A general equilibrium analysis of Canada’s national policy

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\textbf{A B S T R A C T}

In this paper, we study the impact of Canada’s adoption of protectionist trade policy in 1879 on Canadian welfare. Under the National Policy, the Canadian average weighted tariff increased from 14\% to 21\%. The conventional view is that this was a distortionary policy that negatively affected Canadian welfare. We argue that this view is incomplete because it ignores general equilibrium effects. Using a multi-industry general equilibrium model with differentiated goods, we show that tariffs’ impact on welfare can potentially be positive, even for small open economies, due to their impact on domestic terms of trade and government revenues. We apply these theoretical insights in a reassessment of the static impact that the National Policy had on Canadian welfare in 1879, using newly compiled granular trade and production data, and newly estimated historically contemporaneous import demand elasticities. Our results suggest that, although a multilateral move to free trade would have resulted in the best welfare outcome for Canadians, the National Policy’s tariff increases actually improved Canadian welfare by approximately 0.15\% of GDP in 1879 – an amount equivalent to approximately $2.3$ billion 2016 USD.

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1. Introduction

Powerful market integration and globalization forces were at work during the late nineteenth and early twentieth centuries. Global demand was rising sharply, transport costs were falling, and manufactured goods, raw materials, people and capital were moving across international borders with unprecedented fluidity as markets integrated along both intensive and extensive margins (Betran and Huberman, 2016; Estevadeordal et al., 2003; Huberman et al., 2017).

Policy responses during this first era of globalization varied widely across countries. Britain maintained predominantly free trade policies that had originally been introduced during the mid-nineteenth century, while simultaneously pressuring their Commonwealth trade partners to resist domestic calls for protection (Bairoch, 1972; 1989; Irwin, 1994). The United States, in contrast, maintained persistently high tariff levels, particularly on manufactured imports, throughout the 1870–1913 period (Irwin, 2000a; 2000b; 2010; Taussig, 1931). Meanwhile, a group of rapidly converging small-open-economies, which included Argentina, Australia, the Scandinavian countries, and Canada, struggled to balance their need for tariff revenue against demands for protection from domestic producers who were facing growing import volumes and a shift in the industrial intensity of their imports (Beaulieu and Cherniwchan, 2014; Pomfret, 1995; Salmon, 1997).

In Canada, the response to the domestic and international pressures brought on by globalization was decisive. In part inspired by Henry Clay’s early nineteenth century American System and informed by Britain’s experience with free trade, John A. Macdonald’s Conservative government introduced the National Policy as part of the federal budget on March 14, 1879. This policy had three broad objectives: the promotion of immigration, the building of a trans-continental rail line, and the protection of domestic manufacturers from US (and to a lesser extent British) competition. The National Policy’s tariff changes signalled a clean and abrupt discontinuity
in the primary objective of Canadian trade policy, explicitly favoring protectionism for the first time.\(^1\) Virtually every line of the Canadian tariff schedule was rewritten, specific industries were narrowly targeted for protection, and average tariff rates imposed on manufactured imports rose from 14.2% in 1877 to 21.5% in 1880 (Alexander and Keay, 2017).\(^2\) Further tariff increases were imposed by Macdonald’s Finance Minister Charles Tupper in 1887, and even with the reintroduction of imperial preferences under the Fielding tariffs in 1897, and vigorous opposition to protectionism by Wilfrid Laurier’s Liberal Party in the ‘free trade elections’ of 1891 and 1911, a protectionist trajectory which remained in place over the next 110 years, was firmly established for Canadian trade policy.\(^3\)

In this paper we use a static, general equilibrium trade model with multiple industries, similar to a version presented in Costinot and Rodriguez-Clare (2014), to show that during the first era of globalization, even for small open economies like Canada, increases in tariff protection were not necessarily associated with reductions in domestic welfare. Our general equilibrium approach allows us to capture not only the partial equilibrium distortionary effect of the National Policy’s tariffs on Canadian prices, but also the policy’s positive impact on domestic terms of trade, and government revenue.\(^4\)

The conventional view among economic historians is that Canada’s National Policy may have fostered long run-dynamic welfare improvements by, for example, sheltering infant industries, promoting agglomeration and encouraging technological change, but the policy was costly for Canadians in terms of static reductions in welfare.\(^5\) Pomfret (1993), for example, suggests that the policy’s tariff increases reduced welfare by more than 4% of gross domestic product (GDP) in 1879. Beaulieu and Cherniwchan (2014) use Anderson and Neary (2005) partial equilibrium measure of static deadweight loss (DWL) to show that the National Policy’s welfare effects may have been considerably lower than Pomfret claimed, but they were still negative, and in the neighborhood of 0.7%–1.5% of Canadian GDP. We believe that these conventional measures are incomplete because they only consider partial equilibrium distortionary price effects. The reasons for the adoption of an incomplete approach are twofold. First, any broader general equilibrium assessment of the impact of protective tariffs requires the measurement of terms of trade and government revenue effects, which are challenging to quantify in a historical context because the data requirements are more demanding than partial equilibrium assessments (Feenstra, 1995). Second, terms of trade effects, in particular, can be completely dismissed for small open economies like Canada in 1879, if we believe that these economies lacked any measurable international market power.\(^6\)

The measurement of general equilibrium welfare effects in our model requires information from the year of the policy change on total income; import penetration ratios; expenditure shares; and industry-specific trade elasticities, for Canada and its trade partners – the United States, Britain and the rest-of-the-world (RoW); as well as industry-level evidence on the change in average weighted tariffs (AWT) under the National Policy. We construct or, where appropriate, estimate these variables and parameters using newly compiled granular, annual trade and production data. Our results suggest that the increase in Canadian tariffs under the National Policy actually improved Canadian welfare in the year in which the policy was introduced by between 0.14% and 0.16% of real domestic GDP. In 2016 USD, this aggregate static welfare effect is equivalent to approximately $2.3 billion.\(^7\) Our assessment is sensitive to the trade elasticity estimates used, but our finding of a small, positive welfare effect is robust across a wide range of modern and historically contemporaneous elasticity choices. We also show that although Canadian welfare was higher under this policy than it would have been had Canada unilaterally lowered its tariffs to zero in 1879, a multilateral move to free trade would have resulted in an even better welfare outcome for Canadians. We conclude that from a general equilibrium perspective, in the economic environment that characterized the first era of globalization, Canada’s unilateral adoption of protectionist trade policy was a welfare-enhancing policy change.

The modern parallels to this historical episode are clear, if not perfect. Today, complexities associated with product and policy differentiation, global value chains, and multilateral and bilateral variation in trade costs, limit our ability to identify the conditions under which the adoption of protectionist objectives can significantly affect a country’s aggregate welfare, either positively or negatively (Calliendo and Parro, 2015; Costinot and Rodriguez-Clare, 2014; Feenstra, 1995; Ossa, 2014). Simplicity in the Canadian trading environment in 1879 – few trading partners, a relatively small number of products exchanged, uniform tariffs across partners, and newly available, finely detailed trade, price and production data – relax some of these modern limitations. The introduction of the National Policy in Canada, therefore, provides a clean, well-defined policy break that lends itself to a detailed general equilibrium assessment of the welfare impact of a country’s unilateral adoption of protectionism, relative to unilateral and multilateral free trade policy options. We do not only learn about the welfare impact of the National Policy – our assessment of this change in policy objectives reveals the need in both modern and historical contexts to adopt a general equilibrium perspective, and we can clearly

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1. Revenue objectives were never completely abandoned. Tariffs on imported exotics, for example, which include goods with little or no domestic production and relatively low import demand elasticities, remained high throughout the post-1870 era (Beaulieu and Cherniwchan, 2014, 161).
2. During this period, Canadian trade, price and production data are reported over fiscal years that end June 30. As a result, the introduction of the National Policy spans the fiscal years 1878 and 1879.
3. For a detailed assessment of the structure of the tariff changes under the National Policy, see Alexander and Keay (2017), or Beaulieu and Cherniwchan (2014). Canada did not fully engage in open trade until the Canada-US Free Trade Agreement came into effect on January 1, 1989.
4. Both our general equilibrium and the more conventional partial equilibrium approaches are static, which means that measured welfare changes apply only to the year in which the policy discontinuity occurred.
5. Inwood and Keay (2013) show that the National Policy induced investment and technological innovation in Canadian iron and steel industries. Harris et al. (2015) argue that the most protected industries under the National Policy experienced disproportionately large output increases, productivity improvements, and price declines.
6. As we discuss in Section 3, newer developments in trade theory provide a basis for accounting for the degree of market power, which, both according to these models and empirical evidence, is positive even for small open economies.
7. This $2.3 billion estimate is equal to 0.15% of Canada’s approximately $1.53 trillion USD 2016 GDP.
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