the workplace" (CCC, 2012: 4).

The idea that firms benefit from immigration stems from the relationship between factor supply and factor price (see, for instance, Borjas, 1995). An important stream of literature on the economics of immigration builds upon the Heckscher–Ohlin model to predict the impact of labour movements on factor prices. Basically, countries where labour is relatively scarce are expected to attract workers from countries where labour is abundant. As a result, wages go down in the recipient country and conversely in the emigrants' country. The model is discussed at length in Hatton and Williamson (1994, 2005), Grubel (1994) and Krugman and Obstfeld (2002, ch. 7) and tested empirically in O'Rourke and colleagues (1996) and Taylor and Williamson (1997).

However, deducing that firms are supportive of immigration because of its expected impact on the price of labour would obscure an important point: national industries relying upon different intensities of each factor of production are affected asymmetrically by changes in the composition of labour. For instance, inflows of unskilled workers may benefit traditional industries but not high technology industries. In fact, the Rybczynski (1955) theorem implies that a sector relying less intensively on a factor may actually shrink in size following an increase in the supply of that factor. The responsiveness of output mix to factor supply change is also supported by recent empirical studies (Bernstein and Weinstein, 2002; Hanson and Slaughter, 1999; Harrigan, 1995, 1997). Thus, it is reasonable to expect that industries are likely to advocate the admission of the specific types of labour that would advantage them most (assuming that firms are not indifferent about their size) and that they develop preferences accordingly.

A realistic assumption is that the preferences of industries are more likely to agree on the use of policy instruments that maintain the output mix by selecting migrants according to specific skill sets. This assumption is consistent with the above-mentioned statements of the CCC, insisting on the importance of skills in the selection of foreign workers. In Canada, two main policy instruments can be used for the skills-based selection of foreign workers, namely temporary work permits and economic immigration. With those qualifications in mind, I now turn to the theoretical model.

1.1 Policy making in the presence of a lobby

This section introduces a model depicting the decision-making process of an incumbent government facing pressures from a special interest group. As in other models of special interest politics (for example, Baron, 1994; Grossman and Helpman, 2001, ch. 10), the government has incentives to trade policy concessions in return for the electoral support of the interest group. I consider the intensity of lobbying as an indicator of the interest group's influence on re-election prospects. I then show that in equilibrium, the incumbent is expected to shift from the ideal point of the average voter in response to lobbying efforts. However, when two policy instruments can be used as substitutes (such as permanent immigrants and temporary workers), the equilibrium solution does not imply that governments make concessions on both of them. The implication is that an empirical research design should take into account not only the response of permanent and temporary immigration levels to corporate lobbying, but also the interdependencies between those two policy instruments.

I first consider an incumbent government having to choose the level of a policy instrument x in a convex, one-dimensional policy space $[A, B]$. In this case, let x represent the levels of economic migrants selected through a point system. The government observes the preference of the average voter, denoted $\bar{v}$, through public opinion polls.

Suppose that the government's objective is to secure the support of the average voter, in order to maximize its re-election chances. Let the utility of the average voter be given by the familiar quadratic utility loss function $U = -(x - \bar{v})^2$. Absent any outside intervention, the government solves $\max_x U$ and chooses $x^* = \bar{v}$.

Next, let me introduce a special interest group (SIG). A SIG is defined as an actor who 1) has a preference in the policy space that differs from $\bar{v}$ and 2) is able to significantly affect the re-election chances of the government, through political donations, elite mobilization, the conveyance of messages to the public regarding the quality of the incumbent or independent persuasion campaigns (such as third-party advertising). In this paper, the SIG uses lobbying in order to influence the government's decision-making process. Let s denote the intensity of lobbying activities. I assume that the government interprets s as a measure of the strength of the SIG, which means how influential the SIG is for re-election prospects.

Without loss of generality, and consistently with the substantive background introduced earlier, suppose that the SIG represents business interests and prefers a level of the policy greater than $\bar{v}$. Thus, $y = x - \bar{v}$ (where $y \in [0, B - \bar{v}]$) represents the size of the compromise offered by the government to the SIG.

To reflect the electoral role played by the SIG, the utility function of the average voter may be re-expressed to include the taste-shifting parameter sy^θ. In other words, sy^θ represents the shift in the preference of the average voter, given the support that the incumbent receives from the SIG with a policy concession $y > 0$. It is natural to assume $0 < \theta < 1$, that is, the influence exerted by a SIG on the average voter (through political donations, independent campaigning, and so forth) has decreasing returns.

In short, the government faces a trade-off between the average voter's true policy preference and that of the SIG. The optimal concession y is the one for which the marginal benefit of securing the SIG's support is equal to the marginal loss resulting from unpopular policies. The objective of the government becomes:

$$\max_{y} U = sy^\theta - y^2, \tag{1}$$

and the equilibrium solution to (1) is $y^* = \left(\dfrac{s\theta}{2}\right)^{1/(2-\theta)}$. Given that $0 < \theta < 1$, the partial derivative $\dfrac{\partial y^*}{\partial s}$ is positive, which is intuitive: the stronger the lobby, the larger the equilibrium concession y^*.

The interesting case arises after introducing a second policy. Suppose that the government may now use two policy instruments, x_1 and x_2, to address a single issue. Suppose further that the average voter's preference is the same value $\bar{v}$ on both policy instruments (normalized on a common scale). The SIG still lobbies with an intensity s about both instruments, and prefers values greater than $\bar{v}$. The concessions of the government are now expressed by $y_1 = x_1 - \bar{v}$ and $y_2 = x_2 - \bar{v}$.

I denote the new government's objective with the following implicit function:

$$\max_{y_1, y_2} U = f(y_1, y_2, s) - c(y_1, y_2), \tag{2}$$

where f is the taste-shifting function, increasing in y_1, y_2, and s; and where c is a cost function, increasing in y_1 and y_2. In line with the one-policy case, realistic substantive assumptions are that y_1 and s are complements, and that y_2 and s are also complements. The stronger the lobby, as measured by s, the greater the marginal effect of a concession y_i on the average voter's utility.

However, imposing an arbitrary functional form to (2) would be consequential, since the solution to the two-policy model entirely depends on the complementarity between y_1 and y_2. To see this, suppose first that y_1 and y_2 are complements. That is, the higher the level of one policy instrument (say, permanent immigrant levels), the larger becomes the mar-

ginal effect of a change in the other policy instrument (say, temporary worker levels). In this case, the objective function is supermodular in (y_1, y_2, s) (on supermodularity, see Ashworth and Bueno de Mesquita, 2006). Supermodularity entails that the signs of the comparative statics are given by the cross-partial derivatives $\dfrac{\partial^2 U}{\partial y_1 \partial s}$, and $\dfrac{\partial^2 U}{\partial y_2 \partial s}$. This means that the equilibrium choices y_1^* and y_2^* are both increasing in s, the intensity of lobbying efforts.

In contrast, if y_1 and y_2 are substitutes, then the function U is not supermodular. In this case, the comparative statics cannot be signed. The optimal policy compromise y_1^* or y_2^* could be *negatively* related to s. For instance, the indirect effect of an increase in s on the choice y_1 may offset the positive response of y_2 to s, if governments prefer to substitute y_2 by y_1. The solution depends on the nature of the interdependencies between s, y_1, and y_2. Substantively, there may be good reasons to believe that policy instruments like economic immigrants and temporary workers are substitutes, since they are closely related in purpose and nature.

Instead of arbitrarily choosing a functional form that would determine the signs of the relationships of interest, I will use an empirical strategy accounting for the interactions between the two types of immigration. At this stage, some useful theoretical expectations can be derived. First, notice that the observed policy levels are $x_1^* = y_1^* + \bar{v}$ and $x_2^* = y_2^* + \bar{v}$. Therefore, policy instruments should be positively related to the preference of the average voter. Moreover, if the levels of temporary workers and economic migrants are complements, we should observe that they are positively related to each another; in this case, they should both respond positively to lobbying. If they are instead substitutes, the impact of lobbying may affect each policy instrument in counterintuitive ways.

2. Data

To assess the impact of corporate lobbying on immigration in Canada, I switch to the temporal dimension and make use of quarterly data between 1996 and 2011. This section introduces the data and raises key substantive issues justifying the choice of the series. Moreover, due to legislation change during the period under scrutiny, I proceed with a careful assessment of structural breaks.

### 2.1 Economic migrants and temporary workers

To measure the government's response to corporate lobbying, I consider two specific policy instruments using official and previously undis-

closed quarterly data obtained by special request from Citizenship and
Immigration Canada. The first immigration variable (hereafter Economic,
for short) measures the quarterly inflows of permanent residents in Can-
ada who fall under the category of economic migrants. Those are migrants
selected through the Canadian point system, and their number is estab-
lished using quotas by the ruling party in Parliament.[1] The second vari-
able (hereafter Workers) measures the number of temporary work permits
issued in Canada, by quarter. Both series have been transformed in nat-
ural logarithms and seasonally adjusted. They both cover the period rang-
ing from 1996-Q1 to 2011-Q4.

Economic migrants and temporary workers differ in terms of their
management. While the levels of permanent immigrants clearly fall under
the authority of the government, temporary work permits are partially mar-
ket driven. The standard procedure to hire foreign labour is undertaken
by employers themselves since 1973, who must ask for a labour market
opinion from what is now known as Human Resources and Skills Devel-
opment Canada (Fudge and MacPhail, 2009). The human resources agency
verifies that Canadian citizens could not fill the labour requirements before
authorizing such requests. The *Immigration and Refugee Protection Act*
(IRPA) of 2002 introduced dispositions increasing the government's influ-
ence. For instance, article 205 of the *Immigration and Refugee Protec-
tion Regulations* (the regulations accompanying the IRPA) grants the
Minister of Immigration the power to admit temporary workers outside
the labour market opinion process. Between 2002 and 2011, the annual
share of work permits issued without a labour market opinion ranged
between 48.6 and 63.2 per cent (CIC, 2012*b*: 67), including temporary
workers admitted on the basis of international agreements. Moreover, the
criteria used to evaluate economic conditions during the processing of
labour market opinions, such as wage rates, are themselves a topic of con-
tention, according to Fudge and MacPhail (2009). In theory, nothing pre-
vents governments from adjusting those criteria through internal directives
in response to pressures from employers. In fact, with the introduction of
amendments to the IRPA enclosed in Bill C-50 (2008), ministerial instruc-
tions are now setting explicit caps for different occupations in the tem-
porary foreign worker program (Abbott and Beach, 2011). Overall, there
is a strong substantive justification for examining whether the inflows of
temporary workers are responsive to corporate lobbying activities.

Figures 1 and 2 plot the Economic and Workers series. Quarterly
inflows of economic migrants exhibit a substantial amount of variation
over time, as can be observed in Figure 1. The series has experienced
important drops during the second and third Chrétien mandates in 1998
and 2002 but appears to follow an overall increasing trend. On the other
hand, the Workers series has been steadily increasing over time, although
its pattern is marked by two apparent structural breaks.

FIGURE 1
Economic Permanent Resident Inflows in Canada (Quarterly, 1996Q1-2011Q4)
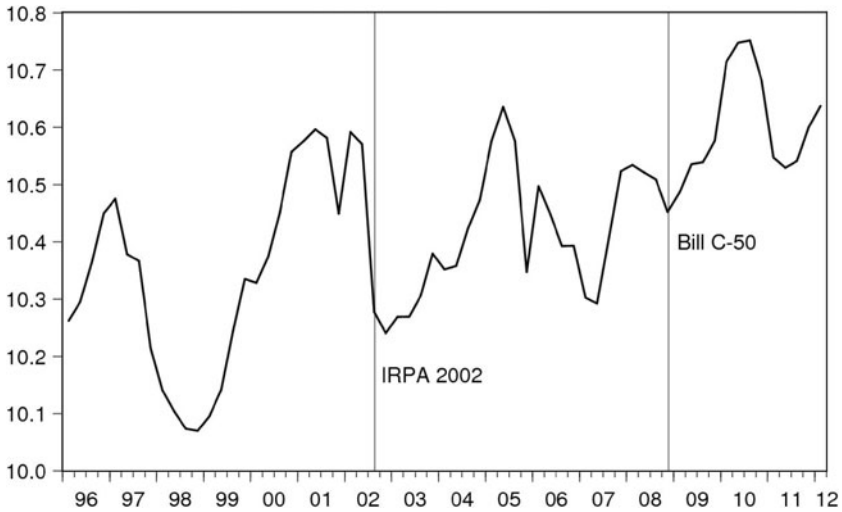
Seasonally adjusted permanent resident inflows in Canada, economic category, in natural logarithms.

Distinguished on each plot by vertical lines are the sub-periods falling under different legislations. The third quarter of 2002 marks the implementation of the IRPA, which coincides with an important structural break in the Workers series, as shown in Figure 2. The series temporarily dropped before returning to an increasing trend. The next important legislation comes with the amendments to the IRPA enclosed in Bill C-50. Although the bill was voted during the spring of 2008, the modifications concerning immigration came into force only during the last quarter of that year. A fall in the levels of temporary workers coincides with the implementation of those amendments. In contrast, the inflow of economic migrants has reached unprecedented heights in the ensuing years.

To account for legislation change, I include control variables in the empirical analysis that follows. Those variables are labelled IRPA and Bill C-50/Lobbying Act below, respectively for the 2002 act and the amendments in Bill C-50. They are shift dummies equalling one when the legislations are in force and zero otherwise.

2.2 Lobbying

I measure the intensity of lobbying by corporations on the issue of immigration using data coming from the Office of the Commissioner of

Figure 2
Temporary Worker Inflows in Canada (Quarterly, 1996Q1-2011Q4)
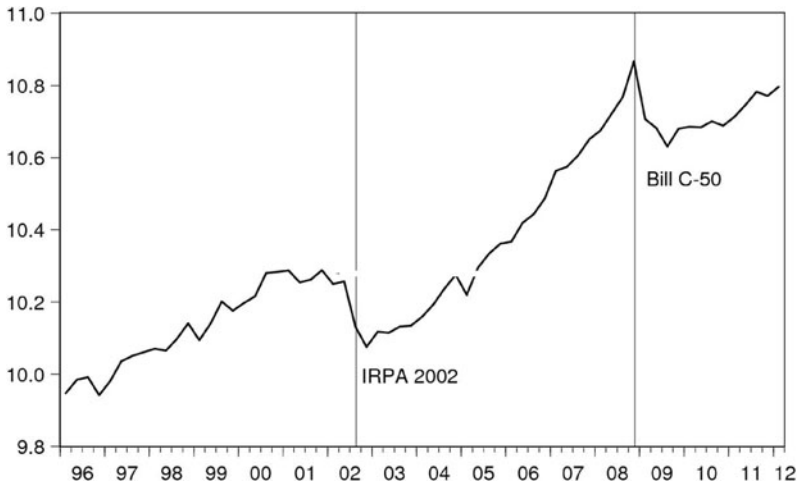
Seasonally adjusted temporary worker inflows in Canada, in natural
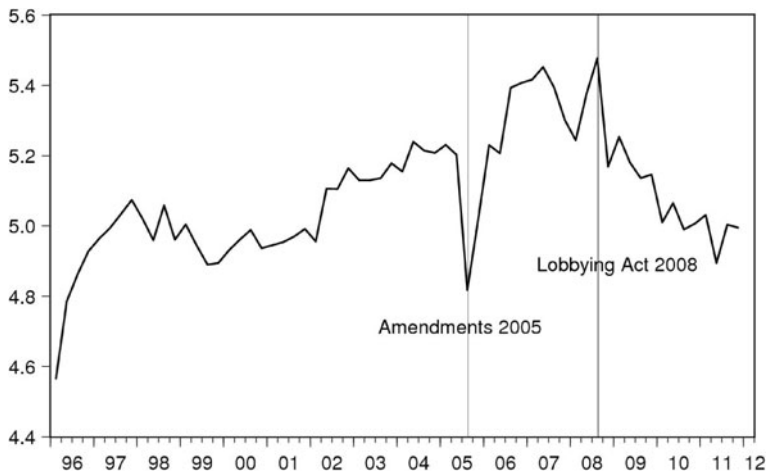logarithms.

Lobbying of Canada.[2] Since 1989, lobbyists in Canada are required to
register their activities. Prior to the 1995 *Act to Amend the Lobbyists
Registration Act*, however, actors who were lobbying without the help
of professional consultants were not required to reveal detailed informa-
tion on the subject matter of their activities (that is, the issue or legis-
lation over which a lobbyist seeks to engage a discussion with a public
official). From 1996 on, all individuals or corporations undertaking lob-
bying activities—whether or not they hired the services of professional
lobbyists—were compelled to disclose the subject matter.

From the full office's database for the period 1996–2011, I used the
5064 registration records from entities who lobbied public officials on
the specific subject matter of immigration. Although an initial coding of
lobbyist types (consultant, corporation or organization) was provided, I
have recoded all entries according to a new categorical variable. Each
lobbyist was classified as 1) a business corporation *or* an organization
whose primary purpose is to represent the interests of firms; 2) profes-
sional associations and labour unions; 3) all other organizations.[3] The
count of lobbyists falling in the first category was used to construct the
corporate lobbying series, referred to as Lobbying below. The variable
measures the total number of active records from corporate lobbies on
the issue of immigration, per quarter.[4] Again, this variable has been log-
transformed and seasonally adjusted. I should point out that available data

on lobbying have a few limitations. For instance, expenditures on lobbying are not publicly disclosed, and it is not possible to track down the precise date of communications between lobbyists and public officials before 2008. Nevertheless, the Lobbying series should provide a meaningful measure of the variation in the intensity of lobbying activities, and it comes from the most comprehensive database available to date in Canada.

Figure 3 plots the Lobbying series. The variable followed an overall increasing trend since 1996, except for the most recent period. Again, two structural breaks affecting the series appear to coincide with relevant legislation change. First, in late June 2005, a new *Act to Amend the Lobbyists Registration Act* was implemented, introducing two key modifications to the registration procedure (Canada, 2011). On the one hand, some forms of communication between lobbies and public officials were now excluded from the registration requirement, like simple requests for information. On the other hand, the length of a registration record was fixed to six months, meaning that lobbyists must now file a new registration record in order to pursue their activities for a period longer than six months. To account for this break, a shift dummy labelled Amendments is included in the empirical analysis as a necessary control. It has the value of one starting at 2005-Q3 and zero otherwise.

FIGURE 3
Corporate Lobbying on the Issue of Immigration in Canada (Quarterly, 1996Q1-2011Q4)

Seasonally adjusted number of active registration records from corporate lobbyists on the issue of immigration in Canada, per quarter, in natural logarithms.

Second, a new lobbying act came into force during the third quarter of 2008. This act coincides with an apparently sustained drop in the number of corporate lobbies on the issue of immigration. The somewhat more stringent requirements imposed on lobbyists may in part explain the reduction in the count of active lobbies. Because the implementation of the lobbying act coincides with another legislative change (the previously mentioned amendments to the IRPA in Bill C-50), only one control variable is used to account for both changes introduced earlier as Bill C-50/ Lobbying Act. Including two dummy variables that are identical but for one quarter would unnecessarily reduce the efficiency of empirical estimates, and tests revealed that this has no consequence on the findings presented below.

2.3 Average voter's preference and control variables

To measure the preference of the average voter (labelled $\bar{v}$ in section 1), I consider survey questions tackling preferences over immigration in Canada. To my knowledge, there has been no systematic measure over time of the public's preference concerning temporary workers specifically. Thus, I focus only on opinion about immigration in general. Table 1 presents the evolution of public opinion on immigration in Canada from 1993 to 2011. The data come from surveys of the Canadian Election Studies (CES), which have consistently queried respondents over time. The question labelling has been virtually the same since 1993, and asks, "Do you think Canada should admit: 'more immigrants,' 'fewer immigrants,' or 'about the same as now?'" Weighted proportions are shown in the first three columns of Table 1. As can be observed, while in 1993 an over-

TABLE 1

Public Opinion on Immigration in Canada (1993–2011)

Year	More	Same	Fewer	N	Mean	Mean CI
1993	17.36%	16.86%	60.50%	3775	0.545	[0.515, 0.574]
1997	8.63	40.79	46.18	3949	0.607	[0.583, 0.632]
2000	14.20	47.15	35.20	3513	0.782	[0.756, 0.809]
2004	16.41	49.75	29.15	4323	0.866	[0.843, 0.890]
2006	15.40	55.20	23.56	4058	0.913	[0.890, 0.937]
2008	13.80	55.29	24.72	3689	0.884	[0.854, 0.913]
2011	10.52	57.96	27.64	3362	0.822	[0.796, 0.848]

The table reports the weighted proportions of respondents in CES's campaign surveys saying that they prefer more immigrants in Canada, the same level, or fewer, respectively. Weighted means (using a variable with categories coded Fewer = 0, Same = 1, More = 2) are reported along with the 95% confidence intervals (CI). Values lower than 1 indicate that the estimated location of the average voter is on the "Fewer" side of the midpoint.

whelming share preferred a decrease in immigration inflows, respondents have been more likely to choose the middle response category since then. Respondents supportive of expansive immigration policies tend to remain a minority.

Overall, the average voter can be located as leaning in the "fewer" response category, as shown in the fifth column of Table 1. I have used a numerical conversion of categories to retrieve the mean from the ordinal scale. Values of the mean lower than 1 indicate that the average respondent's estimated position tends toward the restrictive side of the immigration policy spectrum. This figure merely reflects the balance of voters around the middle category, which tilts toward the "fewer" response. The 95 per cent confidence intervals are reported in the last column. Despite the temporal increase in the number of respondents choosing the middle response category until 2008, the preferred policy position of the average voter has been to reduce the immigration flows during the whole period within the bounds of statistical significance. Thus, when compared against the overt position of the CCC mentioned earlier, the public appears to disagree with the corporate sector.

Unfortunately, there exists no consistent quarterly series of public opinion on immigration in Canada during this period. Analysing the dynamics of voter preference is therefore impossible. But this also implies that governments themselves are probably unaware of short-run fluctuations in public opinion; they realistically have a general idea of the location of the average voter during their mandates. To control for the preference of the average voter, I construct a variable that corresponds to the mean response to the survey question, the values of which being shown in the fifth column of Table 1. This variable is called Average Voter Preference below.

Lastly, I consider two additional control variables accounting for regime change. The first is an indicator of the party in power, labelled Liberal, which equals one if the government is formed by the Liberal Party of Canada and zero if formed by the Conservative Party of Canada. I also consider the implementation of Bill C-24, which came in force in 2003-Q3 and introduced an important restriction to party finance in Canada, namely a ban on corporate donations. If governments are responsive to corporate lobbies due to electoral considerations, then the introduction of Bill C-24 should indirectly affect the influence of lobbies. A dummy variable labelled Bill C-24 accounts for this change.

3. Empirical Analysis

I begin the empirical analysis by examining the bivariate associations between Lobbying and each of the two immigration series. Table 2 reports

TABLE 2

Cross-Correlations between Lobbying and Types of Immigration

	Economic, Lobbying $(t \pm i)$			Workers, Lobbying $(t \pm i)$	
i	Lag	Lead	i	Lag	Lead
0	0.081	0.081	0	0.446*	0.446*
1	0.102	0.042	1	0.489*	0.360*
2	0.093	0.066	2	0.514*	0.308*
3	0.171	0.089	3	0.556*	0.242
4	0.254*	0.109	4	0.571*	0.194
5	0.334*	0.146	5	0.592*	0.155
6	0.429*	0.201	6	0.622*	0.121
7	0.516*	0.221	7	0.639*	0.093
8	0.526*	0.250*	8	0.656*	0.075
9	0.521*	0.263*	9	0.644*	0.047
10	0.522*	0.224	10	0.633*	0.007
11	0.525*	0.214	11	0.625*	0.004
12	0.518*	0.222	12	0.613*	−0.031

Cross correlations between corporate lobbying and economic migrants (left panel), and temporary workers (right panel), for up to 12 lags and leads of the Lobbying series. Correlations are considered significant and marked with an asterisk if they exceed the value of $\pm \dfrac{2}{\sqrt{T}} = 0.25$ (T = 64).

cross-correlations up to 12 leads and lags of the Lobbying variable. In other words, those are correlation coefficients between the intensity of lobbying i periods in the past (or i periods in the future) and observed policy outcomes. A correlation is considered significantly different from zero if the coefficient exceeds the absolute value of $\dfrac{2}{\sqrt{T}}$, which means approximately 0.25 with $T = 64$.

The first column of Table 2 suggests a positive association between the lags of Lobbying and the Economic variable, significant after one year. This one-year delay could be explained by the fact that quotas of permanent residents are usually set on a yearly basis by the government. On the other hand, the leads of Lobbying are not significantly related to the Economic variable (for the most part), suggesting that the relationship is one-sided. The last two columns of Table 2 report the cross-correlations using the Workers series. This time, the lags of Lobbying are positive and significant for the whole period, even in the short-run. Inflows of foreign workers are also significantly related to the leads of Lobbying up to two periods ahead. Overall, those cross-correlations represent preliminary evidence consistent with the view that immigration levels in Canada are positively affected by corporate lobbying. But the robustness of those relationships must now be assessed using a multiple time series framework, after controlling for legislation change.

Because of its flexibility and properties, I rely upon the vector auto-regression (VAR) approach developed by Sims (1972, 1980), which consists of a system of equations where each series is treated as endogenous. The VAR methodology avoids the reliance on arbitrary identification assumptions altogether. It also enables the use of Granger causality tests to examine the direction of causal relationships. Moreover, VARs permit to distinguish between short-run and long-run effects.

Consider a VAR system with the structural form:

$$\mathbf{A}_0 \mathbf{y}_t = \mathbf{V} + \sum_{i=1}^{q} \mathbf{A}_i \mathbf{y}_{t-i} + \mathbf{B} \mathbf{x}_t + \mathbf{e}_t, \tag{3}$$

where $\mathbf{y}_t = (\text{Lobbying}_t, \text{Workers}_t, \text{Economic}_t)'$, $\mathbf{x}_t = (\text{IRPA}_t, \text{Bill C-50/Lobbying Act}_t, \text{Amendments}_t, \text{Average Voter Preference}_t, \text{Liberal}_t, \text{Bill C-24}_t)'$, q is the lag length, $\mathbf{V}$ is a matrix of intercepts and time trends, and $\mathbf{e}_t$ a vector of residuals. The matrices $\mathbf{A}_0$, $\mathbf{A}_i$, and $\mathbf{B}$ contain the parameters of the VAR's structural form.

Since the system of simultaneous equations in 3 is not identified, the structural form cannot be estimated. Instead, VAR analysis consists of estimating the reduced form equations, which correspond to:

$$\mathbf{y}_t = \mathbf{D} + \sum_{i=1}^{q} \mathbf{\Pi}_i \mathbf{y}_{t-i} + \mathbf{\Theta} \mathbf{x}_t + \mathbf{u}_t, \tag{4}$$

where $\mathbf{\Pi}_i$ and $\mathbf{\Theta}$ are the matrices of reduced form parameters. Of course, the estimated coefficients in $\mathbf{\Pi}_i$ and $\mathbf{\Theta}$ are not interpretable individually. However, the short- and long-run relationships between the series can be simulated using forecast error impulse responses and orthogonalized impulse responses. Both techniques are used below.

The next subsections go over the key steps of the VAR methodology, including unit root testing, lag length selection, and impulse response analysis.

3.1 Unit root tests

Testing variables for unit roots (that is, for the existence of a time-dependent mean and variance) has become the starting point of time-series analysis to prevent the potential issues that may result from regression models including non-stationary variables (Granger and Newbold, 1974). Therefore, I proceed with unit roots tests on the Lobbying, Workers, and Economic series. The results of Augmented Dickey-Fuller (ADF) unit root tests are reported in Table 3, for lag lengths between 0 and 8. All tests include a time trend and a constant. The null hypothesis is that the series contains a unit root.

TABLE 3
Augmented Dickey-Fuller Unit Root Tests

				With Structural Breaks	
Lags	Economic	Workers	Lobbying	Workers	Lobbying
0	−2.604	−1.726	−3.142†	−5.496**	−5.834**
1	−3.345†	−1.761	−2.204	−5.206**	−4.605**
2	−3.156†	−1.828	−1.709	−4.975**	−4.124**
3	−4.083**	−1.772	−1.786	−4.717**	−4.736**
4	−3.678*	−1.961	−1.496	−4.602**	−4.385**
5	−3.705*	−2.318	−1.552	−4.507**	−4.403**
6	−4.560**	−2.446	−1.261	−4.305**	−3.795*
7	−4.202**	−2.693	−1.040	−4.289**	−3.223†
8	−2.944	−1.979	−0.980	−3.425*	−2.574

Augmented Dickey-Fuller unit root tests of the null of non-stationarity, including inter-
cepts and trends. The last two columns are the t-statistics from ADF regressions includ-
ing two trend shifts to account for structural breaks. The breaks have been located at
2002-Q3 and 2008-Q4 for the Workers series, and at 2005-Q3 and 2008-Q4 for the Lob-
bying series (see discussion in text). The critical values are −3.96, −3.41, and −3.13,
respectively for the 0.01, 0.05, and 0.10 significance levels.
**: $p < 0.01$, *: $p < 0.05$, †: $p < 0.10$.

   The first column of Table 3 shows that the series on economic immi-
grant inflows appears trend-stationary for most of the lag lengths consid-
ered. The Akaike information criterion (AIC) suggests that the appropriate
lag length is 6. Using 6 lags, the null hypothesis is clearly rejected at the
$p < 0.01$ significance level, confirming the verdict of trend stationarity.
On the other hand, as shown in the second and third columns of the table,
the null hypothesis of a unit root holds for the Workers and Lobbying
series, under various lag lengths, at the 0.05 significance level.
   However, the earlier graphical inspection of Workers and Lobbying
pointed to the existence of important structural breaks. In the presence
of structural breaks, ADF unit root tests are known to be biased in favour
of accepting the null hypothesis (Enders, 2010: 227–29; Perron, 1989).
Therefore, and following the approach in Perron (1989), I devised ADF
unit root tests including trend shifts starting at the time of each of the
two major structural breaks. I created interaction terms by multiplying
the time trend with the IRPA and Bill C-50/Lobbying Act variables, and
included those terms in the Workers ADF regression. I did the same with
the Amendments and Bill C-50/Lobbying Act variables in the Lobbying
ADF regression. Columns 4 and 5 of Table 3 report the ADF test statis-
tics accounting for structural breaks, which are evaluated against the same
critical values used earlier.
   Once accounting for structural breaks, the test statistics support the
conclusion that both time-series are trend stationary. This verdict holds

for most lag lengths. Thus, I treat all endogenous variables in the following analysis as stationary.

3.2 Lag length selection

A sensitive step in VAR analysis is the selection of the number of lags to include in the model. Insufficient lags can leave important dynamics out of the model, whereas excessive lags reduce the efficiency of estimates by taking away degrees of freedom.

As a starting point, I consider a rule of thumb stating that the lag length q should cover at least a full cycle of the data's periodicity, even when the series are seasonally adjusted (Brandt and Williams, 2007: 25). Since I am using quarterly data, this means that an ideal lag length would be at least 4. On the other hand, q is limited by sample size, which amounts to only 64 observations, and the use of eight deterministic terms already consumes degrees of freedom. Thus, I consider searching for an optimal lag length between 4 and 8.

Table 4 reports four common measures to select lag length: the AIC, the Bayesian (Schwarz) information criterion (BIC), the Hannan-Quinn information criterion (HQC), and the final prediction error (FPE). The lowest value for each statistic indicates the optimal q. As Table 4 shows, the optimal lag length depends on the criterion considered. The AIC and FPE statistics suggest choosing larger lag lengths, 8 and 5, respectively. In contrast, both the BIC and HQC recommend the most parsimonious model, with 4 lags. On the positive side, notice that I have tested VAR models with each of the lag lengths between 4 and 8, and the impact on the results that I will present below is negligible. I choose to focus on a

TABLE 4

Lag Length Selection Criteria

Lag Length	AIC	BIC	HQC	FPE
4	−17.101	−15.006	−16.281	4.053e–08
5	−17.193	−14.763	−16.244	3.890e–08
6	−16.952	−14.181	−15.873	5.334e–08
7	−17.098	−13.980	−15.886	5.136e–08
8	−17.316	−13.844	−15.970	4.827e–08

The table reports the Akaike information criterion (AIC), the Bayesian (Schwarz) information criterion (BIC), the Hannan-Quinn information criterion (HQC), and the final prediction error (FPE) for VAR models of various lag lengths. In each case, the lowest value indicates the optimal lag length.

VAR model with 6 lags, denoted VAR(6), which represents a compromise between the optimal lag lengths suggested by the four information criteria.

3.3 VAR estimates and goodness of fit

I now turn my attention to the adequacy of the chosen specification. Table 5 reports goodness-of-fit statistics and tests of the normality of residuals for each equation in the VAR(6) model. The adjusted R^2s and the standard errors of the regressions suggest that the Workers equation produces the best fit among the three. Put another way, the forecast of temporary worker inflows is especially efficient. Of particular importance are the normality tests for the residuals (Jarque-Bera tests for residuals from each equation, and the Lütkepohl's joint normality test for the whole model). Non-significant statistics indicate that residuals have been efficiently purged out from serial correlation. As can be observed in Table 5, the VAR(6) model efficiently incorporates the dynamics, and all of the residuals are normally distributed.

I also report the VAR estimates. Recall that those are reduced form parameters and should not be considered accurate point estimates. They are sometimes interpreted for signs, however. Of interest is the positive association between the Average Voter Preference and the Economic variable, although the relationship is short of statistical significance (this estimate is significant in the VAR(8) specification). In contrast, the Workers series does not appear to follow meaningfully the trends in the average voter opinion. As for the dynamics between the endogenous variables, I address them below using impulse response analysis.

3.4 Granger causality

I perform Granger causality tests to address the direction of causality between the three endogenous series. The interest is to confirm whether corporate lobbying has a causal effect on policy outcomes, rather than the other way around. The idea behind Granger causality tests is to assess whether the past values of a variable significantly improve the contemporaneous prediction of another variable, controlling for the past values of the predicted variable (Granger, 1969). With two endogenous series, Granger causality tests can be readily implemented in a VAR analysis. With three endogenous series, it is possible to partition the VAR model into two groups, each containing a subset of the three variables (see Lütkepohl, 2005: ch. 2).

The first three rows of Table 6 report Granger causality tests based on the main VAR(6) specification. The table shows Wald tests of the null of Granger non-causality, along with the p-values. As can be seen, none

TABLE 5

VAR Reduced Form Estimates and Goodness-of-Fit Statistics

	Equation		
Variable	Lobbying	Workers	Economic
$\sum_{i=1}^{6} Lobbying_{t-i}$	0.134 (0.223)	0.215 (0.121)	0.037 (0.256)
$\sum_{i=1}^{6} Workers_{t-i}$	0.708 (0.376)	0.567 (0.203)	−0.238 (0.433)
$\sum_{i=1}^{6} Economic_{t-i}$	0.081 (0.167)	−0.059 (0.090)	0.379 (0.192)
IRPA (2002)	0.181 (0.074)	−0.156 (0.040)	−0.197 (0.085)
Bill C-50/Lobbying Act (2008)	−0.294 (0.070)	−0.045 (0.038)	0.031 (0.081)
Amendments (2005)	−0.306 (0.063)	0.056 (0.034)	−0.122 (0.073)
Average Voter Preference (Log)	0.053 (0.202)	−0.222 (0.109)	0.454 (0.232)
Liberal	−0.382 (0.081)	0.002 (0.044)	−0.075 (0.093)
Bill C-24	0.249 (0.110)	0.011 (0.059)	−0.018 (0.126)
Intercept	−3.326 (2.959)	4.736 (1.600)	6.688 (3.404)
Trend	−0.014 (0.006)	0.010 (0.003)	0.009 (0.007)
R^2	0.917	0.990	0.904
Adj.-R^2	0.853	0.982	0.829
Std. Error of the Regression	0.061	0.033	0.071
Jarque-Bera Normality Test	1.107	1.532	0.508
p-value (Jarque-Bera)	0.575	0.465	0.776
AIC		−16.952	
BIC		−14.181	
Lütkepohl's Joint Normality Test		3.175	
p-value (Lütkepohl)		0.787	

OLS estimates for each equation of the reduced form VAR (6) model, with standard errors in parentheses. Endogenous variables are in natural logarithms and have been seasonally adjusted.

of the series causes the group composed of the two others. However, it is perhaps more interesting to learn whether a variable causes an individual series (rather than a group of two series). For this purpose I have estimated bivariate VAR (6) models. Those bivariate VARs are identical to

TABLE 6

Granger Causality Tests

Multivariate VAR		
Direction of Causality	Wald Test	*p*-Value
Lobbying → Workers, Economic	1.369	0.194
Workers → Lobbying, Economic	0.765	0.684
Economic → Lobbying, Workers	1.366	0.196
Bivariate VARs		
Direction of Causality	Wald Test	*p*-Value
Lobbying → Workers	3.062	0.010
Workers → Lobbying	0.933	0.476
Lobbying → Economic	0.631	0.705
Economic → Lobbying	1.018	0.420
Workers → Economic	0.857	0.530
Economic → Workers	1.980	0.079

The table reports Wald tests of the null of Granger non-causality, along with *p*-values.

the main specification in every respect, except for the fact that they each include one pair of endogenous series at a time. The results are presented straightforwardly in the bottom rows of Table 6. Only one test is statistically significant at the 0.05 confidence level: Lobbying has a causal impact on Workers. This result is consistent with the argument developed in this paper. On the other hand, Lobbying does not appear to have a significant causal effect on the Economic series.

3.5 Impulse response analysis

To examine the dynamics between endogenous series, the VAR methodology relies upon impulse response analysis. Impulse responses can be viewed as estimates of the effect of variables on each other, over time. Basically, impulse responses are coefficients in the moving-average representation of a VAR model (see Lütkepohl, 2005; Enders, 2010). For instance, consider the moving-average representation

$$\mathbf{y}_t = \boldsymbol{\mu} + \sum_{i=0}^{\infty} \boldsymbol{\Phi}_i \mathbf{u}_{t-i}, \tag{5}$$

where $\boldsymbol{\mu}$ contains the means of the $\mathbf{y}_t$ series. For any two variables j and k, the moving-average coefficients in the $\boldsymbol{\Phi}_i$ matrices depict the response of a series y_j to a shock in the residuals u_k of equation k. Those coeffi-

cients are also interpretable as the response of a y_j series to a shock in the y_k series having occurred i periods in the past.

I consider two different types of impulse responses. First, the matrices Φ_i in (5) can be computed using the method described in Lütkepohl (2005: 51–56), yielding coefficients called forecast error impulse responses. This method restricts the contemporaneous effects to zero, and simulates responses to a shock in one series while holding the other residuals to zero. There is no assumption regarding the exogeneity of the series.

The second method is called orthogonalized impulse responses. Here, the researcher uses identification assumptions to estimate the residuals of the structural form: in the trivariate case, one variable is assumed exogenous to the system, and a second variable is assumed exogenous to the third (see Enders, 2010: 307–11). This is called a Cholesky decomposition. In contrast to the previous method, contemporaneous effects are allowed, which means that impulse responses provide a better depiction of the dynamics. The downside is that the Cholesky ordering of the variables (from exogenous to endogenous) matters, and may affect the results.

Figure 4 shows the forecast error impulse responses based on the VAR (6) model. I focus on the four relationships of interest (over the nine possible combinations). The vertical axis of each plot measures the response of a variable to a one unit increase in another variable at time 0, everything else being equal. The responses can be tracked over time, up to 12 quarters ahead. Since I use variables in natural logarithms, the responses can be conveniently interpreted as elasticities: the coefficients of the impulse response functions represent the percentage change in a response variable for a 1 per cent increase in another variable. In each subplot of Figure 4, the title indicates the direction of the relationship. To assess statistical significance, each plot includes Hall's bootstrapped 95 per cent error bands (computed using 1000 bootstrap replications). I will use the same type of error bands throughout the rest of the text.

Focusing on the upper-left plot of Figure 4, the estimated impact of Lobbying on the Workers series appears positive and significant. The short-run elasticity in the first quarter following a change in Lobbying corresponds to 0.23. Short-run responses of the Workers variable remain positive and statistically significant for about one year. In contrast, the responses of Economic to a 1 per cent shock in Lobbying, depicted in the upper-right plot, cannot be distinguished from zero. The two plots at the bottom of Figure 4 illustrate the interdependencies between the Workers and Economic series. As can be seen, inflows of economic migrants respond negatively to innovations in the levels of temporary workers after two quarters. This finding supports the hypothesis that economic migrants and temporary workers are substitutes rather than complements. On the other hand, the Workers series appears unresponsive to changes in the Economic series.

FIGURE 4
Forecast Error Impulse Responses
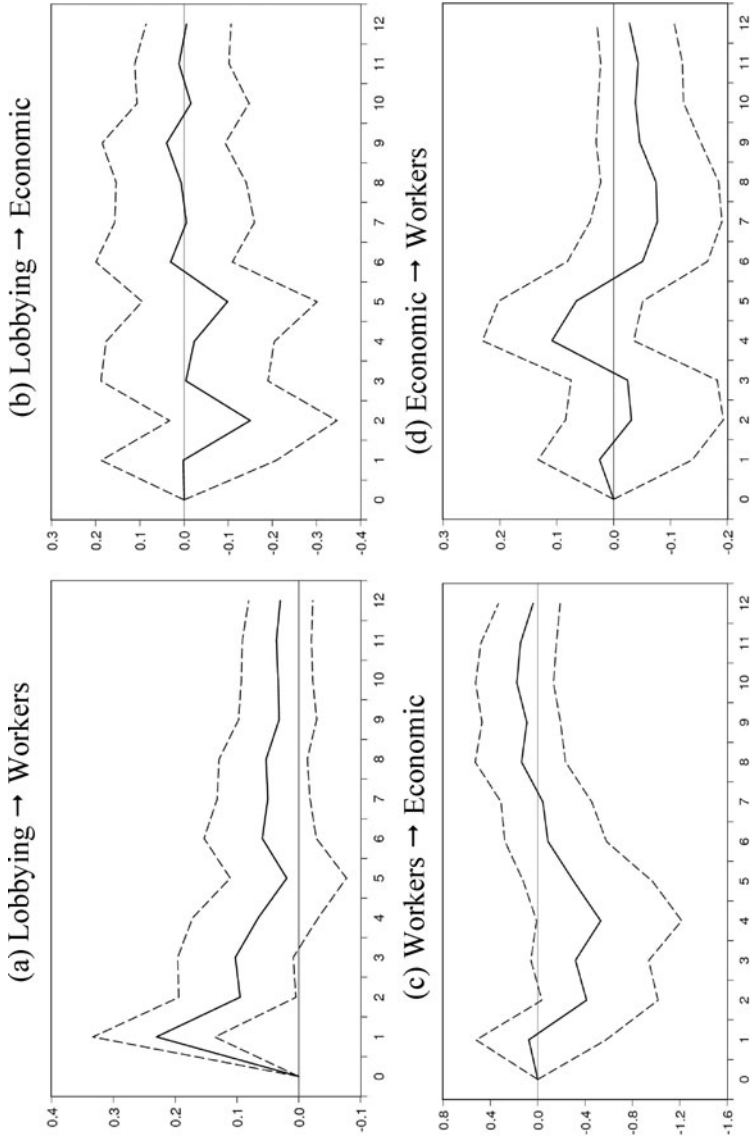
Of course, it is also interesting to have an estimate of the overall response of a variable. Long-run effects can be computed by cumulating impulse responses over time and are depicted in Figure 5. Since the short-run effects of one variable on another wear off over time, accumulated responses converge to a value that can be interpreted as the long-run impact. Here, I consider the accumulated response after two years. The two-year long-run elasticity of the Workers variable with respect to Lobbying corresponds to 0.67. That is, a 1 per cent increase in corporate lobbying activities leads to an estimated 0.67 per cent increase in temporary worker inflows, all else being equal, distributed over a period of two years. Expectedly, the cumulative impact of Lobbying on Economic is zero on the long run, as shown in the upper-right plot of Figure 5.

I now turn to the alternative approach, orthogonalized impulse responses, to verify whether the results hold. I use the Cholesky ordering Lobbying → Workers → Economic, from the most exogenous to the most endogenous. This choice is consistent with the theory introduced earlier.

Figure 6 reports the orthogonalized impulse responses for the two relationships of interest. Coefficients still represent responses to a unit shock in the original series, and correspond to elasticities. Starting with the impact of Lobbying on the Workers series, the one-step ahead short-run elasticity is 0.26, virtually the same as before. The short-run effects remain positive and significant for approximately two years, except between lags 4 and 6. There is no evidence of a significant contemporaneous effect. The cumulative elasticity after two years is 0.53, compared to the value of 0.67 found earlier (for simplicity of presentation, the cumulated responses are not reported in figures).

As for the response of Economic to changes in Lobbying, it now appears ambiguous. The response is initially negative but becomes positive and significant about a year and a half after the initial shock before fading off. In sum, there is no clear evidence that the intensity of corporate lobbying positively affects the inflows of economic permanent immigrants in Canada.

Overall, the empirical findings reported so far suggest that the inflows of temporary workers are most responsive to lobbying efforts from the business sector. Short-run effects are positive and significant, and the cumulative long-run elasticity (computed after two years) varies between 0.53 and 0.67. This means that a 10 per cent increase in the number of corporate actors lobbying on immigration is associated with a long-run increase ranging between 5.3 and 6.7 per cent in the number of temporary work permits per quarter. Using the mean values of each of the two variables for illustrative purposes, this example corresponds to the addition of 16.3 new active corporate lobbyists (compared to the sample average of 163 per quarter) and an associated increase in the number of
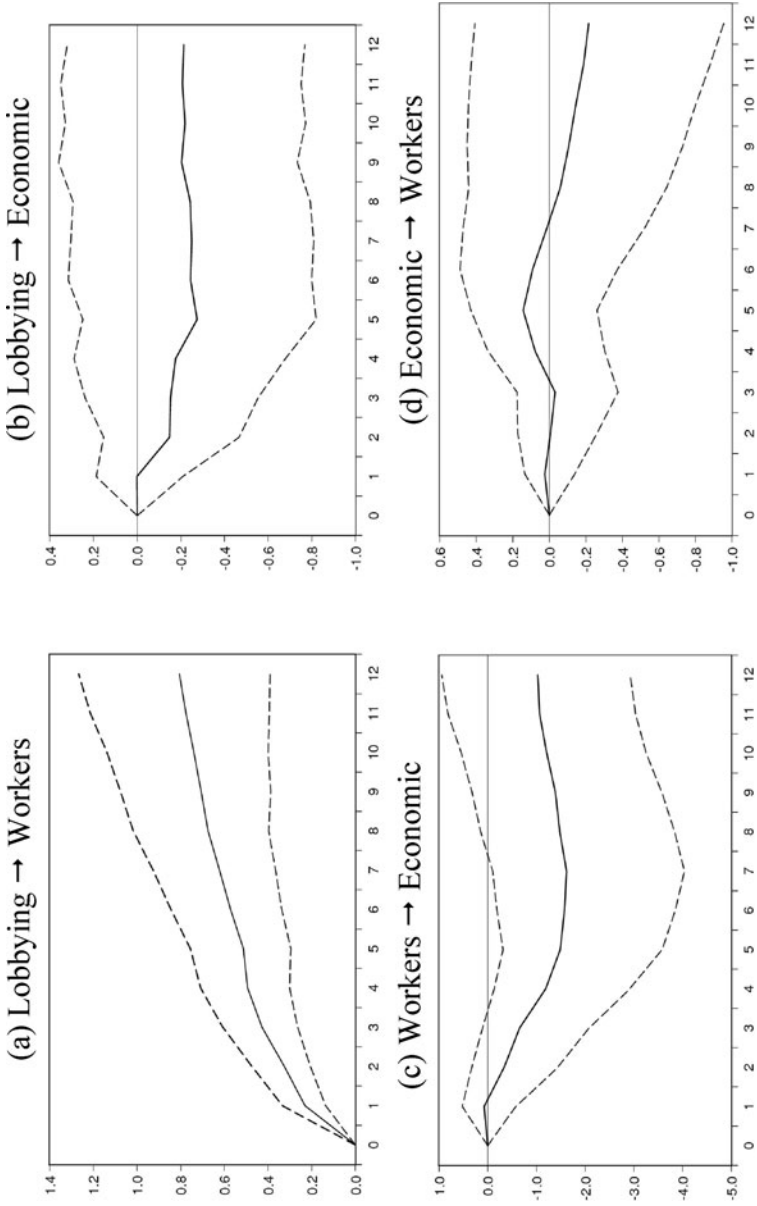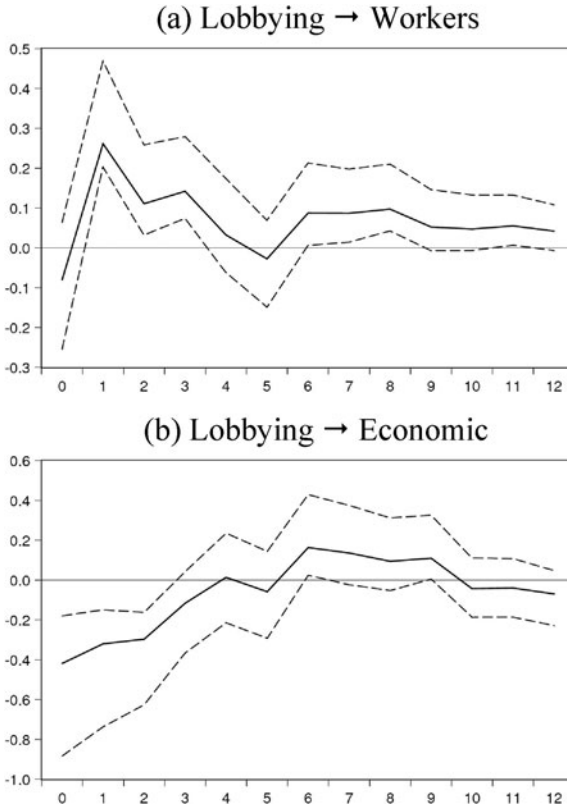
FIGURE 5
Accumulated Forecast Error Impulse Responses

FIGURE 6
Orthogonalized Impulse Responses

(a) Lobbying → Workers

(b) Lobbying → Economic

temporary work permits between 1750 and 2220 (compared to an aver-age of 33,100). Moreover, this relationship is Granger causal.

3.6 Accounting for the labour market

The previous result is surprising given that the management of work per-mits in Canada can be expected to partially fall outside the scope of direct political influence. To test the robustness of this result, I replicate a VAR model including the rate of unemployment as an endogenous regressor, along with the Lobbying and Workers variables.[5] The goal is to find whether the impact of lobbying remains significant after accounting for the share of work permits depending primarily on market conditions. Due to sample size limitations, unemployment could not be readily included in the previous specification.

For consistency, the new model includes the same deterministic terms as before and is computed with six lags. Figure 7 reports the forecast error impulse responses of the new VAR. The figure includes the two relationships of interest to understand the inflows of temporary workers in Canada. The response of Workers to Lobbying exhibits a similar pattern as before. The estimated short-run elasticity after one quarter is 0.24, close to the value of 0.23 found using the previous specification. The cumulated elasticity after two years is 0.65, compared to the 0.67 obtained before. Moreover, the relationship from Lobbying toward the pair composed of Unemployment and Workers is Granger causal (with a Wald test statistic of 2.03 and a p-value of 0.03).

Unsurprisingly, shocks in the rate of unemployment lead to a negative and significant response of the number of temporary work permits, as depicted in Figure 7(b). When the rate of unemployment falls, meaning that national labour becomes scarcer, a greater number of work

FIGURE 7

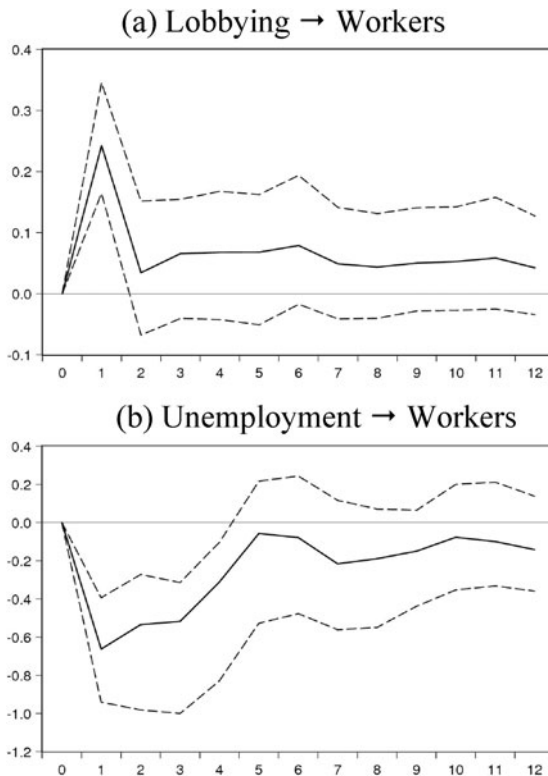Forecast Error Impulse Responses, Alternative VAR Specification

TABLE 7

Decomposition of Forecast Error Variance

		Innovations In		
		Unemployment	Lobbying	Workers
Forecast Variable	Unemployment	0.96	0.02	0.02
	Lobbying	0.22	0.70	0.07
	Workers	0.38	0.17	0.44

Forecast error variance decomposition based on the alternative VAR(6) specification, computed after 12 periods using the Cholesky ordering: Unemployment → Lobbying → Workers.

permits are issued, since this stimulates the market-driven process of temporary worker admission. When unemployment rises, temporary worker inflows go down.

When replicating using orthogonalized impulse responses, as depicted in Figure 8, the main finding also holds (I made use of the Cholesky ordering Unemployment → Lobbying → Workers). In fact, point estimates appear magnified, which is due to the existence of a positive and significant contemporaneous impact of Lobbying on Workers. The one-step ahead elasticity for the relationship Lobbying → Workers is 0.36, and the short-run effects appear to persist for nearly two years. The long-run elasticity after two years is 1.27, much larger than the value of 0.53 found using the previous specification.

Lastly, I assess the relative importance of each factor to explain the variance in the Workers series. This method is called forecast error variance decomposition. It is especially interesting to compare how much of the variance in the Workers series is explained by market forces versus corporate lobbying. I keep the same Cholesky ordering, which also matters here. Table 7 reports the variance decomposition for each variable, computed after 12 periods (three years). Each row decomposes the variance of a series between the three variables mentioned in the column headers. As can be seen, 38 per cent of the variance in the Workers series is explained by unemployment, 17 per cent is attributable to corporate lobbying, while 44 per cent is explained by the series itself. Thus, even after accounting for market forces, there seems to be a non-trivial part of the variation in temporary worker inflows explainable by the pressures exerted by corporations on decision makers.

4. Conclusion

This paper sought to provide a systematic assessment of the claim that governments cater to corporate interests when managing immigration.

Orthogonalized Impulse Responses, Alternative VAR Specification

(a) Lobbying → Workers

(b) Unemployment → Workers
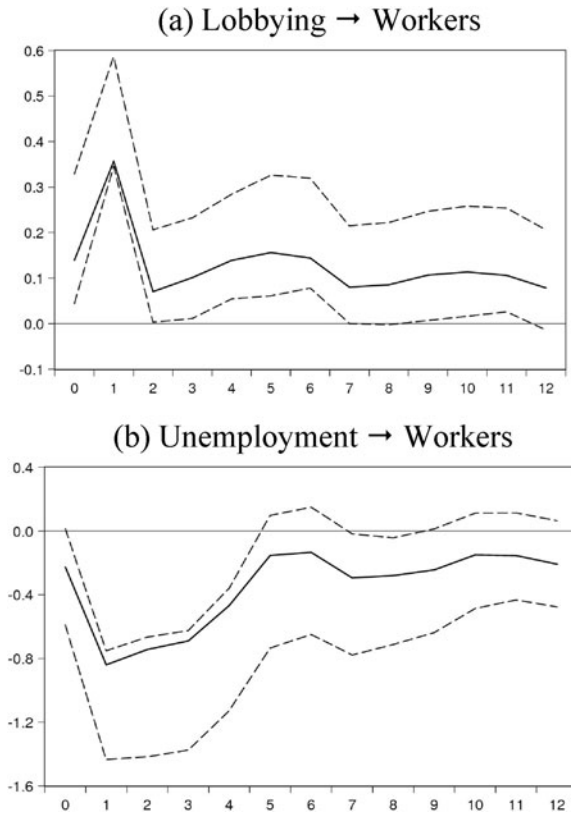
Focusing on the case of Canada, I argued that two policy instruments, temporary work permits and economic immigration, are most likely to answer the specific needs of industries. I also stressed that electorally motivated governments need not make concessions on both these instruments if they can be used as substitutes. To shed light on this question, I made use of fine-grained empirical data on lobbying and immigration in Canada over time and adopted an empirical methodology avoiding the reliance on restrictive modelling assumptions by using VAR analysis.

A key finding is the positive and significant response of temporary worker inflows to the intensity of corporate lobbying on the subject matter of immigration. This relationship is Granger causal, and the conclusion holds after controlling for the role of market forces. In contrast, there is no strong evidence that lobbies are able to affect the levels of economic immigration, except when considering cross-correlations. Those

results may sound counterintuitive, since temporary work permits in Canada were historically issued through a market-driven process limiting the scope of political influence, in contrast to permanent immigration. In practice, however, an important share of temporary foreign workers is admitted outside the labour market opinion process, providing enough political flexibility to adjust levels in response to outstanding requests from corporations.

The main empirical findings underscore the potentially important role played by temporary worker programs as a source of foreign labour. As argued in the theoretical section of this paper, national industries are likely to form conflicting preferences over the skill composition of immigration, since they each rely upon workers with specific skill sets. Temporary worker programs are particularly well suited to answer those specific industry needs. Indeed, temporary workers can be hired from abroad and selected based on their experience and resume. Temporary worker programs can also accommodate various types of industries, even the more traditional ones (for instance through the Seasonal Agricultural Worker Program or the Low Skill Pilot Program (see CIC, 2012*a*)). In contrast, policy makers have much less control over the actual sector of employment of permanent residents, whose status is not conditional on hiring offers. Future research could examine whether the electoral costs of temporary and permanent immigration also differ, in other words, whether voters have more favourable views regarding temporary workers than permanent immigrants. If so, this could reinforce the conclusion that temporary worker programs represent a substitute to economic immigration serving the objectives of both governments and industries.

Notes

1   Permanent immigration in Canada is a responsibility shared between the federal and provincial governments. For instance, Section 10(2) of the 2002 *Immigration and Refugee Protection Act* requires that the federal government meet with provinces when establishing quotas for each class of immigrants. However, the federal government remains the central authority issuing visas for permanent residence. Moreover, lobbying data availability restricts the possibility to examine corporate influence in all provinces. For those reasons, I will focus on policy making at the federal level.

2   I acknowledge the generous assistance of Gillian Cantello, director of registration and client services at the Office of the Commissioner of Lobbying, in the collection of the data used in this paper and for valuable information regarding the history of the lobbying act. The content of this paragraph is also based on Canada (2011).

3   Across the whole period from 1996 to 2011, 49 per cent of the lobbyists on the issue of immigration were from the corporate sector, 23 per cent were professional associations or unions, and the remaining were other organizations.

4   Registration records were included even if active only during a fraction of a quarter. The same rule has been applied consistently across the whole time period. I also considered two alternative measures of corporate lobbying: 1) the count of new registration records per quarter (rather than the sum of all active records) and 2) a rep-

lication of the Lobbying series in which active records were weighted to account for the importance of corporate actors (weights were based on the total number of records registered by each lobbyist during the whole time-period). Since the conclusions are similar when replicating the empirical analysis using those alternative indicators, I will focus exclusively on the most straightforward measure introduced in the text.

5   This series comes from Statistics Canada (Canada, 2012). Unadjusted monthly values were averaged by quarter. The series was then transformed in natural logarithms and seasonally adjusted. Unit root tests performed on this variable produce mixed results. A recent article suggests that the unemployment series in Canada is trend stationary once accounting for structural breaks (Ewing and Wunnava, 2001). For the purpose of this study, I will treat this series as stationary.

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