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Protecting infant industries: Canadian manufacturing and the national policy, 1870–1913 ☆

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Abstract

Infant industry protection has been the cornerstone of a debate on tariff policy that extends at least from the eighteenth century to the current day. In contrast to traditional neo-classical models of international trade that imply net negative effects, industrial organization and learning-by-doing trade models describe how protective tariffs can encourage output expansion, productivity improvement, and price reductions. Taking Canada's 1879 National Policy as a natural experiment, we explore the effect of a policy that substantially increased tariff protection to some, but not all, Canadian manufacturing industries. Using treatment intensity and difference-in-differences approaches, we find strong support for the predictions of the new trade models. After 1879, industries that received greater protection experienced faster growth in output and productivity, as well as larger price reductions. The industries targeted by the National Policy also exhibited greater returns to scale and faster learning rates. These results have important implications for the infant-industry debate in addition to addressing a central theme in Canadian economic history,

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1. Introduction

Alexander Hamilton, in his influential 1791 *Report on Manufactures*, presented one of the early cases for protecting industries in a young economy. Since then infant-industry protection has been part of a debate that extends to the present day. Baldwin (1969), while acknowledging the different viewpoints as of the late 1960s, makes a case against protection; while Melitz (2005), reflecting more recent work, explores conditions under which protection might be desirable. Empirical studies on the impact of both protection

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(Irwin and Temin, 2001; Irwin, 2000; Bils, 1984; Krueger and Tuncer, 1982) and trade liberalization (Amiti and Konings, 2007; Schor, 2004; Tybout and Westbrook 1995) in the presence of infant industries also give a mixed picture. Although we cannot claim to definitively resolve the question, we offer the most broadly-based empirical analysis of infant-industry protection in the literature. And, unlike previous work that has focused on individual industries, we provide compelling evidence that, in the context of an emerging economy, higher tariffs can promote rapid industrialization and contribute to aggregate economic growth.

As part of the Dominion Government's 1879 budget, the Canadian parliament passed what has become known as the National Policy. The legislation had broad nation building objectives that were to be achieved by substantially increasing tariffs on a long list of manufactured goods and through measures to promote railway building and immigration. Indeed the National Policy echoed key elements of the 'American System', promoted in the early eighteenth century by Henry Clay and other Whig politicians. The American System also emphasised high tariffs and infrastructure improvements, and was controversial just as the National Policy has been in Canadian economic development.[1] Easterbrook and Aitken's (1956) classic, *Canadian Economic History*, presents what is regarded as the traditional view, which reflects claims made by John A. Macdonald in 1878 when, as leader of the opposition Conservative Party, he first proposed the National Policy. As Easterbrook and Aitken (1956: 394) put it, the National Policy supported: "… a strong economic and political unity to 1930, a better balanced and diversified though vulnerable transcontinental economy, and a rise to 'middle nation' role in world affairs." According to this interpretation, higher protective tariffs promoted economic and industrial development, and were a vital source of government revenue. This view of the National Policy is not without its critics. Dales (1966) and Easton et al. (1988), for example, use standard neoclassical trade models in support of their revisionist view that the National Policy reduced per-capita income growth and possibly extensive growth.

In light of the growing influence of the large, mainly theoretical, 'new' trade literature that describes how tariff protection for infant industries can increase productivity and the pace of industrial development, there is a need to revisit both the traditional and revisionist perspectives. The Canadian experience of increased tariff protection under the National Policy provides us with an opportunity to test the theoretical predictions of the neo-classical and new trade models, while investigating the impact of the policy on Canadian development.

We present versions of two models prominent in the new trade literature. The first treats the manufacturing sector as a Cournot oligopoly, where a tariff can promote growth through internal scale economies. The second model focuses on external economies and the impact of tariff protection on learning by doing. These models describe mechanisms through which tariffs can trigger increases in output and productivity. We use Urquhart's (1993) data on fifteen Canadian manufacturing industries, spanning the years 1870–1913, to compare the performance of industries that were targeted by the National Policy with those that were not. Using treatment intensity and difference-in-differences estimation approaches, where industries receiving substantial tariff protection comprise the targeted group, we identify large, statistically significant impacts on output, productivity and price. We also find evidence of increasing returns to scale and learning-by-doing, with those industries most affected by the National Policy being particularly sensitive to output expansion through their scale economies and learning rates. Our findings support the two new trade models, and the traditional view that the National Policy fostered infant industries and promoted Canadian economic development.[2]

2. Tariffs and Canadian economic growth, 1870–1913

Prior to the work of Urquhart (1986, 1993), 1879 was not seen as a watershed year for the Canadian economy. According to earlier interpretations, the last thirty years of the nineteenth century was a period of generally sustained growth, albeit with a slowdown during the general recession of the early 1890s (Hartland, 1955; Firestone, 1960; Bertram, 1964). Although Young (1955), McDougall (1971), Barnett (1966) and Altman (1987) point to faster growth in the decade following the introduction of the National Policy, they argue that the 'wheat boom' period of 1896–1914 was the true break point in Canadian development. Urquhart's annual national income estimates have since allowed researchers to address the issue of timing more rigorously. Inwood and Stengos (1991), for example, test for structural breaks in gross national product and investment over the period

[1] For discussions of the American System that focus on the infrastructure aspect, see Lively (1955) and Goodrich (1970).

[2] Supporting infant industries with tariff protection is not costless. Even where infant industry effects can be identified, the net contribution to welfare may be small or even negative (Head, 1994; Inwood and Keay, 2013; Irwin, 2000). We do not consider the general equilibrium or broader welfare effects.