Globalization, Politics and Provincial Government Spending in Canada

MARK PICKUP* *University of Oxford and University of Calgary*

1.0 Introduction

With its small, open, price-taking economy, Canada has long been exposed to the pressures of the world market. With the introduction of the Canada/US Free Trade Agreement (FTA) in 1989, its continental extension as the North American Free Trade Agreement (NAFTA) four years later, the continuing expansion of the General Agreement on Tariffs and Trade (GATT) and the negotiation of the General Agreement on Trade in Services (GATS), Canadian markets have become increasingly integrated into the world market (Banting, Hoberg and Simeon, 1997).[1] The extent and nature of the consequences for Canadian government fiscal policy is hotly debated. In terms of its impact on the funding of the welfare state, this debate has not simply been an academic one. It has invoked a great deal of emotional protest, as exemplified by the concerns expressed that Canadian health care would be undermined by GATS and NAFTA (Evans et al., 2000).

Any study of Canadian fiscal policy and, in particular, the future of the welfare state, must take provincial government spending into account. As the federal government has taken measures to rationalize its spending, the provinces have taken on a greater share of the costs of the welfare system and, accordingly, greater decision-making power. Through a time series, cross-sectional econometric analysis of provincial government spending, I shed light on the effect that increased globalization has

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*Mark Pickup, University of Oxford & University of Calgary; mark.pickup@politics.ox.ac.uk

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had on provincial government expenditures and, in particular, on funding of the Canadian welfare system.

Globalization is typified by the increasing interconnectedness and interdependence of economies. Trade liberalization is a key component of globalization. I demonstrate that the impact of increasing trade liberalization on provincial government spending is dependent upon the ideology of the government and conditioned by the degree of provincial unionization. When relatively high levels of unionization prevail, those Canadian provincial governments that have ideologically and traditionally favoured higher spending have been pressured by trade liberalization to reduce total spending to a lowest common denominator. However, when unionization is low, provincial government spending responses to increasing trade openness is primarily compensatory—particularly in terms of welfare state spending. This is in contradiction to the "race to the bottom" theory. The contingent nature of the government response weakens the pressures of convergence produced by trade liberalization. Consequently, trade liberalization has not made political and regional determinants of government spending subservient to economic considerations.

I proceed as follows. In this section, I first outline recent theories regarding the impact of globalization on domestic spending in democratic nations, tying these theories into existing Canadian interprovincial analyses of government spending. In doing so, I present the Canadian provincial government spending responses to trade liberalization that are predicted by the globalization literature. These predictions are: 1) trade liberalization in an environment of weak labour organizations, such as that found in Canada, will create market pressures on governments to reduce spending to a lowest common denominator, regardless of the partisan nature of the party in power; and 2) that labour organization in Canada is weak enough that provincial government spending responses to increased trade liberalization will not be contingent upon levels of unionization. In section 2, I describe current trends in the trade liberalization of Canadian markets and in provincial government spending. In section 3, I describe other theories of government spending and identify the exogenous variables (political and economic) that need to be controlled in a model of government spending. In section 4, I outline the methodology and the econometric models employed to test the government spending responses predicted by the globalization literature. In section 5, I present the evidence and in section 6, I present my conclusions.

1.1 Theory

Within the globalization literature, there are two traditional categories of theories regarding how a government will respond to the pressures of

Abstract. Using time series, cross-sectional econometric modelling, an analysis is made of competing political and economic determinants of Canadian provincial government fiscal policy during the 1980s and 1990s. It is determined that provincial government spending responses to trade liberalization are dependent upon the ideology of the government and conditioned by the degree of provincial unionization. When relatively high levels of unionization prevail, those governments that typically spend the most reduce total spending to a lowest common denominator. However, when unionization is low, provincial government spending responses to increasing trade openness is primarily compensatory. This is in contradiction to the "race to the bottom" theory. The contingent nature of the provincial government spending response to trade openness means that despite overall pressures for fiscal convergence, political, economic and regional factors continue to contribute to distinct provincial spending policies.

Résumé. Cet article utilise une modélisation économétrique transversale en série chronologique pour analyser les déterminants politiques et économiques en compétition au niveau de la politique fiscale du gouvernement provincial canadien durant les années 1980 et 1990. Il est établi qu'en termes de dépenses publiques, les réactions du gouvernement provincial face à la libéralisation des échanges sont tributaires de l'idéologie du gouvernement et déterminées par le niveau de syndicalisation provincial. Lorsque le niveau de syndicalisation est relativement élevé, ce sont les gouvernements provinciaux qui dépensent le plus qui réduisent leurs dépenses totales au plus bas dénominateur commun. Par contre, plus le niveau de syndicalisation est bas, plus les dépenses publiques face à la libéralisation des échanges sont principalement compensatoires. Cela vient contredire la théorie du « nivellement par le bas ». La nature conditionnelle de la réaction du gouvernement provincial en termes de dépenses publiques signifie qu'en dépit des pressions globales pour la convergence fiscale, des facteurs politiques, économiques et régionaux continuent de contribuer aux politiques de dépenses publiques distinctes.

the global market, in terms of its spending. In "Globalization and Government Spending around the World" (2000), Geoffrey Garrett describes these as the "efficiency" theory and the "compensation" theory. The efficiency theory predicts that increased trade liberalization will place pressures on governments to reduce spending. These pressures originate with the international business sector, which views all government interventions negatively. While these pressures have always existed, more open markets are more susceptible to them. This has become increasingly true. As Garrett describes it, "technological changes that have lowered the costs and increased the speed of transportation and, more importantly, communication, have increased the opportunity costs of closure throughout the industrial countries" (1998). Thus, the increased ease with which business and finance may exercise its exit option places greater pressure on governments to bend to their wishes and engage in a "race to the bottom."

The compensation theory, on the other hand, argues that governments will respond to more open markets by increasing the public sector. David R. Cameron (1978) explains this phenomenon in terms of industrial concentration. That is, in order to compete internationally, a nation with an open economy will tend towards increased product concentration. The consequence of this is increased unionization, stronger labour confederations and more collective bargaining. The increased

influence of organized labour is used to place pressure on the government to increase government spending.

The consequence of this chain of events is that the opening of markets is met by greater government spending.

Dani Rodrik (1998) provides an alternative description of a compensatory response. He describes the relationship between trade openness and government spending in terms of risk mitigation. Rodrik argues that increased exposure to global markets can produce more volatile terms of trade and greater product concentration. In this way, exposure creates greater risk because it produces specialization, not because the world market is itself more risky. Governments, Rodrik explains, use spending to reduce the external risk associated with open economies. He demonstrates that a small permanent increase in government consumption can reduce the variability of real income; this holds in both higher and lower income nations. In less developed nations, governments can mitigate risk by taking command of a larger share of the economy (increased consumption) and in more advanced nations by providing a safety net (increased transfers to individuals). Although Rodrik's description of the relationship between market openness and government spending differs from that of Cameron's, it is also compensatory in that it predicts greater government spending in the face of opening markets.

The one characteristic that both the "efficiency" and the "compensation" theory have in common is that as globalization increases, political factors become subservient to economic pressures. Contrary to traditional theories on the effects of globalization on government spending, Garrett (1998) argues that cross-national partisan differences in government spending can be heightened, rather than decreased. The short-term negative impact of globalization, produced by market dislocation, produces pressure on government to increase spending from groups that are adversely affected. In those instances where strong left-parties and high labour organization exist, social democratic corporatism allows for an exchange of government social policy spending in return for the unions' regulation of the labour market (controlling wages and strife). This can produce externalities that attract capital. Moreover, large public economies may produce other benefits for capital (e.g., education and infrastructure) and stabilize society. In the long run, the result is both increased government spending and a successful economic formula.

When labour is not well organized, a strong right-party will find weak resistance to cutting government spending, producing an effective liberalized market. In the face of globalization, this has also proven to be an effective economic formula, but with decreased government spending (Garrett, 1998). Thus, Garrett bridges the efficiency and compensation theories by arguing that union strength and the partisan nature of the government will determine which path is followed. The work of others,

such as Carles Boix (1998), has served to corroborate Garrett's theory at the international level.

Turning to Canada, to determine what Garrett's theory would predict for Canadian provincial governments, it is necessary to consider the ideological structure of Canadian provincial parties and levels of labour organization. Studies by Keith Archer and Alan Whitehorn (1990) and Donald Blake (1988) find that the policy positions of party activists within the federal NDP, the Progressive Conservatives and the Liberals are ideologically coherent within the parties, and vary between the parties. On the issue of government spending in particular, the research reveals that NDP activists are generally further to the left (more in favour) than either the Liberals or the Progressive Conservatives and further from them than either of the two traditional parties are from each other (Archer and Whitehorn, 1990). Not surprisingly, Progressive Conservative activists were found to be generally further to the right on the issue of government spending than Liberal activists. The same pattern was found for the rating of party activists on indices of support for social welfare programmes and opposition to privatization.

It has also been found that provincial parties differ in the social economic characteristics of their base of electoral support (Chandler and Chandler, 1979). To the extent that this and the ideologies of party activists influence the policies of Canadian parties, all else being equal, one would expect the different provincial parties to have divergent fiscal policies when they form the government. In other words, partisan politics should matter. In "Do Parties Make a Difference?" James McAllister (1989) demonstrates that at the Canadian federal level the party in power does affect government spending but not to the same extent as economic variables such as employment. Overall, though, there is compelling evidence that the partisan flavour of the provincial government should matter in Canada. As for the organization of labour in Canada, there is less clarity.

Based on measures of the proportion of the workforce that is unionized, Canada has one of the most weakly organized labour forces in the industrialized world (Garrett, 1998). This is true within all Canadian provinces. Given this fact, Garrett's theory leads to a prediction that right-wing governments, such as a PC one, would reduce spending in response to trade liberalization. But what of left-wing governments, such as an NDP one? According to Garrett, an attempt to increase spending in response to trade liberalization, in an environment of a weak labour force, will create inflation and economic instability.[2] This places pressures on left-wing Canadian provincial governments to experiment with the abandonment of redistributional policies. To the extent that left-wing governments succumb to these pressures, it is predicted that Canadian provincial governments of all ideological inclinations will reduce spending in

response to trade liberalization to some lowest common denominator.[3] This expectation is ideally tested by the following model.

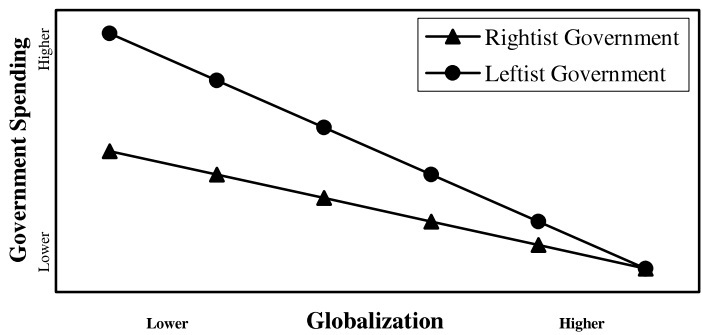
$$\left(\begin{matrix}trade\\liberalization\end{matrix}\right) + \begin{matrix}party\\in\\power\end{matrix} + \left(\begin{matrix}trade\\liberalization\end{matrix}\right) \times \left(\begin{matrix}party\\in\\power\end{matrix}\right) \rightarrow \begin{matrix}government\\spending\end{matrix}$$

The expected results from such a model are captured in Figure 1 and can be described as follows:

(1) When trade liberalization is low, spending will be higher or lower, depending upon the ideological predisposition of the party in power.
(2) An increase in trade liberalization will produce a decrease in government spending.
(3) As trade liberalization increases, parties which are predisposed to higher spending will cut spending faster than parties which are predisposed to lower spending, until spending differences between the parties are small or insignificant.

These expectations are premised on the assumption that unionization across Canada is too low to permit a left-wing government and the labour force of a given province to form an effective strategy to deal with increasing trade liberalization through increased government spending. In order to actually test this assumption, it is necessary to allow the effects of trade liberalization on government spending to also be conditioned by unionization. If the assumption holds true, then the impact of trade liberalization should be the same regardless of the level of unionization. This is tested by the following model.

FIGURE 1
The Impact of Globalization on Government Spending



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$$\begin{aligned}
&\left(\begin{matrix}trade\\liberalization\end{matrix}\right) + unionization + \begin{matrix}party\\in\\power\end{matrix}\\
&\quad + \left(\begin{matrix}trade\\liberalization\end{matrix}\right) \times \left(\begin{matrix}party\\in\\power\end{matrix}\right) + (unionization) \times \left(\begin{matrix}party\\in\\power\end{matrix}\right)\\
&\quad + \left(\begin{matrix}trade\\liberalization\end{matrix}\right) \times (unionization)\\
&\quad + \left(\begin{matrix}trade\\liberalization\end{matrix}\right) \times (unionization) \times \left(\begin{matrix}party\\in\\power\end{matrix}\right) \rightarrow \begin{matrix}government\\spending\end{matrix}
\end{aligned}$$

In addition to a unionization/trade liberalization interaction term and a unionization/trade liberalization/party in power interaction term, the above model also includes unionization and its interaction with the party in power. This is done because while unionization is generally expected to be positively correlated with government expenditures, there is, according to Garrett's theory, the potential for this to depend upon the ideological leanings of the government.[4] The next section examines the trends in provincial government spending and provincial trade liberalization.

2.0 Current Trends

In order to control for the varying sizes of the provincial economies, all measures of government spending are expressed in terms of proportion of provincial GDP. Examining Figure 2a, it is evident that while regional variations exist, overall patterns in total government spending (excluding public debt payments)/GDP are similar. That is, after reaching a peak in the early nineties, real provincial spending has levelled out or declined. The Prairies region (defined as Alberta, Saskatchewan and Manitoba) has experienced the greatest reduction, taking its average spending levels from above that of BC in 1992 (at 22 percent of GDP) to below it in 1994, at 18 percent. As a proportion of GDP, the Atlantic provincial governments consistently spend the most (on average, from 1981–1999, 25 percent of GDP), followed closely by the Quebec government (23 percent). The Ontario government, in contrast, consistently spends the least as a proportion of GDP (15 percent).

In this study, I operationalize trade liberalization as trade openness. While the globalization theories discussed so far—describing a government's expected spending response to increased trade liberalization—refer only to international trade, a similar logic can be applied to the mix of international and interprovincial trade. In their attempts to produce

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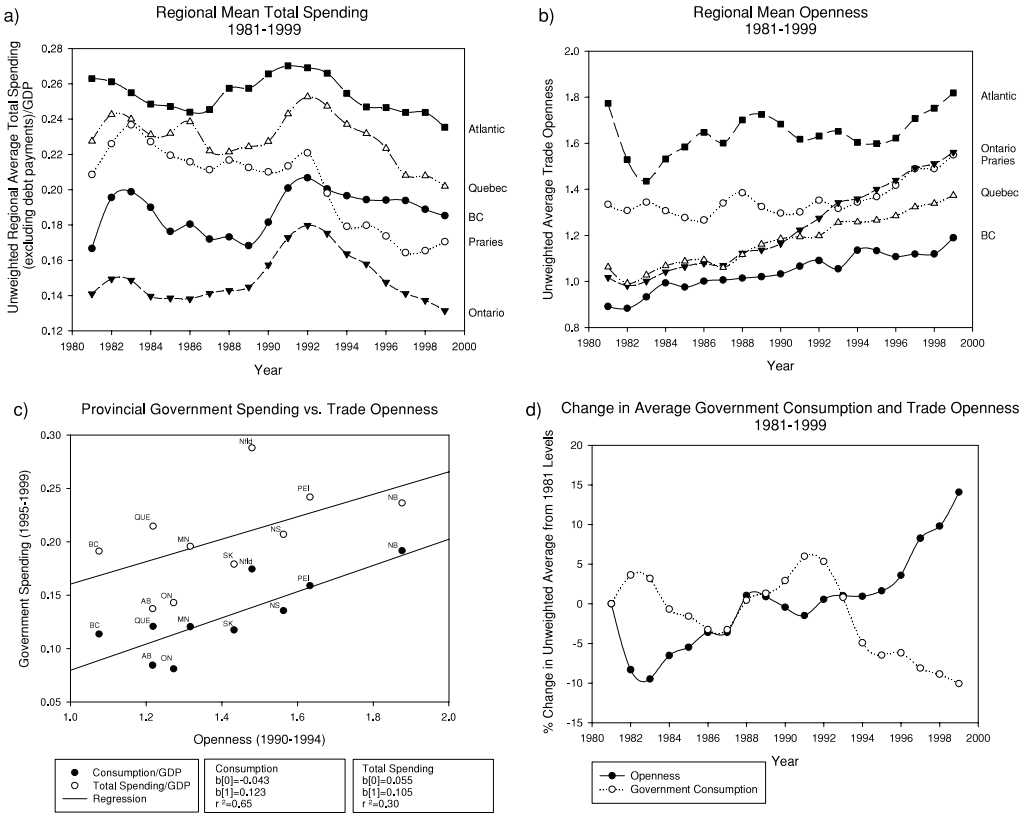
FIGURE 2A–D
Government Spending and Trade Openness, 1981–1999



economically profitable environments, provincial governments compete not only with world markets but also with each other. In fact, given the evidence that national borders still have a much larger impact on investment and trade flows than do provincial borders (Helliwell, 1998), interprovincial trade has the potential to be very competitive. Moreover, jobs and trade that are lost to another province are just as damaging to the provincial economy as those lost to another country. Provincial governments would be expected to develop fiscal policies with the mindset that the provincial economy must be maximized and/or protected in the face of both international and interprovincial trade. This suggests that interprovincial trade must also be considered when measuring the openness of a provincial economy

Figure 2b illustrates the trends within the five Canadian regions using the following measure of provincial market openness to international and interprovincial trade: (Total Imports + Total Exports)/Private GDP. Since government expenditures can affect total GDP and since they are included in the dependent variable, the measure of trade openness utilizes only private GDP in the denominator. This avoids the problem of spurious correlation.[5]

Globalization theories are premised on the notion that national markets are increasingly becoming open to trade. While the specifics of the increase in openness vary from region to region, the general direction is common: trade openness has been on the rise in all regions since the early nineties (Figure 2b). The economies of the Atlantic provinces are the most open, while that of BC is the least open. The Ontario economy has seen the largest consistent increase in openness, surpassing that of Quebec to match that of the Prairies.

Turning now to the relationship between trade openness and government spending, an initial examination of Figure 2c suggests that the compensation theory holds true amongst Canadian provinces. Provinces which had more open markets during the first half of the nineties did tend to spend more, expressed as both total spending and consumption as a proportion of GDP, during the second half of the nineties. However, Figure 2d tells a different story. When considering changes in government consumption and trade openness since 1982, rather than absolute levels, it would appear that a negative correlation exists. As trade openness increased, government consumption decreased and vice versa. This supports the "race to the bottom" theory.

This highlights the complexity in the relationship between trade openness and government spending. Differences in absolute levels of openness across provinces reflect historical differences between the provinces. This seems to have resulted in one type of difference in government spending: more open economies have greater government spending. Recent changes in trade openness, which have varied to some extent across the

provinces but have all been in the same direction, reflect a different phenomenon. This appears to have produced an overall reduction in government spending.

These results, while possibly contradictory at first glance, are consistent with Garrett's (1995) work at the international level. He finds that while there is a positive relationship between trade levels and expenditure levels, nations that have recently experienced the greatest increase in international trade liberalization have actually slowed down the expansion of their government spending. Moreover, nations with the greatest absolute levels of government spending have reduced spending growth; in other words, recent increases in trade openness have reduced government growth and those nations starting with the highest levels of spending have experienced the greatest decline in government growth.[6]

Simply, there is more than one response to trade liberalization at work. One reflects historical differences between nations or provinces. The other reflects a response to a recent and uniform increase in trade openness across Western industrialized nations and all Canadian provinces alike. Both of these phenomena must be considered when examining the impact of trade openness and its recent increase. Before we can explore these further, though, we first must consider other possible determinants of government spending which may compete with trade openness.

3.0 Other Determinants of Government Spending

In examining the relationship between trade liberalization and government spending, it is important to keep in mind that there are a large number of other potential explanations. For example, Alberto Alesina and Romain Wacziarg (1998) suggest that country size is the key variable. They argue that government consumption, as a share of GDP, is larger in smaller countries, while at the same time smaller countries tend to have more open economies. Therefore, these relationships between government consumption, economic trade and country size produce a positive relationship between trade liberalization and government spending. To account for the possibility suggested by Alesina and Wacziarg, it is important to include in any model of provincial government spending a control for the size of the province. In fact, there are a large number of such theories describing the determinants of government spending. In order to test for and demonstrate the impact of trade openness, we need to control for the variables that these competing theories suggest are important, such as economic, political or regional (cultural) variables.

3.1 Economic Determinants

Many economic variables potentially affect the level of government spending. The possible importance of unionization as an intervening factor has already been identified. In this study, unionization is operationalized as the fraction of the labour force that belongs to a union. Union density in its own right is also expected to have an important impact, as a positive correlation, on government spending. As Duane Swank (1998) notes, such expenditures tend to increase the income of union members. However, he also suggests that high union strength can assist ideologically left governments in establishing spending controls when both government and unions agree that they are absolutely necessary for the sake of the economy.

There are other economic variables that may not directly interact with government ideology and trade openness but likely compete with them. One long-standing candidate is private wealth (Ram, 1987). Wagner's law simply states that as the wealth of society increases, so does the size of government. Accordingly, per capita income should be positively correlated with government growth. At the international level, there has been mixed evidence for the operation of Wagner's law (Garrett, 2000; Rodrik, 1997, 1998). In the Canadian provincial context, Wagner's law is consistent with the findings of Sohrab Abizadeh and John Gray (1992) that the party in power makes little difference to government spending; rather, governments seem to respond to increases in private-sector provincial GDP.[7]

Unemployment levels and dependency ratios may also play an important role in spending. The dependency ratio tells us how many young people (under 16) and older people (over 64) depend on people of working age (16 to 64). An increase in either unemployment or the dependency ratio may automatically raise the cost of existing programmes, while at the same time putting pressure on the government to create new programmes. Urbanization is also an important variable, as high levels can be expected to lower government spending by allowing the government to take advantage of economies of scale.

Federal transfers to the provinces are specific to an interprovincial study. The provinces have little control over this variable, yet it has an obvious impact on the potential level of provincial government spending. Moreover, levels of federal transfers underwent significant retrenchment during the nineties, which could in part account for the decline in provincial spending witnessed during this period. Unfortunately, controlling for federal transfers produces a complication. Such transfers are composed mainly of social programme funding and (for some) equalization payments. Equalization payments are based on the relative strength of the provincial economy in comparison to other provinces,

allowing some provincial governments to spend more than they might have otherwise. Thus, it makes sense to control for equalization payments by including them as an exogenous variable. The social programme funding portion of federal transfer payments, however, is tied endogenously to provincial spending through cost-sharing mechanisms. Fortunately for our purposes, changes in social programme funding during the 1980s and 1990s were primarily driven by federal government cuts. Thus, including them as an exogenous variable is not wholly inappropriate, given the importance of controlling for transfer payments.

Inclusion of interest payments on debt as a proportion of GDP is included for purely practical purposes. Simply put, the more a government needs to pay in interest payments, the less it will have to spend on government programmes. Rodrik (1997) suggests the possibility that because a province with a more open economy can borrow more from the capital markets, it will spend more. This would indicate a need to control for debt levels. Of course, the collinearity between debt interest payments and debt is too high to include both in the same model. Fortunately, the high correlation means that the inclusion of debt interest payments will control for the potential spurious correlation suggested by Rodrik.

Population is also included as a control against the possibility that the relationship between trade openness and government spending is a spurious one. It is possible that provinces with smaller populations must have both more open economies to take advantage of economies of scale and spend more relative to GDP, due to the fixed costs of operating any government. The inclusion of population also controls for the potential—as suggested by Alesina and Wacziarg (1998)—that the relationship between government size and openness acts indirectly through province size.

3.2 Political Personalities

The literature on determinants of government spending also suggests that in addition to the party in power, the impact of strong political personalities must also be examined. In his work on affluent democracies from 1960 to 1980, Swank (1998) determined that the ideological preferences of policy makers have a significant impact on government spending. Cameron (1985) suggests that such an effect can be seen at the Canadian federal level in the personal influences of John Diefenbaker, Joe Clark, Pierre Trudeau and Louis St. Laurent during their terms as prime minister. Similarly, James McAllister (1989) notes that at the provincial level, the premier in power may matter more to levels of government spending than the party he or she belongs to. In provincial

politics during the 1980s and 1990s, two such figures suggest themselves. Both Ralph Klein as premier of Alberta and Mike Harris as premier of Ontario have been noted for their personal commitment to the task of cutting government. However, it is not clear if either Premier Klein or Premier Harris truly had a personal impact on government expenditures or if they were simply implementing the policy dictated by the economy and/or their party. The impact of these two political personalities on government spending is controlled for in the econometric modeling of this study.

3.3 Regionalism

In any comparative analysis of Canadian provinces, it is important to consider the influence of regionalism, even if it is only as a control. Controlling for regionalism is made necessary by the fact that there are likely factors that influence government spending levels, which systematically vary between regions and which are not exogenously included in the model.[8] These factors may be structural and not included because it is not clear what they are, or they may be cultural and not included because there is no clear measure of them. Ever since Gad Horowitz's (1966) Canadian adaptation of the Hartzian fragmentation approach to understanding the political cultures of new societies, the idea that regional variations in political culture are the result of varying historical patterns of immigration remains compelling to this day. Given the potential distinctiveness of provincial government fiscal policy in Quebec, the Prairies and the other regions of Canada, regional fixed effects are included in the following models.

4.0 Methodology and Model Specification

An interprovincial study has many advantages in terms of examining the political and economic determinants of government spending. It focuses on a level of government that plays an important role in providing key government programmes and services, while holding constant many of the institutional factors often considered important. This provides for a focus on the non-institutional economic and political factors, which, it has been argued, vary as much between provinces as they do between OECD countries (Imbeau et al., 2001).

This study analyzes various categories of spending separately, as it has been argued that there are different political costs for different types of spending (Landon and Ryan, 1997). The econometric models use cross-sectional, time series provincial statistical data from 1981 to 1999.[9] Panel-corrected standard errors are calculated following the procedure outlined by Nathaniel Beck and Jonathan Katz (1995). This is a conservative

estimation. Correcting for correlation between panels increases standard errors and therefore decreases statistical significance. However, this procedure helps ensure that the results found are not due to specification errors.[10]

Commonly, those following the Beck and Katz procedure will also employ a full fixed effects model with a lagged dependent variable. The models outlined in this section do include unit dummies at the regional level. They do not contain unit dummies at the provincial level for reasons explained below. A conscious decision was made to not include period dummies or a lagged dependent variable. This decision was based on the work of Thomas Plumper et al. (2005). They demonstrate that the inclusion of time dummies leaves very little variance for the explanatory variables. This is particularly problematic if it is changes in levels that are of interest, which is the case for this study. The problem is made even worse by the inclusion of a lagged dependent variable. Moreover, the estimated parameter on the lagged dependent variable is likely to be biased upwards (Achen, 2000). Rather than include a lagged dependent variable or time dummies, it is better to control for autocorrelation within the error component of the series through an AR(1) error model. Accordingly, this has been done using the Prais-Winsten method. In doing so, a separate AR(1) coefficient is specified for each panel (province).

In keeping with the theory described by Figure 1, the first model estimated for this study includes both the lagged main effects of trade openness and the party in government, and the interaction effect of (party) $\times$ (openness). It also includes the lagged main effects of other economic variables and regionalism fixed effects, along with political personality dummy variables. A second model is also estimated, which conditions the effects described in Figure 1 on unionization by including union density, (union density) $\times$ (openness), (union density) $\times$ (party) and (union density) $\times$ (party) $\times$ (openness). The use of a one-year lag for the explanatory variables follows the work of those in the field, such as Garrett (1995) and Rodrik (1998). It is based on the notion that the effects of economic and political changes are felt relatively quickly but that there will be at least a one-budget lag before the government can respond to these effects. Therefore, there must be some degree of lag included in the model and a one-year lag is the smallest possible, given the data. With the exception of the party, Klein and Harris dummy variables and federal transfers to provinces, these explanatory variables are also found in studies by Garrett (1998 and 2000) and Dani Rodrik (1987 and 1998). The choice of explanatory variables is designed to both test the theory at hand and control for competing theories of government spending. The complete models are:

Model I

$$\begin{aligned}\text{GOVSPEND}_{it} = {} & \beta_{o\iota} + \beta_1\text{OPEN}_{i,t-1} + \beta_2\text{FEDTRAN/GDP}_{i,t-1} \\ & + \beta_3\text{DEBT/GDP}_{i,t-1} + \beta_4\text{POP}_{i,t-1} \\ & + \beta_5\text{URBAN}_{i,t-1} + \beta_6\text{UNEMP}_{i,t-1} + \beta_7\text{DEP}_{i,t-1} \\ & + \beta_8\text{UNION}_{i,t-1} + \beta_9\text{PCI}_{i,t-1} + \beta_{10}\text{NDP}_{i,t-1} \\ & + \beta_{11}\text{PQ}_{t-1} + \beta_{12}\text{SC}_{i,t-1} + \beta_{13}\text{PC}_{i,t-1} \\ & + \beta_{14}\text{KLEIN}_{i,t-1} + \beta_{15}\text{HARRIS}_{i,t-1} + \beta_{16}\text{BC}_i \\ & + \beta_{17}\text{PRA}_i + \beta_{18}\text{ATLAN}_i + \beta_{19}\text{QUE}_i \\ & + \beta_{20}(\text{Party} \times \text{Openness Interactions})_{i,t-1}\end{aligned}$$

Model II

$$\begin{aligned}\text{GOVSPEND}_{it} = {} & \beta_{o\iota} + \beta_1\text{OPEN}_{i,t-1} + \beta_2\text{FEDTRAN/GDP}_{i,t-1} \\ & + \beta_3\text{DEBT/GDP}_{i,t-1} + \beta_4\text{POP}_{i,t-1} \\ & + \beta_5\text{URBAN}_{i,t-1} + \beta_6\text{UNEMP}_{i,t-1} + \beta_7\text{DEP}_{i,t-1} \\ & + \beta_8\text{UNION}_{i,t-1} + \beta_9\text{PCI}_{i,t-1} + \beta_{10}\text{NDP}_{i,t-1} \\ & + \beta_{11}\text{PQ}_{t-1} + \beta_{12}\text{SC}_{i,t-1} + \beta_{13}\text{PC}_{i,t-1} \\ & + \beta_{14}\text{KLEIN}_{i,t-1} + \beta_{15}\text{HARRIS}_{i,t-1} + \beta_{16}\text{BC}_i \\ & + \beta_{17}\text{PRA}_i + \beta_{18}\text{ATLAN}_i + \beta_{19}\text{QUE}_i \\ & + \beta_{20}(\text{Party} \times \text{Openness Interactions})_{i,t-1} \\ & + \beta_{21}(\text{Party} \times \text{UNION Interactions})_{i,t-1} \\ & + \beta_{22}(\text{Openness} \times \text{UNION Interactions})_{i,t-1} \\ & + \beta_{23}(\text{Party} \times \text{UNION} \times \text{Openness Interactions})_{i,t-1}\end{aligned}$$ [11]

where i indicates the province for which the measurement applies and t indicates the year to which it applies;

OPEN_{t-i} is trade openness lagged one year;

FEDTRAN/GDP_{t-1} is federal transfers as a proportion of GDP lagged one year;

DEBT/GDP_{t-1} is interest payments on provincial debt as a proportion of GDP lagged one year;

POP_{t-1} is the provincial population lagged one year;

URBAN_{t-1} is the degree of provincial urbanization lagged one year;

UNEMP_{t-1} is unemployment levels lagged one year;

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DEP_{t-1} is the dependency ratio lagged one year;
$UNION_{t-1}$ is union density lagged one year;
PCI_{t-1} is per capita income lagged one year;
PC_{t-1}, NDP_{t-1}, PQ_{t-1}, and SC_{t-1}
are party in power dummy variables lagged one year, with the Liberals as the control party;
$KLEIN_{t-1}$ and β_{14} $HARRIS_{t-1}$
are Klein and Harris dummy variables lagged one year;
BC, PRA, ATLAN, QUE
are regional fixed effects with Ontario as the control province; and $(\text{Party} \times \text{Openness Interactions})_{t-1,}$ $(\text{Party} \times \text{UNION Interactions})_{t-1,}$ $(\text{Openness} \times \text{UNION Interactions})_{t-1}$ and $(\text{Party} \times \text{UNION} \times \text{Openness Interactions})_{t-1}$ are the respective interactions between trade openness, union density and the party in power, all lagged one year.

Definitions for all terms are provided in the appendix. Regional fixed effects are captured and controlled for by a series of regional dummy variables. Regional rather than provincial dummies are used for two reasons. The first is to produce geographical units of greater similarity with respect to population. The population of the Atlantic region is of course much smaller than that of Ontario, but the two are much more similar than are PEI and Ontario. The second reason for regional dummies is to ensure that the number of time points in the time series cross-sectional setup clearly dominated the number of geographical units.[12] This avoids the many statistical problems associated with a strict panel data setup.

The creation of regional units is always controversial. For example, the inclusion of Alberta with Manitoba and Saskatchewan may seem inappropriate due to their economic differences. However, in terms of government spending and economic openness (see Figure 2c), Alberta, Manitoba and Saskatchewan are much more similar than the provinces which make up the Atlantic region.[13] The differences between Alberta and the other two Prairie provinces are captured in part by the Klein dummy variable. This variable represents the differences between Alberta and the other Prairie provinces after 1992, which were not present prior to 1992. One of the most obvious of these differences is Klein's premiership, but it clearly isn't the only factor at work. This necessitates a cautious interpretation of the effects of the Klein dummy variable.

The party-in-power measure is included as a series of dummy variables. Many studies use more complicated measures, such as percentage of the seats in Cabinet held by social democratic parties. This is usually made necessary by the coalition nature of many parliamentary cabinets. The use of the simple dummy variable in the above model reflects the reality that within Canadian legislatures, the party that forms

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government often has near complete control of policy. It also allows for the fact that provincial parties, such as Social Credit and the Parti Québécois, do not fit traditional social democrat/neoliberal dichotomies. The Social Credit Party is particularly difficult to place on a left/right scale. While provincial Social Credit parties tend to have lower than average expenditures on transfers to individuals, they tend to have much higher than average consumption expenditures. The use of a dummy for each potential party in power does not limit the analysis in any way, while at the same time it allows for the nuances of Canadian provincial party ideologies.

In order to examine the many facets of government spending, models were built for a series of dependent variables, $GOVSPEND_{it}$. As proportions of provincial GDP, these are total government spending (excluding debt payments), provincial government consumption (expenditures on goods and services), and provincial government transfers to individuals. Government consumption and total government spending are commonly used in studies of the impact of market integration on domestic fiscal policy.[14] Government consumption is a good indicator of government size. The transfers to individuals variable reflects Swank's (2000) inclusion of social transfers as a measure of public sector expenditures. Transfers to individuals and consumption are the key components of the welfare state.

5.0 Results and Analysis

The results of the OLS estimates of the model coefficients are provided in Tables 1a through 1c. The calculated panel corrected standard errors are also provided. Results are presented for both a model including only party-openness interactions (model I) and a model including the full set of party-openness-union interactions (model II). R^2 values for the models fall in the range 0.82 to 0.96. The magnitude of these values must be interpreted with caution, given the inclusion of regional fixed effects in the models.

5.1 Trade Openness, Unionization and Government Expenditures

Model I tests the theory that increased economic openness has resulted in governments of all partisan natures reducing spending to some lowest common denominator. Table 1a presents the results for total government spending as a percentage of GDP; Table 1b presents the results for government consumption as a percentage of GDP; and Table 1c does the same for transfers to individuals as a percentage of GDP. Looking at the tables, there are interesting similarities and differences amongst parties. At low levels of trade openness, a Progressive Conservative government

TABLE 1A

Total Spending (Excluding Debt Payments) as Percentage of GDP

	Model I Party-Openness Interactions		Model II Party-Openness-Union Interactions	
	OLS Coefficient	Panel Corrected SE	OLS Coefficient	Panel Corrected SE
β^{i}_{PCI}	3.330[b]	1.750	1.890	1.470
β_{DEP}	−0.149	0.158	0.00246	0.164
β_{UNEMP}	−0.000311	0.000991	0.000301	0.000893
β_{URBAN}	−0.121[a]	0.0204	−0.112[a]	0.0184
β^{ii}_{POP}	0.0111[b]	0.00477	0.00778[b]	0.00425
$\beta_{FED/GDP}$	0.564[a]	0.127	0.437[a]	0.104
$\beta_{DEBT/GDP}$	−0.205[a]	0.0686	−0.180[a]	0.0757
β_{UNION}	0.249[a]	0.0375	0.836[a]	0.284
β_{OPEN}	0.00497	0.0149	0.138[a]	0.0643
β_{PCxOPN}	0.0317[b]	0.0192	−0.0654	0.0757
$\beta_{NDPxOPN}$	−0.0488	0.0305	1.111[a]	0.293
$\beta_{SOCxOPN}$	−0.0301	0.0859	1.0211	1.608
β_{PQxOPN}	−0.0600	0.0603	−0.225	1.405
β_{PC}	−0.0493[b]	0.0261	0.135	0.116
β_{NDP}	0.0644	0.0404	−1.146[a]	0.390
β_{PQ}	0.0650	0.0698	0.0495	1.749
β_{SC}	0.0219	0.0875	−0.792	1.591
β_{HARRIS}	0.00316	0.0131	−0.0123	0.0120
β_{KLEIN}	−0.0223[a]	0.00968	−0.0185[a]	0.00880
β_{BC}	0.0736[a]	0.0320	0.0534[b]	0.0288
β_{QUE}	0.0779[a]	0.0150	0.0516[a]	0.0126
β_{ATLAN}	0.0924[a]	0.0431	0.0493	0.0369
β_{PRA}	0.121[a]	0.0369	0.0882[a]	0.0321
$\beta_{PCxUNION}$	—	—	−0.537[a]	0.333
$\beta_{NDPxUNION}$	—	—	3.945[a]	1.146
$\beta_{PQxUNION}$	—	—	−1.141	4.563
$\beta_{SOCxUNION}$	—	—	2.119	3.882
$\beta_{OPENxUNION}$	—	—	−0.338[b]	0.179
$\beta_{PCxUNIONxOPEN}$	—	—	0.282	0.215
$\beta_{NDPxUNIONxOPEN}$	—	—	−3.455[a]	0.859
$\beta_{PQxUNIONxOPEN}$	—	—	0.465	3.657
$\beta_{SOCxUNIONxOPEN}$	—	—	−2.762	3.938
PC Joint-F[iii]	—	—	11.96[a]	—
NDP Joint-F	—	—	45.48[a]	—
PQ Joint-F	—	—	5.06	—
SC Joint-F	—	—	10.97[a]	—
Liberal Joint-F	—	—	84.99[a]	—
r^2	0.898	—	0.960	—

[a]Significant at 5% level. [b]Significant at 10% level.

Notes: [i]PCI is measured in millions of dollars. [ii]Population is measured in millions. [iii]The Joint-F is a test of the joint significance of the party in power/trade openness interaction, the party in power/union density interaction, and the party in power/trade openness/union density interaction. This is repeated for each party except the Liberals. For the Liberals, the Joint-F is a test of the joint significance of openness, union and the union/openness interaction.

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TABLE 1B
Consumption as a Percentage of GDP

	Model I Party-Openness Interactions		Model II Party-Openness-Union Interactions	
	OLS Coefficient	Panel Corrected SE	OLS Coefficient	Panel Corrected SE
β^{i}_{PCI}	−0.528	1.010	−1.350	9.250
β_{DEP}	−0.181	0.116	−0.183	0.122
β_{UNEMP}	−0.00222[a]	0.000646	−0.00188[a]	0.000631
β_{URBAN}	−0.0727[a]	0.0143	−0.0702[a]	0.0133
β^{ii}_{POP}	0.00321[a]	0.00305	0.00216[a]	0.00302
$\beta_{FED/GDP}$	0.0602	0.0864	−0.0107	0.0794
$\beta_{DEBT/GDP}$	−0.164[a]	0.0550	−0.159[a]	0.0548
β_{UNION}	0.198[a]	0.0238	0.232	0.216
β_{OPEN}	0.0557[a]	0.0984	0.0644	0.0492
β_{PCxOPN}	−0.0280[a]	0.0119	−0.000943	0.0630
$\beta_{NDPxOPN}$	−0.101[a]	0.0213	0.586[a]	0.238
$\beta_{SOCxOPN}$	−0.0364	0.0729	0.209	1.397
β_{PQxOPN}	−0.0641	0.0423	−0.04003	1.102
β_{PC}	0.0366[a]	0.0172	−0.0208	0.0961
β_{NDP}	0.138[a]	0.0279	−0.643[a]	0.0315
β_{PQ}	0.0760	0.0487	0.759	1.391
β_{SC}	0.0633	0.0726	−0.139	1.380
β_{HARRIS}	−0.00408	0.00866	−0.00285	0.00866
β_{KLEIN}	−0.0108	0.00667	−0.00808	0.00631
β_{BC}	0.0112	0.0206	0.00764	0.0196
β_{QUE}	0.0441[a]	0.0106	0.0359[a]	0.0101
β_{ATLAN}	0.0554[b]	0.0288	0.0449[b]	0.0265
β_{PRA}	0.0443[b]	0.0241	0.0395[b]	0.0230
$\beta_{PCxUNION}$	—	—	0.0162	0.279
$\beta_{NDPxUNION}$	—	—	2.260[a]	0.911
$\beta_{PQxUNION}$	—	—	−1.903	3.616
$\beta_{SOCxUNION}$	—	—	0.507	2.359
$\beta_{OPENxUNION}$	—	—	−0.0284	0.136
$\beta_{PCxUNIONxOPEN}$	—	—	−0.8301	0.181
$\beta_{NDPxUNIONxOPEN}$	—	—	−2.009[a]	0.688
$\beta_{PQxUNIONxOPEN}$	—	—	0.988	2.861
$\beta_{SOCxUNIONxOPEN}$	—	—	−0.638	3.412
PC Joint-F[iii]	—	—	8.66[a]	—
NDP Joint-F	—	—	42416[a]	—
PQ Joint-F	—	—	8.97[a]	—
SC Joint-F	—	—	0.83	—
Liberal Joint-F	—	—	121.27[a]	—
r^2	0.923	—	0.945	—

[a]Significant at 5% level. [b]Significant at 10% level.

Notes: [i]PCI is measured in millions of dollars. [ii]Population is measured in millions. [iii]The Joint-F is a test of the joint significance of the party in power/trade openness interaction, the party in power/union density interaction, and the party in power/trade openness/union density interaction. This is repeated for each party except the Liberals. For the Liberals, the Joint-F is a test of the joint significance of openness, union and the union/openness interaction.

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TABLE 1C
Transfers to Individuals as a Percentage of GDP

	Model I Party-Openness Interactions		Model II Party-Openness-Union Interactions	
	OLS Coefficient	Panel Corrected SE	OLS Coefficient	Panel Corrected SE
β^{i}_{PCI}	−0.369	0.395	−0.938[a]	0.330
β_{DEP}	−0.0699	0.0448	−0.0378	0.04420
β_{UNEMP}	0.000190	0.000273	0.000257	0.000228
β_{URBAN}	−0.0259[a]	0.00571	−0.0254[a]	0.00496
β^{ii}_{POP}	0.00584[a]	0.00130	0.00732[a]	0.00120
$\beta_{FED/GDP}$	−0.0150	0.0341	−0.0135	0.0273
$\beta_{DEBT/GDP}$	−0.0341	0.0215	−0.0295	0.0224
β_{UNION}	0.0727[a]	0.0109	0.299[a]	0.0693
β_{OPEN}	0.00673[b]	0.00368	0.0570[a]	0.0158
β_{PCxOPN}	0.00960[a]	0.00462	0.00790	0.0215
$\beta_{NDPxOPN}$	0.00175	0.00723	0.262[a]	0.0592
$\beta_{SOCxOPN}$	0.0490	0.0313	0.260	0.667
β_{PQxOPN}	−0.0193	0.0149	0.175	0.458
β_{PC}	−0.0170[a]	0.00700	0.00237	0.335
β_{NDP}	−0.00795	0.00983	−0.306[a]	0.0832
β_{PQ}	0.0261	0.0179	−0.138	0.582
β_{SC}	−0.0558[b]	0.0314	−0.163	0.659
β_{HARRIS}	−0.00688[a]	0.00309	−0.0132[a]	0.00289
β_{KLEIN}	−0.00358	0.00247	−0.00291	0.00190
β_{BC}	0.0389[a]	0.00836	0.0443[a]	0.00718
β_{QUE}	0.0174[a]	0.00444	0.0151[a]	0.00404
β_{ATLAN}	0.0390[a]	0.0117	0.0445[a]	0.0103
β_{PRA}	0.0433[a]	0.0103	0.0516[a]	0.00935
$\beta_{PCxUNION}$	—	—	−0.0448	0.0999
$\beta_{NDPxUNION}$	—	—	0.869[a]	0.242
$\beta_{PQxUNION}$	—	—	0.394	1.512
$\beta_{SOCxUNION}$	—	—	0.356	1.603
$\beta_{OPENxUNION}$	—	—	−0.132[a]	0.0444
$\beta_{PCxUNIONxOPEN}$	—	—	−0.00126	0.0638
$\beta_{NDPxUNIONxOPEN}$	—	—	−0.761[a]	0.172
$\beta_{PQxUNIONxOPEN}$	—	—	−0.472	1.188
$\beta_{SOCxUNIONxOPEN}$	—	—	−0.621	1.627
PC Joint-F[iii]	—	—	19.31[a]	—
NDP Joint-F	—	—	39.69[a]	—
PQ Joint-F	—	—	6.57[b]	—
SC Joint-F	—	—	19.43[a]	—
Liberal Joint-F	—	—	100.44[a]	—
r^2	0.815	—	0.9179	—

[a]Significant at 5% level. [b]Significant at 10% level.

Notes: [i]PCI is measured in millions of dollars. [ii]Population is measured in millions. [iii]The Joint-F is a test of the joint significance of the party in power/trade openness interaction, the party in power/union density interaction, and the party in power/trade openness/union density interaction. This is repeated for each party except the Liberals. For the Liberals, the Joint-F is a test of the joint significance of openness, union and the union/openness interaction.

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spends less than any other government, in terms of total spending. Yet, in terms of consumption, Progressive Conservative governments most resemble NDP governments with high expenditures. As for transfers to individuals, Progressive Conservative and Social Credit governments spend the least at low levels of trade openness. For all types of spending, the Parti Québécois is statistically indistinguishable from the Liberals.

Considering now how these patterns change with rising levels of trade openness, the results for total spending are minimal. There is weak statistical evidence that Progressive Conservative governments, which systematically have lower total spending than any other, are the only governments to respond to trade openness. They do so by increasing spending. The results for government consumption are more substantial. Both NDP and Progressive Conservative governments have statistically significant higher levels of consumption at low trade openness, with the NDP having the highest. As trade openness increases, NDP governments respond by reducing consumption. This is consistent with the theory posited by the globalization literature. The party that systematically spends the most on consumption when in government (NDP) responds to increasing trade openness by reducing spending. However, Liberal, Progressive Conservative and Social Credit governments actually increase consumption in response to trade openness. Progressive Conservative governments increase consumption at about half the rate of these other governments. This suggests that governments led by a party other than the NDP experience pressures to increase consumption in response to increasing trade openness.

As for transfers to individuals, all governments except for those formed by the Parti Québécois respond to increases in trade openness by increasing expenditures. Progressive Conservative governments spend significantly less than Liberal and NDP governments, and increase transfers more quickly in response to increasing trade openness. Social Credit governments spend the least on transfers to individuals and increase spending the most in response to increasing trade openness.

Considering welfare state spending as a whole, it would seem that those governments that generally have the lowest levels of consumption and transfers to individuals increase spending the most in response to increasing trade openness, while those governments that systematically spend the most either increase spending at a much slower rate or decrease consumption and transfers to individuals. In this way, trade openness does cause government consumption and transfers to individuals to converge across governments of all parties but not in the manner predicted by the hypothesized theory. Spending converges at some intermediate point rather than at the lowest level.

The theory being tested by model I is premised on the idea that labour organization across the Canadian provinces is universally low enough that

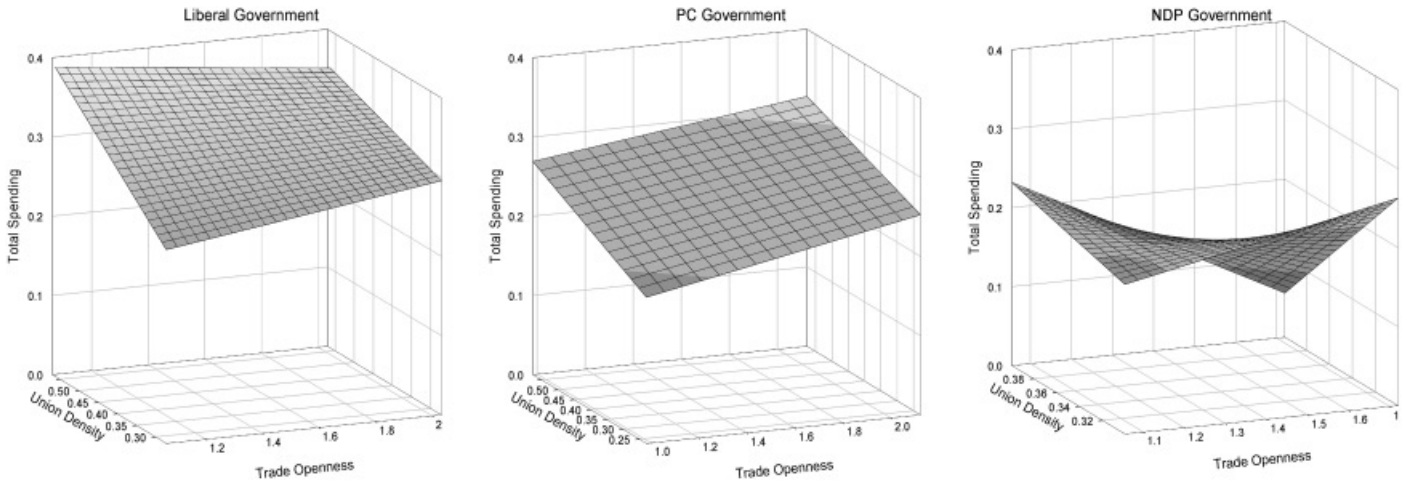
it does not produce diverging strategies in response to trade openness amongst different partisan governments. Based on model I, high union density produces higher total spending, consumption and transfers to individuals. This suggests that union density may compensate for any spending cuts that occur due to trade openness. It also suggests that union density may be high enough in some provinces and vary widely enough across the provinces to make a difference to the impact of openness on government spending. Therefore, a second model (model II) was estimated, which conditions the impact of trade openness, government partisanship and their interaction on union density.

Examining the estimated coefficients for model II in Tables 1a through 1c, it is evident that many of the interaction and constituent terms for trade openness, union density and government partisanship are statistically significant. For total government spending and transfers to individuals, the interaction terms are jointly significantly different from Liberal governments at the 95 per cent confidence level for Progressive Conservative, NDP and Social Credit governments. For government consumption, the same is true for Progressive Conservative, NDP and Parti Québécois governments.

In order to interpret these three-way interaction effects, the impact of trade openness at varying levels of union density and the impact of union density at varying levels of trade openness are plotted for different governments. Figure 3a presents these plots for total government spending for Liberal, NDP and PC governments. Figure 3b does the same for government consumption. These plots present the varying effects of union density and trade openness only for those values that each partisan type of government has experienced. This reduces the potential possibility of unhelpful out-of-sample predictions. The impact of these variables (union density and trade openness) is presented as the predicted level of government expenditures (total government spending and consumption) for each partisan type of government, depending upon the level of these variables.[15] In doing so, all other variables are set at their median values.[16]

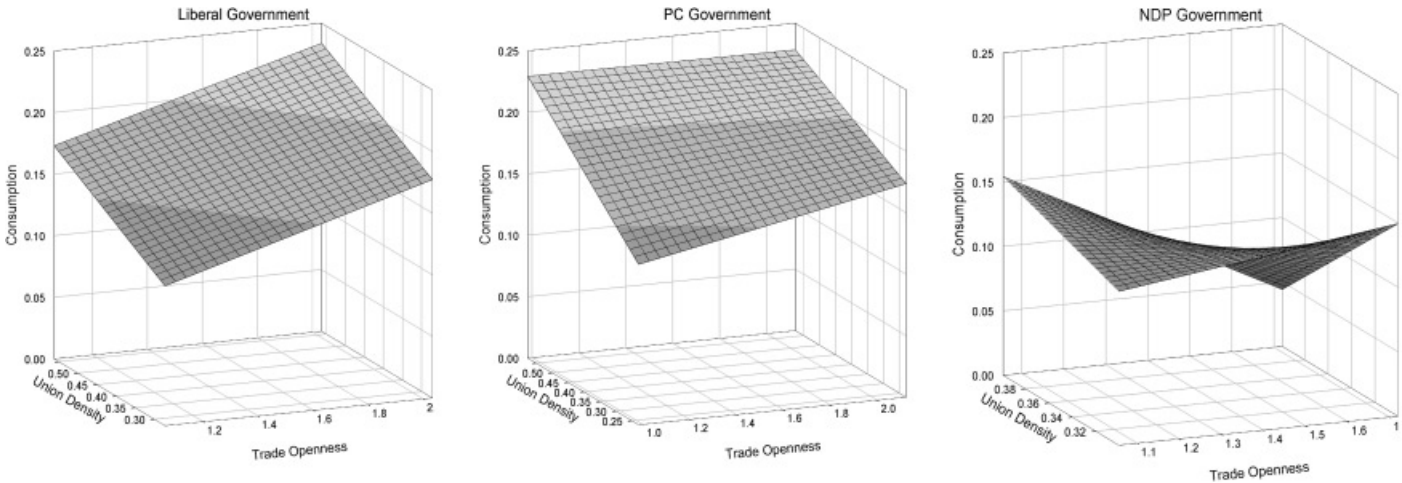
Examining these figures is very informative. Starting with total government expenditures, it is evident that at relatively high levels of union density, things have changed from model I. Liberal and Parti Québécois (not shown) governments still show very little response to levels of trade openness, and Progressive Conservative governments increase total spending. However, NDP governments clearly cut total spending in response to increasing trade openness. Social Credit governments (not shown) do the same but to a lesser extent. As union density decreases, the pattern that was established in model I is re-established. All partisan types of governments respond very little to increases in trade openness. The largest response is that of Progressive Conservative governments, which continue to increase total spending somewhat.

FIGURE 3A
Total Government Spending Response to Union Density and Trade Openness (Liberal, NDP and PC Governments)



Note: Total government spending response to union density and trade openness is presented as the predicted level of total spending depending upon the level of these variables. In doing so, all other variables are set at their median values. The regional dummy variables are set as one for the Prairies and zero otherwise. The Klein and Harris dummy variables are both set at zero.

FIGURE 3B
Government Consumption Response to Union Density and Trade Openness (Liberal, NDP and PC Governments)



Note: The government consumption response to union density and trade openness is presented as the predicted level of government consumption depending upon the level of these variables. In doing so, all other variables are set at their median values. The regional dummy variables are set as one for the Prairies and zero otherwise. The Klein and Harris dummy variables are both set at zero.

A much more pronounced result is found with government consumption. At relatively high levels of union density, the results are similar to model I. Liberal and Social Credit (not shown) governments increase consumption, PC governments do not respond to increasing trade openness and NDP governments cut consumption. Parti Québécois governments respond to union density but not trade openness (not shown). The overall effect is convergence at some intermediate level. That government spending does not simply converge to a lowest common denominator is particularly evident in government consumption responses to trade openness at lower levels of union density. Liberal governments continue to increase consumption but now so do PC governments. NDP governments at lower levels of union density no longer cut consumption in response to increasing trade openness. With union density low, the consumption response seems to be much more one of compensation—that is, the governments that have the lowest consumption increase it in response to increasing trade openness to match that of the governments that have the highest consumption. In terms of transfers to individuals (not shown), the partisan spending responses are very similar to consumption, except that it is the Parti Québécois governments which are now statistically indistinguishable at the 95 per cent confidence level from Liberal governments; the Social Credit response is—as with total spending—very similar to NDP governments.

Clearly, the response of governments to trade openness depends upon the level of union density. The difference is primarily manifest in the changing responses of NDP and Social Credit governments. With the exception of these governments at higher levels of union density, governments generally respond to trade openness through expenditure increases. This is particularly evident for the most important aspects of the welfare state: consumption and transfers to individuals. Digging deeper, it turns out that the NDP and Social Credit governments that cut welfare state spending in response to increasing trade openness, under relatively high levels of union density, are the BC Social Credit, Saskatchewan NDP and Manitoba NDP governments. With the exception of these three instances, the typical Canadian provincial government response to increasing trade openness is compensation through increased consumption and transfers to individuals. These effects are modest in magnitude. At the lowest levels of union density experienced by a Liberal government, a one standard deviation increase in trade openness (0.261) will produce an increase in consumption of 1.5 per cent of GDP.

The middling size of the compensatory response means that the three exceptions to this response are very important. Under an NDP government, a one-standard deviation increase in trade openness at the highest level of union density that an NDP government experienced in this period (0.399) will produce a decrease in consumption of 4.3 per cent of GDP. This is, of course, an extreme case, but with consumption levels only

ranging from 7.4 to 20.9 per cent of GDP, it demonstrates the potential magnitude of the efficiency response of certain provincial governments to increasing trade openness.

Given the importance of these cases, it is necessary to consider potential causes of their divergence from the usual pattern. Corporatist theory may provide a hint. While the occurrence of NDP governments in an environment of strongly organized labour reducing spending would seem to contradict Garrett's reading of corporatist theory, it is actually consistent with Swank's interpretation. Swank (1988) has suggested that close and trusting linkages with unions can assist reluctant left governments in reducing spending.[17] Unlike centre or right governments, which may have to rely on spending to remain electorally popular, left governments may be able to use their connections with unions to make the case for austerity. For this to occur, of course, a certain degree of unionization is necessary. Hence, higher levels of unionization may allow NDP governments to make spending cuts while avoiding some of the electoral backlash that governments of other ideologies may experience.

The different readings of corporatist theory may not actually be a distinction between Garrett and Swank but more a distinction between *relatively* high unionization in Canadian terms (which objectively speaking is still low) and *objectively* strong labour organization. Even the most unionized provinces in Canada could hardly be described as social corporatist states, as Garrett's theory understands them. Union density in Canada may reach high enough levels to assist NDP governments to implement austerity policies but not high enough to produce the spending increases expected in a left-labour environment.

This explanation is relatively convincing for NDP governments but it does little to explain why the BC Social Credit Party also chose to engage in spending cuts under relatively high levels of unionization. For this, we may be assisted by Timothy Lewis' description of the neoliberal movement towards spending cuts at the federal level during the 1990s. He describes it as "a populist counterrevolution against the perceived excessive Keynesian revolution" (2003). Of all the combinations of parties and provinces during the 1980s and 1990s, the Social Credit Party in BC was most strongly founded on populist foundations (Blake, Carty and Erikson, 1991). If there was any time and place during the 1980s and 1990s when and where a populist argument could be made, it was in BC under the Social Credit government. Moreover, this is the only instance of a Social Credit Party in our dataset, so the fact that the spending cuts occurred under the high unionization inherent to BC may simply be a coincidence. Unfortunately, while this may explain the policies of the Social Credit government in BC during the nineties, it does little to contribute to general theory, except to say that the same populist predilection of Prairie politics may have made the neoliberal counterrevolution

particularly relevant in Manitoba and Saskatchewan during their respective NDP governments.

Overall, if the behaviour of these governments—in particular the NDP—is not an aberration but is the consequence of systemic forces, then these forces need to be taken seriously, given that they threaten to override Canadian provincial governments' primary response, that of compensation, to increasing trade openness.

5.2 Other Economic and Political Factors

As demonstrated in Figure 2b, trade openness has increased across the regions since the early nineties. However, even though this period witnessed an increase in trade openness, with low levels of variation between provinces, variation in total government spending, consumption and transfers to individuals actually increased.[18] This suggests that while trade openness has a potentially large impact on government spending, it has not overcome the effects of other economic and political variables to produce convergence. As has already been demonstrated, varying levels of union density have a big impact on the potential for trade openness to produce convergence. It is also useful to briefly consider the impact of other economic and political factors.

Overall, some economic variables do impact government expenditures. However, none of them individually have the same potential as trade openness, in terms of magnitude, to affect government spending. Of the economic factors, the potential for higher levels of urbanization to allow governments to take advantage of economies of scale has the greatest magnitude. All else being equal, a province with urbanization levels one standard deviation (0.219) above the mean (0.424) will spend less by 2.45 percentage points of GDP. Urbanization also leads to lower consumption, and lower transfers to individuals.

Beyond urbanization, population size is positively correlated with total government spending, consumption and transfers to individuals. This runs counter to the hypothesis that the correlation between trade liberalization and government spending is spurious, because small provincial size is responsible for both trade openness and large government spending (relative to GDP). There is a very small negative relationship between per capita income and transfers to individuals. This suggests that among Canadian provincial governments, Wagner's law does not hold.

The effects of debt payment levels and federal transfer payments on government spending are straightforward. Higher levels of debt payments mean the government has less to spend. This is true in terms of total spending and consumption. Higher federal transfer payments result in higher total spending. Transfer payments do not appear to affect the size of the public sector or transfers to individuals.[19]

As for political variables, the estimated parameters for the Klein and Harris dummy variables indicate that Premier Klein had a statistically significant effect on total levels of Alberta government spending, while Premier Harris had an impact on Ontario government spending on transfers to individuals. Since Premier Klein came to power in 1993, spending has dropped from the 1992 level of 19 per cent of GDP to a low of 13 per cent. Model II suggests that spending in Alberta would have dropped to 15 per cent of GDP even without Premier Klein's influence. Klein only increased the already occurring cuts by two percentage points. Premier Harris' impact on transfers to individuals in Ontario was of a similar magnitude. These findings suggest that political personalities can have an influence on provincial government spending but that these effects are no larger than those produced by the economic forces discussed above.

Having now considered all the variables included in the models that may contribute to variations in government spending, we turn to regional effects, which cannot be explained by these variables. The inclusion of regional dummy variables is done to account for factors which systematically vary by region but which cannot be exogenously included in the models. The significance and magnitude of the regional variables suggest that there are important regional factors that have not been exogenously controlled.

The parameters for Quebec are consistently significant for all types of spending, and the largest overall regional effect is that of the Prairies on total spending. Both regions spend more as a fraction of GDP than Ontario. All else being equal, the provinces of the Prairies will on average have total spending levels that are 8.8 percentage points higher than Ontario's. Under the same conditions, Quebec's will on average be 5.2 percentage points higher. As for consumption, these two regions will spend on average between 3.6 to 4 per cent of GDP more than Ontario. The only factor that has a larger impact on welfare state spending is trade openness. Even this is only true at particular levels of union density for specific partisan governments.

While the regional effect of Quebec is not as large as that of the Prairies for total spending, its consistent statistical significance across consumption and transfers to individuals does hint that there is something distinct about Quebec government spending, as there is for government spending in the Prairies. There are simple structural reasons to expect Quebec and Prairie government spending to be unique. It has been noted by Michael Atkinson and Gerald Bierling (1998) that Alberta and Saskatchewan are spending outliers due to oil and gas revenues. Quebec has chosen to provide its own public pension and medicare plans. Beyond this, it has been suggested that since 1994, the Parti Québécois government has become social democratic and has employed government spending to convince Quebec residents that they would be better off free from

the programme-cutting tendencies of the "neoliberal" federal government (Gagnon and Lachapelle, 1996).

Whether regional differences occur for cultural or structural reasons, or both, is not particularly clear. What these findings do confirm is that despite pressures of fiscal convergence, regional political factors continue to contribute to distinct provincial spending policies.

6.0 Conclusions

This study set out to test the theory that trade liberalization in Canada will create market pressures on governments to reduce spending to a lowest common denominator, regardless of the partisan nature of the party in power; and that labour organization in Canada is weak enough that provincial government spending responses to increased trade liberalization will not be contingent upon levels of unionization. These predictions are based on the current globalization literature and both are found to be incorrect in Canada. An analysis that excludes the interaction between unionization and government spending response finds some evidence for the race to the bottom hypothesis. Even this naive analysis, though, suggests that government consumption and transfers to individuals—the core components of the Canadian welfare state—actually respond to increased trade openness by converging at some intermediate level of spending.

An analysis which conditions the government spending response on unionization levels provides a much more nuanced result. This analysis demonstrates that many Canadian provincial governments respond to trade liberalization through compensation at the levels of consumption and transfers to individuals. However, there are particular instances when the response may not be compensatory and the provincial government may engage in spending cuts.

These cases cannot be simply passed off as the exception to the rule. The magnitude of the response of NDP and Social Credit governments under relatively high unionization is such that the aggregate response to trade openness in Canada appears as a race to the bottom, obscuring the compensatory response of many other governments. Social Credit governments may not recur in the near future but there are many strong provincial NDP governments. NDP governments under conditions of relatively high union density have shown their capacity to cut the welfare state. This should caution us against the belief that higher levels of unionization under left governments will necessarily increase government expenditures.

Overall, the compensatory response to trade liberalization has been the norm at the provincial level in Canada. This should not, however, be

taken for granted. As this study demonstrates, under the right economic and political conditions, governments will engage in a race to the bottom—in particular, those governments that have traditionally been the greatest defenders of the Canadian welfare state. On one hand, the fears of the anti-globalizationalists have not yet been realized in Canada. The contingent nature of the government spending response means that regional economic and political factors have not become subservient to pressures for fiscal convergence, and an efficiency response to trade liberalization is still the exception. On the other hand, there is no guarantee that these fears could not eventually become reality.

Notes

1 FTA: Free Trade Agreement, NAFTA: North American Free Trade Agreement, GATT: General Agreement on Tariffs and Trade, GATS: General Agreement on Trade in Services.

2 Trade liberalization affects various segments of the labour force differently. In particular, it has little effect on public employees. Large government spending means a large public sector with wages that are independent of the international market. In the absence of strong union control of wages, the public sector will inflate the wages of labour in those sectors that must compete internationally. This produces inflation and reduces the international competitiveness of these sectors, hurting the economy.

3 This prediction is also consistent with the earlier finding of Cameron (1978) that the effects of government partisanship on spending have the greatest impact in closed states and that as economies become increasingly open, the spending differences between governments decrease.

4 For a discussion of the problems of misspecified models using interaction terms, see Braumoeller (2004).

5 This of course is unnecessary in the measure of government spending. Since it is the dependent variable, it can be measured as a fraction of total GDP without the problem of spurious correlation arising. This is important as it is the proportion of the total economy attributable to government spending that is of interest and not the ratio of government to private economic activity.

6 It is this finding that leads Garrett to argue that it is changes, and not levels in trade openness, that must be used as the dependent variable. When the models used in this study were altered to consider year-to-year changes, no significant relationships were found amongst the usual economic variables. It is likely that in order to measure the effects of changes in economic conditions, it is necessary to measure those changes over decades and not years. This is the method used by Garrett. The difficulty, in the context of this study, is that taking averages over decades reduces it to a small T analysis. For Garrett's work this is acceptable, as he is working with a large N. An interprovincial analysis, of course, is limited to a small N. Thus, this study necessarily follows the tradition of Rodrik and includes only levels in its models. However, Garrett's argument is an important one and is worth consideration in further analysis.

7 It should be noted that the econometric model of Abizadeh and Grey includes only total government expenditures, rather than considering separate components of spending, such as that on transfers to individuals, as this study proposes to do. Furthermore, this study uses party in power and regional dummy variables while Abizadeh and Gray's political measure is based on the left-right placement of the provincial party in power by the political science faculty in each province. The latter tends to

confound regional political culture and partisanship while this study deals with each explicitly. Finally, Abizadeh and Gray do not include the openness of the provincial markets to trade in their econometric model, as this study does.

8 In panel data analysis parlance, this is known as the unobserved individual effects.

9 Measures of interprovincial trade are unavailable before 1981.

10 It should be noted that while the independent variables in the models are certainly contemporaneously exogenous (as will be seen, they are all lagged), it is possible that they are not all strictly exogenous. This violation of the classical linear model assumptions may produce biased estimates of the model parameters. Fortunately, the contemporaneous exogeneity, along with a control for serial correlation (discussed next), allow me to call upon the law of large numbers and the central limit theorem to argue that the parameters are consistent.

11 Depending upon their purposes, different studies on the relationship between trade openness and government spending will use varying combinations of spending, openness, log(spending) and log(openness). The advantage of using the logarithmic form of both the independent and dependent variables is that it allows for the interpretation of the estimated parameter as an elasticity. However, due to the inclusion of openness interaction terms, the non-logarithmic form of openness is used in this model. Furthermore, tests of simple correlation indicate that the strongest relationship exists between the non-logarithmic forms of the variables.

12 Nathaniel Beck and Jonathan Katz (2004) have since suggested that the dominance of T over N may not be as important as they had first suggested in 1995.

13 Rerunning the analysis with the Prairie region broken down as Alberta, Saskatchewan and Manitoba does not change the results substantially.

14 For example, Garrett (2000). In their analysis of the effects of the political business cycle on provincial government spending, François Petry et al. (1999) include local government spending as part of their measure of provincial government spending. This study only includes part of these expenditures. While, as Petry et al. note, local spending is a "creation" of the provinces, the provincial governments largely restricted their influence on it through monetary transfers. These transfers are included. However, to include other local government revenue-raising policies and expenditures would be to confuse the policy decisions of those in power at the provincial and municipal levels. These expenditures are not included.

15 Predicted values of government spending do not treat statistically insignificant coefficients as zero. These coefficients represent the effects of variables included in the model for theoretical reasons. Their inclusion in the model affects the estimated coefficients for variables that were found to have statistically significant effects. Therefore, the exclusion of any of the coefficients would be inappropriate.

16 The regional dummy variables were set as one for the Prairies and zero otherwise. The Klein and Harris dummy variables were both set at zero.

17 In particular, Swank notes the austerity policies of Sweden and Norway.

18 This is based on the increasing coefficient of variation between regions, calculated as the standard deviation divided by the mean and multiplied by 100.

19 Since the effects of federal transfer payment levels are considered only one year down the road, this finding may indicate that a greater lag exists between reduced federal funding and the cutting of provincial programmes.

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Appendix: Variables and Data Sources

All data is yearly for the period 1981–1999 and cross-sectional across the 10 provinces.

The dependent variables are defined as follows:

- total provincial government spending (excluding debt payments)/GDP
- [provincial government consumption (expenditures on goods and services)]/GDP
- (provincial government transfers to individuals)/GDP

All explanatory variables are lagged in the model by one year. They are defined as follows:

- OPEN is the measure of trade openness defined as: [(international exports + international imports + interprovincial exports + interprovincial imports)/private GDP].
- PC, NDP, PQ and SC are party in power dummy variables holding Liberal as constant.
- BC, PRA, QUE and ATLAN are regional dummy variables for BC, the Prairies (Alberta, Saskatchewan and Manitoba), Quebec and the Atlantic provinces (Ontario as the control).
- HARRIS is a dummy variable indicating Mike Harris' premiership. KLEIN is the equivalent for Ralph Klein's premiership.
- Interaction terms: [(international exports + international imports + interprovincial exports + interprovincial imports)/private GDP] × party in power (PC, NDP, PQ, Social Credit).
- DEP is the dependency ratio (ratio of those under 18 or over 65 years of age to the entire population).
- FEDTRAN/GDP is the ratio of federal transfers to the provinces to GDP.
- PCI is per capita income.
- POP is the population.
- URBAN is the proportion of the population in metropolitan areas.
- UNION is the proportion of the labour force that is unionized.
- UNEMP is the unemployment rate.
- DEBT is the interest payments on public debt to GDP ratio.

Dollar values for economic data are converted into 1992 equivalents using a variety of deflators. All economic and demographic data and deflators, with the exception of union density, comes from the Statistics Canada databases CANSIM I and CANSIM II. The union density data prior to 1997 also comes from the CANSIM II database. After 1997, union density data comes for the Labour Force Survey. Party in power data originates from a collection of provincial elections Web sites.

Based on the work of Louis Imbeau et al. (2001), a variety of deflators are used in the conversion of the different forms of government spending and GDP into 1992 dollars. These deflators vary across the provinces, across sectors (public versus private) and across time. This allows us to distinguish changes in real government expenditures from changes that occur due to differential inflation between the government and private sectors, and across the provinces. The deflator used for government consumption is the implicit price index for government current expenditure on goods and services. The deflator used for transfers to individuals is the implicit price index for personal expenditure and consumer goods and services. The deflated values for total government spending (exclud-

ing public debt payments) is calculated by adding each of the already mentioned expenditures to transfers to federal and local government, deflated by the implicit price index for government current expenditure on goods and services and transfers to businesses, deflated by the implicit price index for business gross fixed capital formation. In the calculation of the openness index, the values of imports and exports were deflated using the implicit price indexes for imports of goods and services and exports of goods and services respectively. The provincial GDPs were deflated using the implicit price indexes for gross domestic product at market prices.