

Democracy at Work : Are Canadian Voters in Favour of Free Trade ?**

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Abstract

Although Canadians in general would benefit from a freetrade arrangement with the United States, it is possible that some individuals or groups will be worse off. We therefore face a conflict between the economic welfare of the average citizen and the political decision of the median person. This conflict is explored empirically in the context of recent estimates of industry-by-industry effects of free trade in Canada. This study concentrates on workers as voters trying to protect their current employment. An examination of 29 industries shows that nine would experience a decline ; however the median voter is likely to be in an expanding industry and therefore will favour free trade, but the existence of voting or lobbying costs could reverse that result.

Introduction

It is a hallmark of a democratic society that public-choice decisions are made by the majority of the electorate expressing their common self interest. Predicting the outcome of elections, referenda or important congressional or parliamentary votes becomes a matter of identifying the median voter and his or her economic characteristics because any proposal that does not satisfy at least 50 % of the electorate would presumably not be adopted. However, such political decisions, based on the median voter, do not necessarily maximize national or per-capita welfare, identified with the interests of the "average" economic agent—that individual who is at the arithmetic mean of a distribution of income, factor ownership or taste. This creates a conflict between these two representative individuals whenever these distributions are not symmetrical.

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Despite their inability to improve national welfare, many governments have created elaborate and far-reaching distortions in international trade and there is a growing conviction that such decisions serve the special interests of only a small proportion of the total population. In a recent article that builds on the pioneering work of Baldwin (1982), Mayer (1984) concludes that, "My findings support Baldwin's conjecture that a small group of big gainers may succeed in obtaining tariff protection." (p.983). Nevertheless, one should resist the temptation to subscribe to a conspiracy theory of tariff protection involving bribed politicians and cynical manipulation of the public trust. Instead, there are straightforward economic considerations that play a part in the resolution of the conflict between the mean and the median: the distribution of the gains and losses, the possibility of transfers to offset losses and the existence, size and incidence of lobbying and voting costs.

In this environment, one might predict that a straightforward, costless referendum on free trade would win but that legislative decisions, which almost always involve "log-rolling", would tend to favour protectionist proposals. Nevertheless, we are currently witnessing a situation that is the exact opposite to that conjecture. The Canadian and U.S. governments have recently concluded a free-trade agreement between them, but popular support for this initiative which is still subject to legislative approval in both countries is not strong and, in addition, large groups such as the union movement are openly and aggressively hostile to such a proposal. Yet it is important to remember that public opinion polls are volatile and their interpretation fragile so that no government can rely exclusively on them to make political decision. In that light, more fundamental evidence is needed to determine whether the Canadian or U.S. government is "too far out in front" of the electorate on the issue of free trade.

In this paper is proposed to determine the economic self interest of the Canadian electorate in the free-trade debate and to see whether a majority support or reject trade liberalization. The economic basis for their preference is developed in the next section, while the calculations for the median voter are performed and discussed in the third section, with conclusions contained in the last section. Then it will be possible to predict with somewhat greater assurance than a Gallup poll whether the Canadian government is risking political misfortune with its commitment to free trade.

I. Voter Preferences on Tariffs

How do individuals differ and how do these differences reflect their views on tariffs

? The most important economics characteristics are tastes and endowments. Tastes are likely to be fairly uniform, but it is argued that individuals differ substantially in factor ownership, especially specific factors of production that earn rents in a particular industry. This is also the assumption made by Mayer (1984) and Deardorff (1986).

In a series of studies, Harries (1984) and Cox and Harris (1985, 1986) have applied a general-equilibrium model of the Canadian economy to an analysis of the structural and welfare changes that would accompany any move to free trade. One of the distinguishing features of the model is its emphasis on economies of scale and non-competitive behaviour in the manufacturing sector. As a result, these studies predict much larger overall welfare gains from free trade compared to the constant-returns-to-scale, perfect-competition assumptions that are normally embedded in these models. Despite the rather optimistic predictions that emanate from the Cox-Harris approach, there are, however, a number of industries identified as "losers" from most of the free-trade proposals that are receiving serious consideration and it is vital to determine whether these industries have enough political power to block the dismantling of protection.

To determine winners and losers, it is necessary to establish an important link that is often taken for granted, but rarely made explicit: The welfare of an individual depends on the size of a particular industry to which he or she is "attached".¹ In a general-equilibrium model with complete mobility of all factors of production such a link does not exist, but as soon as there are both fixed or specific factors and variable factors, it is possible to identify gains and losses of individuals with the fortunes of particular industries. As Jones (1971), Mayer (1974) and Mussa (1974) have shown, specific factors are better off with larger output and worse off with smaller output of the industry to which they are specific. In addition, mobile factors may have a preference for their current location even if factor returns are equalized, when they face significant adjustment costs (e.g., moving expenses, learning new skills, loss of seniority and pension benefits)² or when they are risk-averse and attach greater weight

1. For example, Cox and Harris (1985) use welfare terms to describe output changes by industry: "... while some industries prosper other industries decline... On the basis of employment, transportation equipment is the overwhelming winner... The biggest loser is clothing..." (p.131).

2. Such adjustment costs cloud the distinction between fixed and variable factors of production because the net return to the mobile factor is higher in the current location than in any alternative employment. In that light, perhaps only a small proportion of the labour force or any other factor of production is truly mobile, especially if these adjustment costs are amortized over a short period.

to potential losses than to potential gains. In these circumstances, increased output of an industry means that the mobile factor does not have to move and incur these costs or loss of utility, while lower output would force this adjustment on some individuals. For these reasons, persons who are "attached" to an industry are likely to vote for proposals that increase its size or importance and against those policies that threaten to shrink or eliminate the industries from which they derive their livelihood.

II. The Voting Profile for a Canadian Free-Trade Proposal

The most difficult test for the political process in Canada would be a proposal for unilateral free trade. In view of Canada's small size in world markets, such a move would be beneficial to the nation as a whole and to the average person, but some groups would gain more than the average while others would experience a loss. Proposals that involve bilateral tariff reductions would involve fewer industries that would be required to contract and less opposition to the elimination of protection from workers, even though as consumers they may experience some welfare losses from possible trade diversion. Therefore, the political opposition to a free-trade area involving Canada and the United States is likely to be much less than if the Canadian government attempted to introduce unilateral tariff cuts.

In the Cox-Harris model, capital and labour are the primary factors that create value-added in an industry; in addition, output by an industry requires intermediate factors as determined by the input-output relationships. Based on the same argument as is used in comparing rate of effective protection across industries, changes in value-added as opposed to changes in output determine whether an industry will be able to pay more or less to its primary factors. Cox and Harris (1985) calculate the change in value-added by each of 29 industries in the Canadian economy in the event that various impediments to trade existing in 1976, including non-tariff barriers, are unilaterally removed by the Canadian government.³ These calculations are reproduced in the first column of Table 1. It can be seen immediately that there is a great deal of dispersion in these figures: the greatest reduction being in the clothing industry (i.e., 44 %) while the greatest expansion takes place in the transportation equipment sector (i.e., 89 %).

3. Because the model had to be calibrated to a long-run equilibrium, these value-added changes assume away an existing trade deficit in 1976 and allow the number of firms in an industry to adjust to profits and losses.

The emphasis here will be on "workers as voters". Consequently, the voting profile will have limited applicability, but to the extent that tastes are relatively uniform across individuals and to the extent that capital owners are diversified both domestically and internationally, these missing elements recede in importance. The second column in Table 1 presents the number of people employed in each of the industries tabulated by Cox and Harris. These figures include both paid employees and those who were self-employed in 1976.⁴ The total of 6,958,860 workers is smaller than that reported for total employment in Canada that year, 9.5 million, in CANSIM D767286. The major discrepancy is represented by a large block of workers in the area of public administration and defence and of non-market education and health services. Since such workers are unlikely to have a direct interest in the outcome of a vote on tariffs their exclusion from the total is warranted.

To generate the voting profile, the 29 industries are ranked on the basis of the size of the change in value-added, from largest negative to largest positive. These ranks are shown in parentheses next to the first column in Table 1. Then the workers in the second column are summed, starting with 104.6 thousand employed in the clothing industry (ranked first) and adding the 23.7 thousand in knitting mills (ranked second) and so on until we reach the 166.4 thousand workers in the transportation equipment industry for a total of 6,959 thousand individuals. In Figure 1, this cumulative total employment is plotted against the ranked value-added calculations, resulting in a voter profile for the tariff decision in Canada in 1976. Now, calculating the employment-weighted mean of value-added indicates that the average worker is employed in an industry that experiences a 6.5% increase in value-added. This person works in either communication or fishing, hunting and trapping. By definition, the median voter is the 3,479,430th person in the array. He or she works in the sector identified as "Others", comprising most of the service industries other than transportation and storage, communication and electric power and gas (i.e., 26–28). The gain in value-added in that industry is 7%; on that basis, one would predict that this median voter would favour unilateral free trade, in the absence of other considerations such as voting costs. Furthermore, the average and median workers have economic characteristics that are virtually the same.

4. The calibration discussed in footnote 3 means that the employment figures for an assumed equilibrium are not the same as the actual figure reported in Table 1, but the latter are those actually affected by the move to free trade.

Table 1 Distribution of Gains and Losses from Unilateral Free Trade, Canada, 1976.

	Industry (SIC)	Value-added (% change) and rank	Total employment
1	Food and beverages (101-109)	-12.40 (6)	222,895
2	Tobacco (151-153)	-16.80 (5)	9,065
3	Rubber and plastics (162-165)	16.63 (27)	56,365
4	Leather (172-179)	-26.82 (3)	26,626
5	Textiles (181-189)	-3.60 (9)	68,903
6	Knitting mills (231-239)	-43.63 (2)	23,653
7	Clothing (243-249)	-43.89 (1)	104,604
8	Wood products (251-259)	-0.47 (10)	108,589
9	Furniture and fixtures (261-268)	-21.85 (4)	50,183
10	Paper and allied products (271-274)	6.86 (19)	129,930
11	Printing and publishing (286-289)	0.33 (12)	95,828
12	Primary metal industries (291-298)	30.24 (28)	116,243
13	Metal fabricating industries (301-309)	9.95 (24)	157,064
14	Machinery, except electrical (311-318)	-0.44 (11)	90,919
15	Transportation equipment (321-329)	88.98 (29)	166,393
16	Electrical products (331-339)	-4.46 (8)	122,626
17	Non-metallic minerals (351-359)	8.32 (22)	56,730
18	Petroleum and coal products (365-369)	11.00 (25)	15,659
19	Chemical products (372-379)	4.38 (14)	79,877
20	Misc. manufacturing (391-399)	-9.94 (7)	67,307
21	Agriculture (001-021)	5.61 (15)	483,278
22	Forestry (031-039)	15.65 (26)	56,903
23	Fishing, hunting and trapping (041-047)	6.83 (18)	19,662
24	Mining (051-099)	8.02 (21)	131,001
25	Construction (404-421)	4.27 (13)	653,791
26	Transportation and storage (501-519, 524-527)	5.65 (16)	408,259
27	Communication (543-548)	6.36 (17)	189,470
28	Electric power and gas (572-579)	9.35 (23)	81,024
29	Others (602-699, 701-737, 801-899)	7.01 (20)	3,166,013

Sources: Value-added from D. Cox and R. Harris, "Trade Liberalization and Industrial Organization: Some Estimates for Canada," *Journal of Political Economy*, February 1985, pp.115-45, Table 2; total employment from Statistics Canada, Input-Output Division, special processing.

Before we can make a confident prediction about the approval of free trade by Canadians we need to consider the possibility of voting costs changing the voting pattern. It is difficult to imagine what voting and lobbying costs are faced by these workers, but it is possible to take a range of such costs to see if protectionists can muster a majority of a reduced electorate. In a sense, these costs create a horizontal band centered on zero in Figure 1, within which all voters are eliminated. The larger are the costs, the wider is the band and the greater the number of people who do not vote, but the proponents and opponents of free trade are not necessarily disenfranchised symmetrically. Since the 3.5 million workers in the "other" service industries are themselves a majority of the total and they favour free trade, it would take voting costs large enough to eliminate them and all the others whose value-added change was $\pm 7\%$. This would involve those industries ranked between (8) and (20). In that event, the free trade proponents would have 504,333 votes, while the protectionists would have 837,382, which would give the majority to those who oppose free trade. If risk aversion makes potential losers willing to pay 10% of value-added, an additional 67,307 voters in miscellaneous manufacturing industries would be protectionist. On the other hand, increasing these costs symmetrically to eliminate all those whose value-added increased or decreased by less than 10%, would leave those industries ranked (1) through (6) and (25) to (29). The free trade vote would be 437,026 and the protectionist vote would be 411,563. In this case, the majority again swings in favour of free trade. It therefore seems obvious that the results are very sensitive to the size of the voting costs and no firm prediction can be made without further information about the range of people who are indifferent between the status quo and free trade in a political process that imposes some costs on those who vote or lobby for their economic self-interest.

The quality of these results could also be improved if the Cox-Harris model allowed for further disaggregation of industries and for specific exemptions to the free-trade agreement. Such revisions are being undertaken for the Canadian government but are not currently available.

III. Conclusion

The voting profile contained in Figure 1 is a useful device to organize individuals in an economy on the basis of their economic characteristics and to allow them to rank themselves in terms of gains or losses from any policy initiative, especially tariff

changes. As long as the population is not homogeneous there will be a distinction between the mean and the median of a distribution of these characteristics. This distinction is important since the mean represents national welfare but the median is the political decision maker. It is also shown that voting costs determine who the median voter is.

The voting profile is applied to the current Canadian debate about free trade with the United States. Using the Cox-Harris estimates of value-added changes in 29 industries after a unilateral declaration of free trade—the worst-case situation, it is shown that the median and average workers would both gain, suggesting that such a proposal would meet with approval, let alone any agreement that calls for the elimination of trade impediments by other countries. However, certain levels of voting or lobbying costs could eliminate more free-trade votes than protectionist votes and reverse the decision. In that light, it is important for the government to impress on all Canadians that for the large majority there is a positive welfare gain from dismantling existing trade barriers and to guarantee to the minority of “losers” that they will be provided with adequate adjustment assistance.

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