

Staff Discussion Paper/Document d'analyse du personnel 2018-1

Canada's Experience with Trade Policy



by Karyne Charbonneau, Daniel de Munnik and Laura Murphy

Bank of Canada staff discussion papers are completed staff research studies on a wide variety of subjects relevant to central bank policy, produced independently from the Bank's Governing Council. This research may support or challenge prevailing policy orthodoxy. Therefore, the views expressed in this paper are solely those of the authors and may differ from official Bank of Canada views. No responsibility for them should be attributed to the Bank.

Bank of Canada Staff Discussion Paper 2018-1

January 2017

Canada's Experience with Trade Policy

by

Karyne Charbonneau, Daniel de Munnik and Laura Murphy

Canadian Economic Analysis Department
Bank of Canada
Ottawa, Ontario, Canada K1A 0G9
kcharbonneau@bankofcanada.ca
dmunnik@bankofcanada.ca
lmurphy@bankofcanada.ca

Acknowledgements

The authors are grateful to Don Coletti, Alexandre Deslongchamps, Harriet Jackson, Sharon Kozicki, Angela Redish and Larry Schembri and for their comments and helpful suggestions. We also thank Olga Mkhitarova, Jane Boyko and Catherine Butler (Library and Archives Canada) for their reference assistance. Material sourced from the Bank of Canada Archives and Libraries and Archives Canada were very helpful in putting this piece together. All remaining errors and omissions are our responsibility.

Abstract

This paper compiles the contemporary view on three major Canadian-led trade policies that have marked Canada's economic history since Confederation: the National Policy (1879), the Canada–US Agreement on Automotive Products (Auto Pact, 1965) and the Canada–US Free Trade Agreement (FTA, 1989, including its extension to the North American Free Trade Agreement, NAFTA, 1994). The National Policy imposed broad-based tariff increases on imported manufactured goods with the primary intention to promote the development of the Canadian manufacturing sector. However, its effects on the manufacturing sector and on welfare overall were likely negative. The Auto Pact (which helped to liberalize trade in automobiles and auto parts between Canada and the United States) and the Canada–US FTA and NAFTA reversed the protectionism established under the National Policy generations earlier. These agreements generated more trade flows among Canada, the United States and Mexico and had positive benefits for Canadian consumers and producers. Because of production specialization and lower import prices, all participating countries benefited from trade liberalization. These benefits tend to be widely dispersed and fully realized over the longer term. In contrast, trade liberalization can also create significant short-run adjustment costs, negatively affecting certain industries and workers.

Bank topics: Trade integration, International topics

JEL codes: F13, N71, N72

Résumé

Cette étude propose une lecture contemporaine de trois grandes politiques de commerce extérieur pilotées par les autorités canadiennes qui ont marqué l'histoire économique du Canada depuis la Confédération : la Politique nationale (1879), l'Accord canado-américain sur les produits de l'industrie automobile (Pacte de l'automobile de 1965) et l'Accord de libre-échange entre le Canada et les États-Unis (l'Accord de libre-échange de 1989 et son prolongement, à savoir l'Accord de libre-échange nord-américain, ou ALENA, de 1994). La Politique nationale a instauré des hausses générales de droits de douane sur les biens manufacturés importés dans le but premier de favoriser le développement du secteur manufacturier canadien. Dans l'ensemble, ses effets sur le secteur manufacturier et sur le bien-être furent cependant probablement négatifs. Le Pacte de l'automobile, qui a concouru à la libéralisation du commerce des véhicules et des pièces automobiles entre le Canada et les États-Unis, l'Accord de libre-échange entre le Canada et les États-Unis ainsi que l'ALENA ont rompu avec le protectionnisme de la Politique nationale des générations précédentes. Ces accords sont à l'origine d'un essor des flux commerciaux entre le Canada, les États-Unis et le Mexique et ont eu des retombées positives pour les consommateurs et les producteurs canadiens. La spécialisation des producteurs et la baisse des prix à l'importation ont permis à tous les pays signataires de profiter de la libéralisation des échanges. Les avantages ont tendance à être largement partagés et à s'être pleinement matérialisés sur le long terme. Par contre, la libéralisation des échanges peut également engendrer à court terme des coûts d'ajustement non négligeables qui pèsent sur certaines filières et sur une partie des travailleurs.

Sujets : Intégration des échanges, Questions internationales

Codes JEL : F13, N71, N72

1. Major policies that shaped the economic development of Canada

The role of trade policy, particularly the optimal degree of trade openness, in economic development is a contentious issue that has always been prominent in global public policy. Because Canada is a trading nation, this debate is particularly important to Canadians. As Schembri (2016) put it, “Throughout our history, we have successfully relied on trade, both exports and imports, to support our rising standard of living.” Living standards rose as Canada’s economy developed through specialization in higher-value-added goods and services, increased economic efficiency and growing labour productivity. Canada’s international trade is about 65 per cent of our output—one of the highest ratios among G7 countries. As Governor Stephen S. Poloz said this year in a speech to mark Canada’s 150th anniversary, “The bottom line of our history is that openness and economic progress go hand in hand” (Poloz 2017).

Over the past 150 years, three major trade-related policy changes have helped shape the Canadian economy: the National Policy (1879), the Canada–US Agreement on Automotive Products (Auto Pact, 1965) and the Canada–US Free Trade Agreement (FTA 1989, including its extension to the North American Free Trade Agreement, NAFTA, 1994). Economists have used these events to assess the overall benefits of openness to trade, and the general conclusion is that trade liberalization has increased the standard of living of Canadians. The benefits are widely dispersed and are fully realized over the long term, while the costs tend to be felt over the short term and are concentrated in certain industries and workers. How to best address the adverse impacts is an important public policy question but beyond the scope of this article.

In assessing the aggregate impacts of trade policies, this article draws from a wide range of relevant empirical studies. Often these studies produce different estimates. These differences largely depend on the assumptions made and theoretical models used, and the quality and availability of the necessary data.

2. Protectionist tariffs under the National Policy

In the years leading up to Confederation, Canada had an increasingly important trade relationship with the United States. By the mid-1860s, however, when the United States turned toward more protectionist policies by not renewing the Reciprocity Treaty, the Provinces of Canada and the Maritimes faced a dilemma: raise tariffs in response or continue pursuing free trade.¹

The debate came to a head in the October 1878 election. The government and the opposition held divided views regarding the effects of higher tariffs. The Liberal government believed that increasing tariffs would produce higher prices and increase the cost of production while reducing imports and government revenue. In contrast, the Conservative opposition (that would go on to win the election) believed its proposed tariff policy would improve the economy, which had been in recession, discourage emigration to the United States, foster Canada’s infant industries and promote trade between the East and the West. Increased funds from tariffs also contributed to plans for a national railway.

The political debate was mirrored in the academic literature from that period. Free traders, including contemporaries such as Ricardo (1817) and Mill (1848), focused on the possible gains in efficiency and

¹ The Reciprocity Treaty was a free trade agreement in raw materials that was enacted in 1854 between the United States and the British North American colonies. It was terminated in 1866 by the United States.

output through international specialization and trade. Others, such as Hamilton (1791) and List (1841), argued that these principles hold only for advanced economies, whereas newer countries with younger industries need to be protected to grow and gain efficiencies.² The election of the Macdonald government in 1878 led to the implementation of the National Policy in the 1879 budget, which imposed widespread increases to import tariffs. Indeed, the average weighted tariff rose from 14 to 21 per cent (Alexander and Keay 2017). This increase was admittedly protectionist, and average tariffs would rise further, reaching as high as 32 per cent in 1891 (Norrie, Owsram and Emery 2002).

The resulting Canadian manufacturing sector was in some ways a “miniature replica” of that in the United States, with foreign subsidiaries representing a large portion of firm creation (Emery, Norrie and Owsram 2002). Most firms in the protected industries still could not compete with imports because of falling global transportation costs and large-scale production in the United States. While the tariff barriers expanded the industrial makeup and created employment, Canadians paid significantly higher prices for both foreign and domestic goods.

Contemporary analysis of the impact of the National Policy was limited because of a lack of quality data and econometric tools. Analysis from that time therefore paints a very different picture of the policy’s success, depending on its source and what partial data were leveraged.³ Though the availability of quality data is still a limiting factor, modern approaches to estimating the effect of the Macdonald government’s tariff hike continue to be pursued.

Most of the literature on the National Policy tariffs points to significant net welfare losses for Canada. Dales (1966) writes, “The tariff, historians have taught us, is ‘the price of being a Canadian.’ In reality, of course, it is the price we pay for our protected manufacturing industry—very often the bribe we pay foreigners to establish manufacturing capacity in Canada. The old objection to a tariff structure as the mother of monopoly has been modernized by showing in detail how protection fosters inefficient, oligopolistic forms of market organization in Canada.”

Pomfret (1993) provides a more specific estimate of the policy’s effect, finding that approximately 4 to 8 per cent of gross domestic product (GDP) was lost because of the tariff increases. More recently, Beaulieu and Cherniwchan (2014) construct a trade restrictiveness index to explicitly measure protection. They also find protectionism had a negative impact, albeit much smaller than that estimated by Pomfret. Alexander and Keay (2017) sought further improvements on previous studies by attempting to account for the terms-of-trade effect and found that the policy may have been warranted in response to the US action, but their modelling approach requires strong assumptions that may be key to their findings. Though new tools have resulted in updated estimates, the choice of models used in these studies is largely driven by data considerations and, as such, robust conclusions about the overall impact will always be limited.

We continue to learn from the National Policy, a key element of Canadian trade history. Specifically, economists have used the policy to draw lessons about the welfare effects of protectionism. Overall, the

² Both schools of thought claim Mill as their own because, while he largely supported free trade theory, he also argued that infant industries can benefit from some measure of protection.

³ In the early 1880s, for example, studies commissioned by the Canadian government found evidence that the National Policy had been a success, but the analysis suffered from extensive issues related to data collection that led to serious limitations. In contrast, in the years following the policy’s implementation, *The Economist* asserted that it was a failure. See the following examples from *The Economist*: (i) “Canadian Trade,” July 19, 1879, 825, Issue 1873; (ii) “The Canadian Tariff,” April 19, 1879, 446, Issue 1860; (iii) “Our Colonial Possessions—the Canadian Dominion II,” October 22, 1881, 1,305–1,307, Issue 1991; (iv) “Canadian Trade in 1881,” March 18, 1882, 316–317 Issue 2012; (v) “The Operation of the Canadian Tariff,” December 8, 1883, 1,435–1,436, Issue 2012.

body of evidence published to date suggests that the trade policy created a weak and inefficient manufacturing sector, resulting in a net welfare loss.

3. The Auto Pact: a made-in-Canada trade policy innovation

The National Policy put Canada on a protectionist course that it followed well into the 20th century. It was not until shortly after the end of the Second World War that multilateral talks were held to liberalize trade and dismantle global trade barriers. This US-led initiative focused on lessons from Smoot–Hawley protectionist tariffs that deepened the Great Depression.⁴ By 1947, almost two dozen countries, including Canada and the United States, signed the General Agreement on Tariffs and Trade (GATT).⁵ Over subsequent decades, the tariff system first established under the National Policy was slowly dismantled.

Nevertheless, by the early 1960s, the Canadian automotive industry had reached a crisis: relatively inefficient production, declining employment, elevated costs and prices, and a significant and growing deficit in the Canadian balance of payments. These issues were not unique to Canada’s auto sector. Mexico, Brazil and Australia had also become dependent on the highly efficient US auto industry and had responded with significant nationalization. Though the United States wished to avoid a similar reaction from Canada, a bilateral agreement would be difficult to achieve, since it would require a vote to obtain a waiver under GATT during the ongoing US-led Kennedy Round of trade talks. As a result, Canada appeared to have only two traditional policy choices: significantly increasing barriers or seeking unconditional free trade in the hopes that the industry could be resilient (Anastakis 2005).

The Royal Commission on the Automotive Industry, chaired by Dean Bladen, tabled a report in 1961 that presented an innovative option for Canada.⁶ Its core recommendation was to modify the Canadian content provision of domestic sales to include a credit for exports that would allow duty-free exchange between Canada and the United States. This change was conditional on the current level of domestic production being maintained or exceeded. This would result in a realignment of the industry, driven by Canadian specialization in production, to service a larger market. Such realignment could reduce the sector’s excess cost and protect its footprint—a deal that would please both free traders and protectionists (Wonnacott 1965).

The resulting agreement, dubbed the Auto Pact, was signed on January 16, 1965. President Lyndon B. Johnson and Prime Minister Lester B. Pearson promoted it as “... one of the most important and imaginative trading agreements ever made between our two countries.”⁷ The agreement had the support of auto producers, who also had letters of undertaking that were negotiated separately by the Canadian government as a required commitment to enact the trade policy. The main thrust of the arrangement removed the tariffs on assembly and parts on each side of the border and required that Canadian manufacturers (i) maintain the same ratio of vehicle production to vehicle sales in Canada that existed in the model year 1964, (ii) attain value-added in vehicle assembly in Canada at least equal to

⁴ For a modern summary, see “The battle of Smoot-Hawley,” *The Economist*, December 18, 2008.

⁵ For a summary of the history of the GATT, see the [WTO website](#).

⁶ See Macdonald (1963) and Johnson (1963, 1964) for contemporary discussion.

⁷ Exchange of remarks between President Lyndon B. Johnson and Prime Minister Lester B. Pearson on the Canada–United States Trade Agreement on Automotive Products, LBJ Ranch, Johnson City, Texas, January 16, 1965.

that achieved in the model year 1964, and (iii) ensure that any growth above the base year would contain Canadian value-added equal to 60 per cent of the increased sales.⁸ In addition, producers made a commitment to increase investment by Can\$260 million by 1968.

The objective of the Auto Pact was clearly stated: the creation of a continental market for automobiles, which could benefit from specialization and large-scale production. With this, cross-border efficiency, wages and prices were expected to converge, albeit with the possibility of some distortionary effects for the Canadian restrictions imposed on producers. At the time, Wonnacott and Wonnacott (1967) argued that the agreement could largely meet its aims: major producers could achieve significant reductions in excess costs through higher volumes, and a convergence in auto prices and sectoral wages was likely.

As expected, US automakers achieved a significant degree of integration in their North American assembly operations. The trade impact was immediate, with large increases in both imports and exports experienced as early as 1965. By 1968, four years into the agreement, Canadian exports had increased tenfold and imports fourfold. The Canada–US price gap across a wide range of models narrowed (albeit with significant variation) by the 1969 model year. Wages in Canada were negotiated at near parity with those in the United States by the end of the decade (Beigie 1970).

Wilton (1972) concluded that the agreement raised output by about 68 per cent; 9,000 jobs were created; and imports were 993 per cent higher than before the Auto Pact came into effect. Similar to Beigie (1970), Wilton's results also suggested that Canadian retail prices were roughly 10 per cent lower as a result of the agreement, significantly narrowing the price gap. While the work had only a limited and aggregated data set, it made a key contribution because it attempted to disentangle cyclical variation from the structural change sparked by the agreement.

While firm-level data would allow the identification of the impact on firm efficiency, Fuss and Waverman (1986) highlight that Canada's 29 per cent labour productivity disadvantage relative to the US auto sector was eliminated by 1972, and a 23 per cent advantage was gained by 1979. This productivity improvement also highlights the significant gains to US-owned Canadian producers and likely added to productivity gains in the United States from specialization as well as lower prices for consumers.⁹

According to Beigie (1970), Canadian producers exceeded the export requirements in the years following, which was puzzling. The exact reasons for this are still unclear because comparative statistics on production costs between Canada and United States are lacking. Manufacturers' safety margins, lumpy investment spending and misconceptions of the relative cost disadvantage in Canada are all possible explanations (Beigie 1970). Whatever the reason, US firms operating in Canada found it more profitable to do so and the Canadian trade balance on motor vehicles was forever changed as a result.

All told, the Auto Pact was an innovative agreement that drove an important change for the Canadian economy in almost all respects: lower consumer prices and producer costs for automobiles, higher employment, increased market share for Canadian producers and significant labour productivity gains.

⁸ Statement in the House of Commons by the Honourable C. M. Drury, Minister of Industry, on May 5, 1966, on the Resolution for Approval of Canada–US Agreement on Automotive Products.

⁹ In an NEBR working paper, Fuss and Waverman (1986) argue that Beigie (1970) and Wilton (1972) had been misled by equating labour productivity gains with efficiency gains and question the degree of true efficiency gains resulting from the agreement. See Fuss and Waverman (1986, 28) for more information.

Also, US firms producing in Canada and US consumers benefited from the efficiency gains that were generated.

4. Canada's free trade era

By the 1980s, momentum in multilateral trade liberalization under the GATT process had slowed, and the Canadian government was looking for new ways to pursue further trade liberalization, potentially at the regional level. The Royal Commission on the Economic Union and Development Prospects for Canada (known as the Macdonald Commission) tabled an exhaustive analysis of the state of the Canadian economy and potential trade policies. From a list of structural economic issues discussed, the Macdonald Commission determined that the best way to promote prosperity was to pursue free trade and gain secure access to the US market. This was viewed as a major step toward increasing competitiveness and, ultimately, diversifying to other markets. Despite the Auto Pact's success, the Macdonald Commission did not recommend pursuing industry-specific trade agreements because it doubted the success of negotiating many narrow agreements. The proposal began to take hold and negotiations for a US–Canada free trade agreement quickly followed. While Canadian political parties had differing views on the free trade agreement, there was a near-consensus in academia, with more than 200 Canadian economists signing a letter endorsing the FTA.

The FTA was signed in 1988, three years after the Macdonald Commission issued its report, and came into effect at the beginning of 1989. The key elements were the elimination of the majority of trade barriers and the reduction of many non-tariff barriers, such as quotas. It was one of the first trade agreements to address trade in services and to outline a dispute mechanism. It was also the first major agreement between advanced economies outside of GATT.

In contrast to the era of the National Policy, policy-makers had the benefit of many early academic assessments of the potential effects of the proposed free trade agreement. Two classes of models—macroeconomic and general equilibrium (GE)¹⁰—concluded that short-run adjustment costs would be followed by output or welfare gains over several years.¹¹

Most macroeconomic models placed the output impact around 3 per cent. In contrast, GE model results were more diverse because of a wider variety of assumptions and breadth (such as the number of countries and sectors, the degree of substitutability of different goods and whether they accounted for economies of scale). Three prominent GE models found 0.7, 1.1 and 8.9 per cent welfare gains in the long run (the models used by Whalley and Hamilton 1985, Brown and Stern 1989 and Cox and Harris 1992, respectively). Although specific results depended on assumptions, all models predicted an increase in welfare and small job gains or losses, depending on the industry. The Department of Finance Canada also had a GE model, based on the Cox–Harris model, that predicted 2.5 per cent growth in welfare or, in dollar terms, \$450 per Canadian per year—a figure touted to Canadians following the agreement's signing.¹²

¹⁰ Macroeconomic models, also known as forecasting models, have dynamics and a well-articulated supply side but lack industrial detail. GE models are usually static and have a fixed labour supply, but they have detailed industrial sectors that could address questions related to rationalization.

¹¹ Economic Council of Canada, Infometrica, Institute for Policy Analysis (University of Toronto), Wharton Econometrics.

¹² Department of Finance Canada, "Assessment of Free Trade Agreement Forecasts: Income Gains, More Jobs," January 14, 1988, press release.

By 1990, the United States and Mexico began taking serious steps toward a bilateral free trade agreement. Six months after these talks began, Canada signalled a desire to participate in the agreement to avoid losing Mexican trade and investment to US firms. These talks would eventually lead to NAFTA, which came into effect on January 1, 1994. It marked the creation of the largest free trade region in the world at the time.

As with the FTA, Canadian policy-makers often cited the Cox–Harris work as an authoritative model to formulate impact expectations. A key difference between the model’s predictions for NAFTA and the FTA was the inclusion of the potential effect of capital flows into Mexico. In general, GE models tended to predict small increases in trade for the United States and Canada and a larger impact for Mexico. Cox and Harris (1992) predicted NAFTA would cause an additional welfare increase for Canada of about 1 per cent and a trade impact of 2.6 per cent above the previously estimated gains from FTA.¹³ The main channel was rationalization, with an increase in labour productivity in Canada of 2.4 per cent. It also predicted a small decline in the terms of trade. Once again, Cox and Harris’s (1992) estimates on welfare were high relative to their peers. Another key model used for impact analysis of NAFTA, by Brown, Deerdorff and Stern (1992), estimated long-term welfare gains of only 0.7 per cent of real income. Overall, both models forecasted that Canada’s gains from joining NAFTA were relatively small.

Trefler (2004) and Lileeva and Trefler (2010) conducted two of the most complete reassessments of the FTA. Trefler (2004) estimates that, in the short run, the FTA resulted in substantial employment losses (5 per cent for manufacturing as a whole and as much as 12 per cent for the most affected groups competing with imports). Within 10 years, however, employment gains in other parts of manufacturing had more than made up for the short-term losses. This is a stark example of how trade can have massive redistributive effects. Although Trefler finds the FTA led to substantial overall welfare gains and overall workers’ earnings were roughly flat, the costs were likely severely concentrated. As a result, aiding this adjustment should be carefully considered by policy-makers. In the long run, Trefler (2004) finds the FTA resulted in significant labour productivity increases: overall labour productivity increased by 6 per cent for manufacturing as a whole.¹⁴ Trefler concludes that the FTA was likely welfare-improving because the agreement created more trade than it diverted and did not raise the price of imports.

Using plant-level data, Lileeva and Trefler (2010) find that overall manufacturing productivity in Canada increased between 13 and 14 per cent. Approximately two-thirds of this increase is attributed to increases in labour productivity resulting from a redistribution of activity between plants: the exit of low-productivity firms and the expansion of high-productivity firms. The rest of the growth reflects increases in productivity within each plant, notably because of economies of scale.¹⁵ This analysis supported estimates from earlier models that included rationalization (e.g., Cox–Harris and Brown–Stern) as an important driver of gains. It also showcased the benefits of collecting and using microdata. Similar to the National Policy, our knowledge of the impact of certain areas of the agreement is limited by data constraints, particularly data on trade in services.

Regarding the impact of NAFTA, Kehoe (2003) finds that Brown, Deerdorff and Stern (1992) and Cox and Harris (1992) accurately estimate the relative magnitudes on trade for each country but grossly

¹³ Cox and Harris’s (1992) original FTA estimate was 8.9 per cent of GDP. After updating their parameters, this was reduced to just over 3 per cent. This updates their most recent FTA estimate of around 3 per cent. Their work on NAFTA predicts 1 per cent higher than their updated estimate.

¹⁴ The most-affected export-competing groups rose by 14 per cent, and the most-affected import-competing groups rose by 15 per cent.

¹⁵ These results are complemented by Baldwin and Yan (2014), who suggest access to larger markets can aid productivity growth.

underestimate the impact on total trade. For example, total trade rose by 57 per cent as a share of GDP for Canada, whereas the two models predicted increases of 4 and 10 per cent (Brown, Deerdorff and Stern 1992 and Cox and Harris 1992, respectively). Kehoe argues that much of this error arises from models that cannot properly predict trade increases in sectors that had little to no trade before the agreement.

While there is a large body of literature analyzing the effects of NAFTA, Caliendo and Parro (2015) give a complete overview of the effects of the tariff reductions embedded in NAFTA using a state-of-the-art GE model.¹⁶ They find that the impact of NAFTA for Canada, after controlling for FTA effects, was very small (albeit marginally negative) and relatively in line with expectations when it was signed. This occurred because the price of exports declined relative to the price of imports, outweighing the positive trade volume effect. While models at the time accurately forecast the direction of the terms-of-trade and volume effects, they missed their relative sizes, leading to the positive welfare estimates. Further, Caliendo and Parro show that ignoring sector linkages leads to an underestimation of welfare effects. Lastly, a marginally positive impact for the United States was also in line with *ex ante* discussion.

These transformative trade agreements, the Canada–US FTA and NAFTA, together had net positive impacts on all three countries. This supports economists long held view that all countries can gain from liberalization as a result of production specialization (access to larger markets can aid productivity growth) and lower import prices for producers and consumers.

5. Conclusion

In this article we look back at three major Canadian-led trade policies in Canada’s economic history. While the literature on the National Policy tariffs remains inconclusive, due in large part to significant data limitations, the Canada–US Auto Pact was, by most measures, a transformational trade agreement that had many positive benefits for Canadian consumers and producers. In addition, the significant labour productivity gain in US-owned Canadian plants following the agreement suggests that US firms likely saw higher profits, and US consumers also likely saw benefits via lower prices. Lastly, the FTA largely produced the expected long-term benefits for Canada from trade and provided an international success story for trade liberalization where both countries gained welfare (Lileeva and Trefler 2010).

To be able to provide the best advice to policy-makers on the next generation of trade agreements, economists face an important challenge: it is necessary to devote resources to improve data quality and the understanding of service trade, particularly in digital services, or future assessments of trade agreements could be significantly limited. Continued work on trade policy evaluation is worthwhile because innovations in modelling could once again change our view of history. Lastly, redistributive effects induced by trade policy and how complementary policies can best mitigate these effects for those adversely affected remain an important area for research.

¹⁶ Caliendo and Parro (2015) do not address non-tariff barriers.

Literature Cited

- Alexander, P. and I. Keay. 2017. "The Welfare Effects of Protection: A General Equilibrium Analysis of Canada's National Policy." Bank of Canada Staff Working Paper No. 2017-18.
- Anastakis, D. 2005. *Auto Pact: Creating a Borderless North American Auto Industry 1960–1971*. Toronto: University of Toronto Press.
- Baldwin, J. and B. Yan. 2014. "Global Value Chains and the Productivity of Canadian Manufacturing Firms," Statistics Canada Economic Analysis Research Paper Series 11F0027M, no. 90.
- Beaulieu, E. and J. Cherniwchan. 2014. "Tariff Structure, Trade Expansion, and Canadian Protectionism, 1870–1910," *Canadian Journal of Economics* 47 (1): 144–172.
- Beigie, C. E. 1970. *The Canada-U.S. Automotive Agreement: An Evaluation*. Québec: Canadian-American Committee.
- Brown, D. K., A. V. Deardorff and R. M. Stern. 1992. "A North American Free Trade Agreement: Analysis Issues and a Computational Assessment." *The World Economy* 15 (1): 11–30.
- Brown, D. K. and R. M. Stern. 1989. "Computable General Equilibrium Estimates of the Gains from U.S.-Canadian Trade Liberalization." Research Seminar in International Economics Discussion Paper No. 220.
- Caliendo, L. and F. Parro. 2015. "Estimates of the Trade and Welfare Effects of NAFTA." *Review of Economic Studies* 82 (1): 1–44.
- Cox, D. and R. G. Harris. 1992. "North American Free Trade and its Implications for Canada: Results from a CGE Model of North American Trade." *The World Economy* 15 (1): 31–44.
- . 1985. "Summary of a Project on the General Equilibrium Evaluation of Canadian Trade Policy." In *Canada-United States Free Trade, Volume II, Research Studies*, edited by J. Whalley. Toronto: University of Toronto Press.
- Dales, J. H. 1966. *The Protective Tariff in Canada's Development*. Toronto: University of Toronto Press.
- Fuss, M. and L. Waverman. 1986. "The Canada-US Auto Pact of 1965: An Experiment in Selective Trade Liberalization." National Bureau of Economic Research Working Paper No. 1953.
- Gaston, N. and D. Trefler. 1997. "The Labour Market Consequences of the Canada–U.S. Free Trade Agreement." *Canadian Journal of Economics* 30 (1): 18–41.
- Hamilton, A. 1791. *Report on the Subject of Manufactures*.
- Johnson, H. G. 1963. "The Bladen Plan for Increased Protection of the Canadian Automotive Industry." *Canadian Journal of Economics and Political Science* 29 (2): 212–238.
- . 1964. "The New Tariff Policy for the Automotive Industry." *Business Quarterly* 29 (5): 43–57.
- Kehoe, T. J. 2003. "An Evaluation of the Performance of Applied General Equilibrium Models of the Impact of NAFTA." Federal Reserve Bank of Minneapolis Research Department Staff Report No. 320.
- Lileeva, A. and D. Trefler. 2010. "Improved Access to Foreign Markets Raises Plant-level Productivity...For Some Plants." *Quarterly Journal of Economics* 125 (3): 1051–1099.

- List, F. 1841. *The National System of Political Economy*.
- MacDonald, N. B. 1963. "A Comment: The Bladen Plan for Increased Protection for the Canadian Automotive Industry." *Canadian Journal of Economics and Political Science* 29 (4): 505–15.
- Mill, J. S. 1848. *Principles of Political Economy*.
- Norrie, K. D. O'ram and J. C. H. Emery. 2002. *A History of the Canadian Economy*. Toronto: Nelson Canada.
- Poloz, S. S. 2017. "Canada at 150: It Takes a World to Raise a Nation." Speech at the 50th Anniversary of Durham College, Oshawa, Ontario, March 28.
- Pomfret, R. 1993. *The Economic Development of Canada*. Toronto: Nelson Canada.
- Ricardo, D. 1817. *On the Principles of Political Economy and Taxation*.
- Schembri, L. 2016. "Wood, Wheat, Wheels and the Web: Historical Pivots and Future Prospects for Canadian Exports." Speech at the Atlantic Institute for Market Studies, Halifax, Nova Scotia, November 8.
- Thomas, K. P. 1997. "Capital Mobility and Trade Policy: The Case of the Canada–U.S Auto Pact." *Review of International Political Economy* 4 (1): 127–153.
- Trefler, D. 2004. "The Long and Short of the Canada–U.S. Free Trade Agreement." *American Economic Review* 94 (4): 870–895.
- Whalley, J. and R. Hamilton. 1985. "Geographical Discriminatory Trade Arrangement." *Review of Economics and Statistics* 67 (3): 446–455.
- Wilton, D. A. 1972. "An Econometric Model of the Canadian Automotive Manufacturing Industry and the 1965 Automotive Agreement." *Canadian Journal of Economics* 5 (2): 157–181.
- Wonnacott, P. 1965. "Canadian Automotive Protection: Content Provisions, the Bladen Plan, and Recent Tariff Changes." *Canadian Journal of Economics and Political Science* 31 (1): 98–116.
- Wonnacott, P. and R. J. Wonnacott. 1967. "The Automotive Agreement of 1965." *Canadian Journal of Economics and Political Science* 33 (2): 269–284.