Preferential Access to the Canadian Market under the 1897 Fielding Tariff: British Exports to Canada, 1892-1903[†]

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Abstract

Canada inaugurated the formation of the (modern) British imperial trade bloc when, as part of the 1897 Fielding Tariff, it extended preferential market access to imports from Britain. British goods initially received a preferential reduction of one-eighth of the applicable duty, rising to one-quarter in 1898 and one-third in 1900. Because commodity imports were subject to differing duties, the uniform *relative* margins of preference resulted in cross-commodity variation in the *absolute* margins of preference. This cross-commodity variation is exploited in our paper, which is the first cliometric assessment of the efficacy of Canada's pre-WWI preferential trade policy. We compile and use a dataset of over 32,000 annual observations of trade-partner-specific, SIC6-product-level, manufactured imports into Canada during the period from 1892-1903.We find that the effect of Canada's preferential policy was statistically and economically significant; a 1 percentage-point increase in the absolute margins of preference is associated with an 11.5% increase in the value of imports from Britain. Counterfactually, if Canada had not adopted a preferential trade policy, the value of imports from Britain, in 1903, would have been approximately one-half lower.

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I. Introduction

In the 1840s and 1850s, Britain finally dismantled its mercantilist-era trade policy—notably, repealing the Navigation Laws in 1849—thereby ending preferential trade within the British Empire (Knowles 1930, p. 60).[1] Trade between Britain and its colonies, including its self-governing colonies (henceforth Dominions[2]), continued to flourish despite the removal of preferential market access, due to the existence of integrated institutional networks and common consumption patterns, both of which were bolstered by British emigration to the settler colonies (Magee and Thompson 2010). This period in the history of British trade, marked by the absence of preferential, partner-specific market access, was not to last forever. Less than a half-century after Britain closed the book on mercantilism, a new preferential trading system began to re-emerge within the Empire, and its origin can be traced to Canada.

Through the second half of the nineteenth century, the Dominions within the British Empire maintained independent tariff policies, and these policies did not differentiate between imports from the Empire (or Britain exclusively) and imports from outside of the Empire.[3] In 1897, Canada became the first Dominion to break from this practice and accord preferential treatment to imports from Britain, although not initially to imports from the other Dominions.[4] Under the 1897 Fielding Tariff, nearly all dutiable imports from Britain received a one-eighth reduction in the

[1] Canada abolished preference for British goods in the Tariff Act of 1847; see McDiarmid (1946, p. 65).

[2] In 1897, Canada was still the only Dominion, but this designation was extended to Australia, Newfoundland, New Zealand, and South Africa in the years before the First World War. Thus, use of the term 'Dominion' is, admittedly, slightly anachronistic in this paper.

[3] Canada did extend a (non-imperial) reciprocal preference to the United States under the Elgin-Marcy Treaty, which was in effect from 1854-66; see Officer and Smith (1968). Prior to 1897, there were also some minor inter-colonial preferences within the British Empire, such as between New Zealand and South Australia; see New Zealand, Customs Duties Reciprocity Act, 1895, 59 Vict., no. 74.

[4] Canada extended preference to New Zealand in 1904, South Africa in 1906, and Australia in 1925; see Knowles (1930, p. 383).

applicable duty, with the reduction rising to one-quarter in 1898 (Canada, Customs Tariff, 1897, 60-61 Vic., no. 16). In 1900, a separate piece of legislation increased the reduction in the duty applicable to British goods to one-third (Canada, Act to Amend the Customs Tariff, 1900, 63-64 Vic., 15). Thus, Canada entered the twentieth century with a trade policy that placed it at the vanguard of the modern system of British imperial preference.

While a basic Ricardian model of international trade predicts that preferential market access should result in trade diversion, even in this simplest of environments the extent to which trade flows shift would depend on margins of preference and relative trade elasticities (Krugman, Obstfeld and Melitz 2018). The predictions implied by richer theoretical models that allow for deviations from the standard Ricardian assumptions, and heterogeneity across commodities, producers, and partners, are even more ambiguous and context dependent (Clausing 2001; Trefler 2004; Romalis 2007). In the absence of unambiguous theoretical predictions about the impact of preferential market access, it is perhaps surprising that cliometricians have not already examined the impact of Canada's (pre-WWI) preferential policy. This paper undertakes this long over-due examination, asking the obvious question: was Canada's preferential policy effective in increasing imports from Britain?

There are many reasons why Canada's preferential policy merits special consideration. First, Canada was *first*—its decision to allow British goods preferential access to the domestic market served as a prototype that was emulated by other Dominions, all of which adopted preferential policies in the decade after the Fielding Tariff was introduced: New Zealand in 1903; the South African Customs Union in 1903; and Australia in 1907. In their details, the Dominions' preferential policies may have differed, but the structure of the Canadian tariff established a framework that could be adapted to local conditions. New Zealand's policy, for example, applied

to only a small range of commodity imports, and preference was implemented by raising duties on imports from outside of the British Empire (New Zealand, Preferential and Reciprocal Trade Act, 1903, 3 Edw. VII, no. 78). South Africa's policy was similar to Canada's, but with a less generous preferential reduction of one-quarter, as opposed to one-third (Knowles 1936, p. 302). In the newly federated Australia, the implementation of imperial preference involved an entirely separate, preferential tariff schedule (Australia, Customs Tariff, 1908, no. 7).

These differences aside, the historical record attests to the impact that the Canadian example had on the Dominions' policy decisions. In New Zealand's parliamentary debate over the adoption of imperial preference, it was observed that "…the Canadians forged the first link in the chain of free trade between all parts of the Empire, and we here are forging the second free-trade link in that chain between Great Britain and her colonies" (New Zealand Hansard, no. 127, 18 November 1903). Several years later, Australia's Premier, Alfred Deakin, argued strongly in favour of imperial preference, claiming that, "In the first place, we have the example which has been set by every self-governing Dominion – South Africa, Canada, and New Zealand" (Australia Hansard, no. 43, 22 October 1907). Ultimately, during the Ottawa Conference of 1932, it was the prospect of the Dominions withdrawing preferential access for British goods, alongside Britain's trepidation that the Dominions might enter into trade agreements with other countries, that compelled Britain to extend reciprocal preferential treatment to the Dominions' exports (Drummond 1974, p. 252). Although it was not until the interwar era when the much-studied British imperial trade bloc reached its fullest incarnation, the progenitor of the bloc's formation was Canada's policy of imperial preference adopted during the closing years of the nineteenth century (Glickman 1947).

A second reason that Canada's experience with preferential market access has such broad economic and historical relevance is that, in the late nineteenth century, Canada was the most protectionist of the Dominions, having embraced a 'National Policy' beginning in 1879. Thus, Canada's decision to extend preference to imports from Britain represented a sharply discontinuous, narrowly targeted change in trade policy. A study by Britain's Board of Trade estimated, for the year 1902, the bilateral tariff rate that Britain's exports encountered in various overseas markets. In estimating these tariff rates, the Board followed a complicated reweighting procedure in an attempt to correct for the substitution effect, and so the resulting estimates are not conventional average weighted tariffs. Nevertheless, the estimates are revealing: after preferential access had been granted by Canada, but before having been granted by any of the other Dominions, Australian tariffs on British goods amounted to 6%, South African Customs Union tariffs were also 6%, New Zealand's tariffs reached 9%, and preferential access had lowered Canadian tariffs on British imports to 16% (United Kingdom, Board of Trade, *British and Foreign Trade*, 1903, p. 469).

We also note that the potential for partner-specific tariff differences to have had a substantive impact was unusually strong in the Canadian context because Canada was the Dominion in which Britain confronted the greatest competition against a foreign industrial nation, in this case, the United States. Thompson and Magee (2003) have challenged the so-called 'soft market' thesis, arguing that British firms were not sheltered from foreign competition in Dominion markets. Indeed, competition in the Canadian market supports this view. In 1896, just prior to Canada's enactment of imperial preference, a mere 26% of its total imports came from Britain, whereas the British share of total imports was 72% in New Zealand and 66% in the Cape Colony

(United Kingdom, Board of Trade, *Statistical Abstract*, 1897).[5] In the Canadian market, transport costs associated with physical distance gave the United States a great advantage over Britain, and the former supplied the lion's share of Canada's manufactured imports: 53% in 1896, on the eve of the introduction of the Fielding Tariff. Yet, precisely because the United States accounted for such a large share of Canada's imports, the potential for preferential market access to drive trade diversion towards Britain was great.

American access to the Canadian market during the late nineteenth century was not just high, but it was growing rapidly. Coincident with (and even motivating) Canada's adoption of imperial preference in the late 1890s was a fundamental change occurring in the pattern of world trade. The opening of the Mesabi range in Minnesota and the consequent shift in Anglo-American relative iron ore prices catapulted the United States to a position of international competitiveness in those industries for which iron ore was a key input: steel and machinery (Allen 1979; Irwin 2003). The take-off in American exports of these goods came in the mid-1890s. Between 1890 and 1900, the United States went from a revealed comparative disadvantage to a revealed comparative advantage in the industries of iron, steel, and manufactures thereof; machinery (including steam engines and locomotives); and also copper manufactures (Varian 2020, p. 501).[6] By 1907/9, labour productivity in the American steel industry was 183% higher than in the British steel industry, and the Anglo-American productivity gap was even larger in the copper industry (Broadberry 1997, p. 29). The Fielding Tariff of 1897 (and the broader adoption of imperial preference in the

[5] Prior to Federation in 1901, inter-colonial Australian trade was treated as external trade in colonial statistics. Even still, the British share of imports for the colonies of New South Wales (35%) and Victoria (41%) substantially exceeded that of Canada (26%) in 1896.

[6] In 1900, Britain still possessed a revealed comparative advantage in these industries. However, Britain's indicators of revealed comparative advantage declined markedly between 1890 and 1900: iron, steel and manufactures thereof from 3.3 to 2.5; machinery from 3.1 to 2.4; and copper manufactures from 3.9 to 1.5; see Varian 2020, p. 490.

Dominions) was legislated against a backdrop of instability in the pattern of world trade in manufactured goods. Therefore, our assessment of the impact of the Canadian response—granting preferential access to British goods—informs our understanding of the consequences of partner-specific trade policies in the presence of transformative shifts in global trade patterns. From a methodological perspective, we also learn that in a fluid trading environment, preferential trade policy cannot possibly be gauged from a simple inspection of partner-specific trade shares—a structured econometric analysis is required.

A final consideration motivating interest in the Canadian experience with late nineteenth and early twentieth century imperial preference arises from the fact that, although there has been a dedicated study of Canada's interwar preferential policy (Jacks 2014), Canada is one of the only Dominions yet to be the subject of an empirical investigation of its pre-WWI preferential trade policy. Australia's and New Zealand's pre-WWI policies of imperial preference have been examined by, respectively, Sullivan (2001) and Varian (2022), who find that, on the whole, these policies had an inconsequential impact on British trade flows. Regarding Canada's preferential policy, however, the literature offers a mix of *en passant* impressions of its efficacy: "…the anticipation [of trade diversion] has been completely falsified…" (Root 1903, p. 38); "…the effect was remarkable…" (Russell 1947, p. 17); "…there remains considerable doubt as to the value of the preference given by Canada…" (Saul 1957, p. 182); "…whatever slight effect the preferences might have had…" (Saul 1960, p. 185); and "…British trade in Canada certainly benefitted…" (Platt 1993, p. 107). Meanwhile, many more sources on Canadian imperial preference are entirely silent regarding the size or even the direction of the impact. Altogether, given the importance of the trade partners involved, the representative nature of the Canadian experience, the sharp discontinuity in the policy break, and the quality and quantity of the historical evidence, there is a

surprising gap in the historical and cliometric trade literature with respect to our understanding of the impact of Britain's preferential access to the Canadian market.

It should also be stressed that the effect of Canada's preferential policy is not a question of interest to economic historians alone. Trade economists (of the modern world) will recognize Canada's early preferential policy, enacted as part of the Fielding Tariff, as a non-reciprocal trade preference (NRTP)—Canada granted British goods preferential access to the domestic market without Britain giving any reciprocal preference to imports of Canadian goods.[7] There is a growing literature on whether NRTPs, which are nowadays typically extended to developing countries for the very purpose of economic development, actually increase imports from the preference-receiving country (Herz and Wagner 2011; Gil-Pareja et al. 2014; Ornelas and Ritel 2020). On the whole, this literature has identified a tremendous heterogeneity in the effect of NRTPs across partners and, in some cases, no effect of NRTPs can be identified. Our historical context, and access to finely granular trade data, allows us to contribute to the empirical literature on trade policy by evaluating an early historical NRTP directed toward, not a developing country, but rather the most economically mature country of the time—Britain.

In evaluating the efficacy of Canada's preferential policy, this paper makes use of a new, manually compiled dataset of over 32,000 annual observations of trade-partner-specific, SIC6-product-level, dutiable and duty-free, manufactured imports into Canada during the period from

[7] In 1897, Britain's commitment to an essentially free-trade policy left no scope for reciprocating Canada's preferential market access, at least using the primary trade policy instrument of the day—tariffs. However, Britain's fundamental disinclination toward reciprocity would shortly be revealed when Britain imposed a temporary registration duty on grain imports from 1902-3, in order to finance its participation in the Second Boer War. Controversially, Britain refused to grant any preference for Canadian grain; see Zebel (1967).

1892/3-1903/4 (hereafter 1892-1903[8]). The data include the value of imports, duties paid, and, where reported, the quantity of imports. The empirical strategy for this paper takes advantage of the cross-commodity and cross-country variation in the *absolute* margins of tariff preference produced by the Fielding Tariff of 1897 and the Tariff Act of 1900. Since commodities were initially subject to differing import duties, the uniform *relative* margins of preference, viz. one-eighth (1897), one-quarter (1898), and one-third (1900), resulted in varying absolute margins of preference at the commodity level. The absolute margin of preference serves as the key explanatory variable in fixed-effects panel regressions, which are inspired by structural gravity trade models.

This paper proceeds as follows: the next two sections survey the literature on, respectively, imperial trade policy and Canadian trade policy. Section 4 explores the economic and political context that gave rise to Canada's trailblazing adoption of imperial preference in 1897, as well as the main features of the legislation. Section 5 describes the dataset and presents several summary statistics. The penultimate section consists of the econometric analysis and accompanying discussion. The final section offers some conclusions and identifies a number of directions for further research.

II. British imperial trade policy

Within the historical trade literature, the most substantial treatment of Canada's early preferential policy can be found in Saul's (1960) *Studies in British Overseas Trade, 1870-1914*. According to Saul, Canada, more than the other Dominions, presents the strongest evidence that imperial

[8] During the period concerned, the Canadian fiscal year extended from 1 July to 30 June. In this paper, the stated year corresponds to the fiscal year. For example, 1892 covers the year from 1 July 1892 to 30 June 1893.

preference had an effect on British exports—and even then, he described the effect as "slight". Based on his assessment of shifting trade shares, Saul argued that preference raised British exports of woolen textiles to Canada, where consumers substituted from *domestic* to British goods, which already comprised more than one-fifth of British exports to Canada even before the adoption of imperial preference (Saul 1960, p. 183). Unsurprisingly, the policy drew "clamour" from Canadian woolen manufacturers, who found themselves in closer competition with the mills of Yorkshire after tariffs on British imports were reduced (Knowles 1930, p. 382). Regarding the iron and steel industry, in which the United States was ascendant, Saul's (1960, pp. 180-1) assessment was that "…it is unlikely that the preferences had any significant effect", precisely because the duties on these commodities were either very low or nil before the policy was put in place. In other words, the absolute margin of preference, which will figure in this paper's econometric analysis, was too small to affect trade flows.

Studies of Edwardian imperial preference in other British Dominions have found that preferential market access did not, in general, enhance Britain's exports. For New Zealand's preferential policy of 1903, Varian (2022) exploited the limited nature of the policy's extension of preference to only selected commodities. Using propensity-score matching, he found no statistically significant effect of treatment—inclusion in New Zealand's preferential policy had no significant impact on the share of a commodity imported from within the British Empire. However, when the sample was restricted to only those treated commodities receiving very high absolute margins of preference (20% *ad valorem* margins), a statistically and economically significant effect emerged. For Australia's preferential policy, which was embedded within the Lyne Tariff of 1907, Sullivan (2001) contended that the policy was inconsequential due to the meagre average

margins of preference produced by the legislation.[9] For those dutiable commodities that benefitted from preferential market access, the average difference between the preferential and general rates was a mere 5 percentage points (Sullivan 2001, p. 50).

Magee's (2007) assessment of the efficacy of pre-WWI preferences within the British Empire rested upon measures of "revealed advantage", which were calculated as the share of per capita income in a Dominion allocated towards the purchase of British goods, normalized for the share of per capita income in industrial Continental Europe allocated towards the purchase of British goods. Having calculated revealed advantage for quinquennial intervals from 1870-1913 for the Dominions of Australia, Canada, and New Zealand, Magee (2007, p. 353-4) concluded that the adoption of imperial preference did not significantly affect Britain's exports to its Dominions.

Of course, Britain was not the only metropole exporting to its colonies during this 'age of empire'.[10] Estimating a gravity model for the period from 1870-1913, Mitchener and Weidenmier (2008, p. 1826) found that preferential trade policies, including preferential policies in non-British empires, raised bilateral trade by 26% or more, depending upon the specification.[11]

In the 1920s, the preferential policies of the Dominions, whether they successfully diverted trade or not, nevertheless provided leverage when agitating for some reciprocation from Britain, which was still pursuing an essentially free-trade policy and, therefore, lacked the scope to reciprocate.[12] The stopgap to Britain's reciprocation dilemma was the Empire Marketing Board,

[9] However, Irwin (2006, p. 323), based upon his cross-sectional gravity estimations for 1890, 1900, 1906, and 1909, suggested that the preferences enacted by Australia in 1907 "…appear to have the slight effect of halting the decline in intra-Commonwealth trade that was evident up to this point".

[10] The phrase 'age of empire' has been borrowed from the title of Hobsbawm's (1987) book: *The Age of Empire: 1875-1914*.

[11] In their sample, there were preferential policies applying to bilateral trade flows within the British, American, Italian, Portuguese, and Spanish Empires.

[12] Britain adopted imperial preference in the Finance Act of 1919; see McGuire (1939, p. 258). However, the reach of preferential market access was restricted to only those few commodities upon which Britain imposed an import duty. The only preference-receiving commodity that Britain imported from

founded in 1926 to provide a 'soft' preference for Empire goods by means of widespread publicity throughout Britain. However, this short-lived initiative—the Board only existed for seven years—proved futile, as it did not increase Britain's imports from the Dominions and other colonies (Higgins and Varian 2021). Indeed, until 1932, virtually all cliometric evidence has suggested that imperial preference within the British Empire, including India, was a mostly inefficacious endeavor.[13] However, the passage of the Import Duties Act in 1932 finally afforded Britain scope to reciprocate the Dominions' preferences, which it quickly did in the Ottawa agreements of that same year.[14] There is a consensus that the Ottawa agreements increased trade within the British Empire (Eichengreen and Irwin 1995, pp. 15-16; Gowa and Hicks 2013, p. 453; de Bromhead et al. 2019).[15] It is estimated that, but for the tariffs, preferences and quotas agreed at the Ottawa conference, the share of the Empire in Britain's imports in 1935 would have been 8 percentage points lower (de Bromhead et al. 2019, p. 347).

At, or shortly after, the Ottawa conference, Canada signed bilateral trade agreements with Britain, Australia, India, the Irish Free State, Newfoundland, New Zealand, South Africa, and Southern Rhodesia (Hart 2002). However, as Jacks (2014) has argued, these eight agreements resulted in little diversion of Canada's trade toward the British Empire. Applying a difference-in-differences approach to Canada's bilateral trade flows with 118 partners, Jacks found no statistically significant, differential increase in Canada's trade (either exports or imports) with the

Canada to a non-negligible extent was motorcars. Motorcars were subject to a 33.33% McKenna Duty beginning in 1915, with a preferential rate of 22.22% coming into effect in 1919.

[13] India lagged behind the Dominions, having not adopted imperial preference until 1927, and the effect of preferential market access on the British share of Indian imports appears to have been small in the late 1920s (Arthi et al. 2020, p. 23).

[14] Britain signed a total of seven bilateral treaties with Australia, Canada, India, Newfoundland, New Zealand, South Africa, and Southern Rhodesia; see Russell (1947, p. 30).

[15] Although, Gowa and Hicks (2013, p. 453) only found a statistically significant effect for Britain-Dominion trade flows, not for Dominion-Dominion trade flows.

eight aforementioned trade partners in the year after the Ottawa agreements had gone into effect. It would appear that Canada did not conform to the trade-diverting pattern of interwar imperial preference reported in much of the literature. Nevertheless, Jacks did find statistically significant, differential increases in Canada's trade for certain sectors, such as imports of "fibres, textiles and products" and "iron and its products" (Jacks 2014, p. 28).

Taken as a whole, there is very little consistency among economic historians' assessments of the system of British imperial preference that emerged between the 1890s and the 1930s. The range of estimated effects varies by country, time period, policy tool, and even measurement methodology. Against this mixed picture, and in the absence of published, quantitative evidence, it is difficult to anticipate whether the Fielding Tariff should have significantly raised Britain's exports to Canada. Still, the literature on British imperial preference underscores three broad considerations: first, the margins of preference created by the preferential legislation plays a key role; second, there were likely to have been very heterogeneous effects at the sector level; and third, the empirical strategy employed for identification matters. All three of these considerations inform the analysis in this paper.

III. Canadian trade policy before 1914

The watershed moment for Canada's late-nineteenth-century trade policy came not with the Fielding Tariff but rather with the adoption, in 1879, of the National Policy, which ushered in a period of protectionism that would persist, albeit somewhat diminished, until the First World War. Justifiably, Canadian economic historians have focused their attention on this policy, which raised the country's average weighted tariffs from just 14% to over 21% (Alexander and Keay 2019, p. 836). The key feature of the National Policy was that the tariff increases were far from uniform

across commodities, with Alexander and Keay (2019) arguing that tariff increases were higher for finished goods, goods with close domestic substitutes, and goods with production occurring in industries exhibiting higher degrees of political influence. For those manufacturing industries receiving greater tariff increases, the National Policy enhanced both output and productivity growth, with internal returns to scale and learning-by-doing effects explaining approximately 40% of the improvement in productivity growth (Harris et al. 2015, p. 29). Overall, the protectionist National Policy may have actually raised Canada's welfare by a modest 0.15% of GDP, by bringing tariffs closer to their optimal levels (Alexander and Keay 2018).

The Tupper Tariff of 1887 only furthered Canada along its protectionist trajectory. However, during the 1890s, Canadian trade policy moved in a more liberal, less restrictive direction. For late-nineteenth-century Canada, Beaulieu and Cherniwchan (2014) produced quinquennial estimates of a Trade Restrictiveness Index (TRI), a measure which, if applied as a uniform tariff across all commodity imports, would have the same impact on welfare as that of the existing tariff structure, with its varying tariffs imposed on (elasticity-varying) imports.[16] With respect to their TRI, Beaulieu and Cherniwchan find that the effect of the Fielding Tariff was of a broadly similar magnitude as the effects of, separately, the National Policy and the Tupper Tariff (Beaulieu and Cherniwchan 2014, p. 157). From 1875-80 (spanning the National Policy), the TRI increased by 7.5 percentage points, while from 1885-90 (spanning the Tupper Tariff), the TRI increased by 7.9 percentage points. And from 1895-1900 (spanning the Fielding Tariff), the TRI decreased by 5.6 percentage points, which can be attributed, at least in part, to the preferential reductions legislated in the late 1890s.[17] However, the adoption of imperial preference was far

[16] For a discussion of the TRI measure and its operationalization, see Anderson and Neary (1994).

[17] Changes in the TRI can be decomposed into changes in the average level of tariffs, changes in the set of goods to which high tariffs are applied, and the placement of tariffs on goods with less elastic

from the sole development in Canadian trade policy during the final decade of the nineteenth century. As with the adoption of the National Policy in 1879, tariffs changes were selectively applied across commodities under the Tariff Act of 1894 and the Fielding Tariff of 1897. Keay (2019, p. 1486) found that, among those industries that 'matured' during the decade following the adoption of the National Policy, there was a negative correlation between the net export share of an industry and its tariff level—for these industries, which had largely exhausted the productivity-growth potential conferred by the National Policy, a 1% increase in an industry's net export share corresponded to a statistically significant 0.8% decrease in its tariff level. It was amid this period of evolving and sophisticated trade policy adjustments that Canada moved to enact imperial preference.

Canada's preferential policy applied to imports across nearly all industries, including the pig iron industry, which has received special attention within the literature on Canada's pre-WWI trade policy. The output of Canadian pig iron was highly dependent upon the level of effective tariff protection—the level was consistently positive after 1879—with a 1% increase in effective tariff protection associated with a statistically significant 0.8% increase in domestic output (Inwood and Keay 2013, p. 1288). It has been estimated that the elasticity of British pig iron exports to North American (Canadian and American) tariffs was 0.7 during the period from 1870-1913 (Inwood and Keay 2015, p. 112). With such strong effects of Canadian tariff policy on the domestic production and importation of pig iron, it would stand to reason that the preferential reductions of the late 1890s should have been consequential. Perhaps Saul (1960, pp. 180-1) was wrong in his assessment that, for the iron and steel industry, "…it is unlikely that the preferences had any significant effect"?

demand; see Beaulieu and Cherniwchan (2014, p. 152). *Ceteris paribus*, preferential access should reduce the TRI by reducing the average level of tariffs.

IV. Canada's adoption of imperial preference

It was the success of the Liberal party in the election of 1896 that paved the way for Canada's adoption of imperial preference. Although the Liberal party had aspired to a free-trade policy, political pragmatism called for a more modest shift in the direction of freer trade in the late 1890s. In imperial preference, Laurier's Liberal government found a convenient vehicle for moving Canada's trade policy in its desired direction (Hart 2002, p. 73). In Canada, imperial preference via tariff reductions would be a means of advancing trade liberalization, just as imperial preference via tariff increases (on non-British goods) would later be a means of advancing a protectionist trade policy in New Zealand and Australia. The Fielding Tariff, named for Laurier's Minister of Finance, was designed to appeal to the Empire-mindedness of the opposition Conservative party, in an effort to ease the bill's passage through parliament (Hart 2002, pp. 73-4). In fact, the Conservatives had broached the possibility of (reciprocal) preferences with Britain in the 1880s but to no avail (McDiarmid 1946, p. 211).[18] Imperial sentiments within the Canadian Conservative party emanated in part from fears that the country was falling further into the commercial (and political) orbit of the United States (Hart 2002, p. 70). And in the 1890s, such fears would not have been entirely unfounded. As Figure 1 illustrates, as late as 1892, Canada still imported more manufactured goods from Britain than from the United States. Yet, just four years later, Britain's share of Canada's manufactured imports had fallen to just 33%, while the United States' share had risen to 53%.

Of course, there were objections to the passage of the Fielding Tariff, which included not only preferential reductions but also a broader revision, mainly downwards, of the entire tariff

[18] To render such preferences reciprocal, the Canadian High Commissioner in Britain proposed that the mother country impose duties on foreign cattle, flour, and wheat.

schedule. Regarding the preferential component of the Fielding Tariff, Conservative members of parliament loudly condemned its anticipated impact on domestic manufacturing during the debate over the bill (Canada, *Report of the Debates*, 1897).[19] The preferential reductions were also portrayed as a regressive tax policy: "The fine clothes, carpets, curtains, embroideries and other fine goods, imported from England and coming in under that schedule, would be $6,699,000, while from the United States and other countries there would be only about half a million dollars' worth. Now, that means that the poorer people of this country are obliged to pay taxes for the wealthier classes…" (Canada, *Report of the Debate*s, 1897, col. 1581). Moreover, there was disappointment that farmers' agricultural equipment, very little of which came from Britain, would not receive preference.[20] Yet, despite these dissatisfactions, the bill was passed. The Fielding Tariff was a trade-liberalizing piece of legislation that lowered Canada's average weighted tariffs and TRI, but its reach was mild enough to keep the National Policy of 1879 fundamentally intact—even after introducing imperial preference, Canada remained a strongly protectionist Dominion (McDiarmid 1946, p. 237).

Schedule D of the Fielding Tariff (officially the Customs Tariff, 1897 Act) specified Canada's preferential policy:

> On all of the products of countries entitled to the benefits of this Reciprocal Tariff, under the provisions of section seventeen, the duties mentioned in Schedule A shall be reduced as follows:
>
> On and after the twenty-third day of April, 1897, until the thirtieth day of June, 1898, inclusive, the reduction shall in every case be one-eighth of the duty mentioned in Schedule A, and the duty to be levied, collected and paid shall be seven-eighths of the duty mentioned in Schedule A.

[19] For example, one member of parliament stated, "The smaller mills in all parts of the country will have to close, and if this preferential clause is carried into effect, it is only a question of a very short time when the large ones will follow suit" (Canada, *Report of the Debates*, 1897, col. 1517).

[20] Although, in defense of preference, it was argued that farmers would benefit from cheaper British cotton textiles; see Canada, *Report of the Debates*, 1897, col. 2156.

> On and after the first day of July, 1898, the reduction shall in every case be one-fourth of the duty mentioned in Schedule A, and the duty to be levied, collected and paid shall be three-fourths of the duty mentioned in Schedule A.
>
> Provided, however, that these reductions shall not apply to any of the following articles, and that such articles shall in all cases be subject to the duties mentioned schedule A, viz.: wines, malt liquors, spirits, spiritous liquors, liquid medicines and articles containing alcohol; sugar, molasses and syrups of all kinds, the product of sugar cane or beet root; tobacco, cigars and cigarettes (Canada, Customs Tariff, 1897, 60-61 Vic., no. 16).

We note that nowhere in the Fielding Tariff does the word "preference" appear. Rather, Schedule D refers to a "reciprocal tariff". While the intent (and effect) of the Fielding Tariff was to extend preference to imports from Britain, there were complex legal obstacles preventing such a preference from being constructed and presented as such.

In 1862 and 1865, Britain had signed treaties with, respectively, Belgium and Germany, whereby the exports of these countries were entitled to benefit from the lowest tariff rates applied in all of the tariff-autonomous polities of the British Empire (McDiarmid 1946, p. 212). Thus, if Canada was to extend preference to British goods, such preference would also need to be extended to Belgian and German goods, as per *British* treaties which, it was argued, were binding upon the whole of the Empire. Framing preference as a reciprocal tariff policy—accepting that it was understood that essentially only Britain would fulfill the criteria for reciprocity—was an attempt to circumvent the Anglo-Belgian and Anglo-German treaties, with Canada mechanically applying its reciprocal rates in response to the tariff policies of its trade partners (Shields 1965, pp. 529-30). In London, the Foreign Office was not allayed by this logic, believing that Canada's policy had forced Britain into a violation of its treaties (Shields 1965, p. 534). This conundrum raised a number of labyrinthine questions concerning the constitutional relationship between Britain and Canada—questions beyond the scope of this paper. Ultimately, the resolution was that Britain renounced its treaties with Belgium and Germany in 1897, at the instigation of the Colonial

Secretary, Joseph Chamberlain (Shields 1965, p. 535-6).[21] In 1898, in a minor piece of legislation revising Canada's tariff policy, the "reciprocal tariff" was officially replaced by a "British preferential tariff" (Canada, Act to Amend the Customs Tariff, 1897, 61 Vic., 37).[22]

The Tariff Act of 1900 further raised the preferential reduction from one-quarter to one-third beginning on 1 July 1900, with alcohol, sugar, and tobacco remaining ineligible for the preferential reductions (Canada, Act to Amend the Customs Tariff, 1900, 63-64 Vic., 15).[23] In 1910, during the waning days of Laurier's government, agricultural interests pushed for the preferential reduction to be increased to one-half and, eventually, 100% (McDiarmid 1946, p. 231). However, these demands were unsuccessful. The relative margins of preference established in 1900 remained unaltered until the First World War, despite several further revisions to the tariff schedule.

V. Data

For the data used in our analysis, our starting point is the dataset underlying Keay (2019), which consists of commodity-level annual data for Canadian imports, including the value of imports, duties paid, and, where reported, the quantity of imports. However, this dataset does not include information on partner-specific trade flows. Therefore, we enlarge the dataset with information on Canada's bilateral imports from Britain and the United States, which are reported in Canada's

[21] In renouncing the Anglo-Belgian and Anglo-German treaties, Britain claimed that the absence of a clause allowing the self-governing colonies to withdraw from the treaties had been due to "oversight or want of adequate consideration for the exact consequences".

[22] While the other Dominions were not explicitly entitled to the British preferential tariff, it was nevertheless extended to Bermuda, British Guiana, and the British West Indies.

[23] Beginning on 1 August 1898, raw sugar imported direct from any British colony or possession and "refined sugar manufactured wholly from raw sugar produced in the British colonies or possessions" were eligible for the preferential reductions; see Canada, Act to Amend the Customs Tariff, 1897, 61 Vic., 37.

Sessional Papers (Canada, *Sessional Papers*, various years). From this source, we have manually digitized bilateral import data for all manufactured commodities, across 17 industries, for the years 1892-1903.[24] This interval spans the four fiscal years prior to the adoption of imperial preference (1892-5), four years during which it was progressively implemented (1896-9), and four years following the full implementation of the preferential policy (1900-3).[25] The addition of bilateral imports to the existing dataset yields partner-specific import data for three trade partners: Britain, the United States, and the 'rest of the world' (RoW), which is calculated residually. Figure 2 presents the values of Canadian imports from each of these trade partners for each year between 1892-1903.

We note that not all manufactured imports were subject to Canada's preferential policy. A number of manufactured commodities were non-dutiable and, thus, could not benefit from preferential market access; in 1896, 284 of the 1,121 manufactured commodities enumerated in Canada's trade statistics were non-dutiable, for example. As well, certain dutiable manufactured commodities, viz. alcohol, sugar, and tobacco, were explicitly exempted from preferential access by the legislation. Hence, Figure 2 also presents the values of the (dutiable and non-exempted) manufactured imports that fell within the scope of Canada's preferential policy.

The number of manufactured commodities reported in any single year from 1892-1903 ranges between 1,100 and 1,191. Problematically, the descriptions of commodities often change across time. Furthermore, the *Sessional Papers* sometimes aggregate (or disaggregate) commodities from one year to the next. To address inconsistencies in the data, we aggregate all

[24] The manufacturing industries are chemicals; clothing; electrical; food and beverages; iron and steel; leather; miscellaneous; non-ferrous metals; non-metallic minerals; paper; petroleum; printing and publishing; rubber; textiles; tobacco; transport equipment; and wood.

[25] The implementation of Canada's preferential policy began toward the very end of the 1896 fiscal year, with the one-eighth preferential reduction taking effect from 23 April 1897.

manufactured commodities listed in Canada's trade statistics up to the SIC6 product level, relying on the SIC6 coding already present in the Keay (2019) dataset. Since some SIC6 product codes encompass multiple commodities as classified in the trade statistics, there are fewer SIC6 products in any single year, ranging from just 826 to 957. Altogether, for our interval of 12 years, there are 10,949 dutiable and non-dutiable manufactured imports at the SIC6 product level. Since these imports are measured separately for three trade partners, our full sample consists of 32,847 partner-specific observations.

For most observations the value of imports is non-zero. The extensive margin of trade is greatest for the United States, with 98.4% of observations taking a non-zero value, followed by 83.0% for Britain, and 52.9% for RoW. The lower extensive margin for RoW underscores the fact that, for many products, competition within the Canadian import market was strictly an Anglo-American occurrence.

Average weighted tariffs differed among the three trade partners, as is evident from Figure 3, which depicts separate series both for all manufactured imports and for only those manufactured imports which were dutiable and not legislatively exempted from preference. Several features apparent in this figure are noteworthy. First, the all-manufactures series for RoW is much higher than the all-manufactures series for Britain and the United States. The difference can be explained almost entirely by the relatively large share of alcohol—some alcoholic products were subject to exorbitantly high *ad valorem* equivalent duties—within the RoW imports.[26] In the RoW series for only dutiable and non-exempted products, i.e. removing alcohol, the average weighted tariff for RoW is nearly identical to that of the United States, and the series never deviate from each other by more than 1 percentage point. Second, the all-manufactures series is consistently lower for the

[26] In 1896, the share of alcohol in manufactured imports was 8.0% for RoW, 2.2% for Britain, and only 0.4% for the United States.

United States than for Britain, partly due to the larger share of free goods in imports from the former[27] Yet, the main reason for the difference is, once again, alcohol, which constituted a larger share of imports from Britain than from the United States. Third, the British and American series for the dutiable and non-exempted products are remarkably similar until 1897, never deviating by more than 1 percentage point. However, after 1897 the British and American tariff series diverge by an ever-widening margin, consistent with the gradual implementation of preferential access for British goods. By 1903, the average weighted tariff (for only dutiable and non-exempted products) is 5.2 percentage points less for Britain than for the United States.

In our econometric analysis, the explanatory variable of interest is the absolute margin of preference, representing the intensity of treatment. We calculate two different measures of the absolute margin of preference at the SIC6 product level: observed preference and legislative preference. The observed preference measure, *PREFOBS*, is calculated as:

$$PREFOBS_{s6,t} = AWT_{s6,US,t} - AWT_{s6,GB,t} \quad (1)$$

In Equation 1, *AWT* is the customs revenue divided by the value of imports for domestic consumption. The subscript *s6* denotes an SIC6-level manufactured product.[28] The subscripts *US* and *GB* denote imports from the United States and Britain, respectively. The subscript *t* stands for the year (1892-1903). Thus, *PREFOBS* is simply the difference between the American and British average weighted tariff for each SIC6 product.

Of course, partner-specific average weighted tariffs do not align, for all products, with the relative margins of preference stipulated in the legislation. The Canadian tariff schedule included

[27] Many of the manufactures on the free list were intermediate goods (e.g. grease and lumber) with little added value beyond the primary state, and these goods were largely imported from the United States.

[28] Where the value of imports for an SIC6-level product is 0 for either Britain or the United States, then *PREFOBS* for that product is calculated using bilateral import data at a higher level of aggregation, typically SIC4.

both *ad valorem* and specific duties. For those commodities subject to a specific duty, differing bilateral unit values resulted in differing partner-specific average weighted tariffs. To give an example, Castile soap was dutiable at 2¢ per lb. In 1900, the unit value was 4.6¢ per lb. for the British variety and 9.5¢ per lb. for the American variety; as a result even with the one-third preferential tariff reduction (0.66¢ per lb.) applied to the duty on imports from Britain, the British average weighted tariff still exceeded the American average weighted tariff. In this example, the value of *PREFOBS* is actually negative. Another reason why, at the product level, the partner-specific tariffs do not reflect the relative margins of preference created by the 1897 Fielding Tariff and the Tariff Act of 1900 is because some SIC6 products result from the aggregation of commodities subject to different duties, with the internal composition of the SIC6 aggregates differing between Britain and the United States.

Another concern is that, although *PREFOBS* is the most straightforward measure of the absolute margin of preference, it may suffer from endogeneity, because exporters and importers may alter the composition of goods, including the within-SIC6 composition of goods, in response to the preferential policy. In the case of specific duties, *PREFOBS*, which measures the absolute margin of preference as an *ad valorem* equivalent, increases as unit values fall. Thus, the structure of Canada's preferential policy may have induced British exporters to shift toward lower grades of products, so as to benefit from higher absolute margins of preference, but with the effect of increasing the British weighted average tariff and counteracting the preferential reduction.

Cognizant of these shortcomings in our measure of observed preference, we also calculate a legislative measure of the absolute margin of preference, *PREFLEG*, which is less sensitive to the abovementioned issues. This measure takes a value of 0 from 1892-1895. For subsequent years, *PREFLEG* is calculated as:

$$PREFLEG_{s6,1896} = \frac{2}{12}\left[\left(\frac{M_{s6,\neg GB,1896}}{M_{s6,1896}}\right)\left(\frac{1}{8}\right)\left(AWT_{s6,\neg GB,1896}\right) + \left(\frac{M_{s6,GB,1896}}{M_{s6,1896}}\right)\left(\frac{1}{7}\right)\left(AWT_{s6,GB,1896}\right)\right] \quad (2)$$

$$PREFLEG_{s6,1897} = \left(\frac{M_{s6,\neg GB,1897}}{M_{s6,1897}}\right)\left(\frac{1}{8}\right)\left(AWT_{s6,\neg GB,1897}\right) + \left(\frac{M_{s6,GB,1897}}{M_{s6,1897}}\right)\left(\frac{1}{7}\right)\left(AWT_{s6,GB,1897}\right) \quad (3)$$

$$PREFLEG_{s6,1898-9} = \left(\frac{M_{s6,\neg GB,1898-9}}{M_{s6,1898-9}}\right)\left(\frac{1}{4}\right)\left(AWT_{s6,\neg GB,1898-9}\right) + \left(\frac{M_{s6,GB,1898-9}}{M_{s6,1898-9}}\right)\left(\frac{1}{3}\right)\left(AWT_{s6,GB,1898-9}\right) \quad (4)$$

$$PREFLEG_{s6,1900-3} = \left(\frac{M_{s6,\neg GB,1900-3}}{M_{s6,1900-3}}\right)\left(\frac{1}{3}\right)\left(AWT_{s6,\neg GB,1900-3}\right) + \left(\frac{M_{s6,GB,1900-3}}{M_{s6,1900-3}}\right)\left(\frac{1}{2}\right)\left(AWT_{s6,GB,1900-3}\right) \quad (5)$$

In these equations, *M* stands for imports. The subscripts retain their meaning from Equation 1, and ¬*GB* denotes imports from all countries except Britain, i.e. the United States and RoW combined. In Equations 2-5, the absolute margin of preference is calculated making use of both the non-British and British average weighted tariffs. Thus, this measure has the advantage of being calculable even for those products imported from just a single trade partner. The non-British and British average weighted tariffs are multiplied by a factor consistent with the relative margin of preference specified in the legislation. For both 1896 (Equation 2) and 1897 (Equation 3), the factors are 1/8th for the non-British weighted average tariff and 1/7th for the British weighted average tariff, because the British tariff is already net of the preferential reduction. In Equations 4 and 5, the factors are increased in line with the increased relative margins of preference. Thus, *PREFLEG* is an import-weighted average of the absolute margins of preference calculated as a reduction in non-British and British average weighted tariffs. If the value of non-British imports (and therefore the weight) is 0, then *PREFLEG* is calculated solely from the British average weighted tariff, and vice versa. The 1898 and 1900 increases in the relative margins of preference coincided with the Canadian fiscal year, taking effect on 1 July. However, the initial preferential reduction of 1/8th was introduced toward the end of the 1896 fiscal year, on 23 April 1897. Therefore, in Equation 2, the absolute margin of preference is multiplied by 2/12, since British goods received preferential access for only two out of the twelve months in the 1896 fiscal year.

VI. Econometric Analysis of the Impact of Preferential Market Access

Before reporting our estimates of the impact of preferential market access on import values, we first document the decline in the British average weighted tariff following the 1897 Fielding Tariff with the regression equation:

$$AWT_{s6,i,t} = \beta\left(POST_{s6,i,t}\right) + \gamma_{s3} + \delta_i + \theta_t + \varepsilon_{s6,i,t} \quad (6)$$

In Equation 6, *POST* is a binary variable taking a value of 1 for imports from Britain, but only in the years 1897-1903. The subscript *s3* denotes the SIC3 level of aggregation, which roughly corresponds to an industry. Consider, for example, SIC3 #741, which comprises copper and brass manufactures. In the 1903 trade tables, this industry includes 11 SIC6 products, such as SIC6 #741993, "copper rollers for use in calico printing," and SIC6 #741521, "brass nails, rivets, burrs, or washers". The subscript *i* in Equation 6 denotes the trade partner. Fixed effects are included for the SIC3 industries (γ), trade partners (δ), and years (θ). β is an estimation coefficient, and ε is the error term.

Parameter estimates for Equation 6 are presented in Table 1. In column 1, which excludes the fixed effects, we find that the coefficient on *POST* is negative and highly statistically significant. This finding suggests that across all products, British average weighted tariffs were unconditionally significantly lower than American and RoW tariffs after 1897. In column 2, which introduces all of the fixed effects, we find that the coefficient decreases, but its statistical significance remains strong—Canada's extension of preferential market access to British goods, beginning in 1897, coincided with a 3.6 percentage-point decrease in *AWT* for British goods, even after controlling for average tariff differences across SIC3 industries, trade partners, and years. In column 3, we again include all fixed effects, but we limit the sample to only dutiable and non-

exempt imports. Removing the non-dutiable and exempted observations from the sample unsurprisingly raises the (absolute value) coefficient on *POST*.

We now turn to the central question of this paper—was Canada's preferential policy effective in increasing imports from Britain? We begin with a basic intent-to-treat specification in which we ignore the intensity of preferential access and only consider the effect of assignment to the treatment group, which consists of British goods beginning in 1897. The regression equation for our intent-to-treat analysis is identical to Equation 6, except that the dependent variable is now the natural logarithm of SIC6 product-level import values.[29] The results are presented in Table 2. When fixed effects are excluded (column 1), we find a statistically insignificant negative coefficient for *POST*. When fixed effects are included (column 2), we find a much larger, and statistically significant (at the 1% level) coefficient of -0.457, which can be interpreted as a 36.7% reduction in imports associated with assignment to the post-1897 Britain treatment group. In column 3, where we limit the sample to only dutiable and non-exempt commodities, the (absolute value) coefficient falls slightly but remains highly statistically significant. We conclude from these estimates that, after controlling for average import values across SIC3 industries, trade partners, and years, imports of British manufactured goods *fell* substantially following the introduction of preferential market access under the Fielding Tariff.

Of course, as a binary intent-to-treat variable, *POST* is an inadequate indicator of the extent of Canada's preferential trade policy, the formulation of which resulted in considerable cross-product variation in the absolute margin of preference. Some products, such as "iron and steel nuts, rivets, and bolts, with or without threads" (SIC6 # 731824), received a very high intensity of preferential treatment—the legislative preference was 15.0% in 1903 for this product. Other

[29] More precisely, the dependent variable is an inverse hyperbolic sine transformation of the value of imports. This transformation was necessitated by the presence of zero-value imports.

products that were subject to lower general duties, such as "steel in bars, bands, hoops, scroll, strips, sheets or plates, of any size" (SIC 6 #722790), received small intensities of preferential treatment—the legislative preference for this product having been just 1.7% in 1903. And, it should once again be emphasized, the legislative preference for the non-dutiable and exempted products was 0%. Basic trade theory leads us to expect that imports of British goods should be positively associated with the absolute margin of preference.[30]

We now proceed from an intent-to-treat analysis (Table 2) to an intensity-of-treatment analysis (Table 3), estimating the following regression equation:

$$\ln(M)_{s6,i,t} = \beta\left(PREF_{s6,i,t}\right) + \gamma_{s3} + \delta_i + \theta_t + \gamma_{s3} \times \delta_i \times \theta_t + \varepsilon_{s6,i,t} \quad (7)$$

The explanatory variable of interest is, depending upon the specification, either *PREFOBS* or *PREFLEG*. In certain specifications, we include a fixed effect that interacts γ, δ, and θ. This interaction captures changes in comparative advantage across partner-specific SIC3 industries that are allowed to vary over time, while still exploiting the differences in the preferential margin among SIC6 products.[31] It should be noted that our intensity-of-treatment analysis is consistent with structural gravity models of trade, insofar as the fixed effects control for bilateral and multilateral resistance, and the absolute margin of preference measures a trade (policy) cost.[32] Table 3 presents the results of the estimation, with the sample restricted to dutiable and non-exempt products. In columns 1 and 2, the explanatory variable of interest is, respectively, the observed level of absolute preference (*PREFOBS*) and the legislated level of absolute preference

[30] The mechanism by which preferential market access would increase British imports is by altering the price of the British variety of a product relative to the non-British variety of the product; see Armington (1969).

[31] This control is necessary to confidently identify the impact of preferential market access for British imports because comparative advantage, reflected in, for example, import unit values, was shifting strongly in favour of the United States over our period of study.

[32] For a discussion of the theoretical foundations underlying our intensity-of-treatment specification, see Head and Mayer (2014).

(*PREFLEG*). While both coefficients are positive, the coefficient on *PREFLEG* is relatively small and not statistically distinguishable from zero at any conventional level of significance. Column 3, which represents our preferred specification, introduces the industry-by-partner-by-year interaction fixed effect, which controls for variation in comparative advantage across partner-specific industries in each year. The coefficient on *PREFLEG* is now not only statistically significant, it is large and economically significant. A 1 percentage-point increase in the absolute margin of preference in this specification is associated with an 11.5% increase in imports.[33]

Using this coefficient, we estimate counterfactual levels and shares of Canada's manufactured imports from Britain, if Canada had not instituted any preference for British goods.[34] By 1903, in the absence of preferential access to the Canadian market, the value of imports from Britain would have been just $15.2 million, compared to an actual level of $45.4 million. Its share would have fallen to 15.6%, whereas it was actually 35.5%. Figure 4 presents the actual and counterfactual import shares for Britain and for the United States and the RoW (combined). We emphasize that the impact of the 1897 Field Tariff and the Tariff Act of 1900 on the distribution of Canada's imports across its trade partners far exceeded the impact of the Ottawa agreements of 1932 on Britain's imports. By 1935, three years after the Ottawa agreements, the actual share of the Empire in Britain's imports exceeded the counterfactual share by just 8.2 percentage points (de Bromhead et al. 2019, p. 347). By 1903, three years after the full implementation of Canada's

[33] A series of sensitivity tests confirm the robustness of our preferred estimate: we use PPML in place of the inverse hyperbolic sine transformation of import values; we include all non-dutiable and exempt import products; we consider the impact of preferential access relative to only the United States or only RoW import products; we include SIC2 or SIC4 industry fixed effects; and we use a variety of approaches to derive clustered and robust standard errors.

[34] This counterfactual assumes that preferential access was trade generating, rather than trade diverting; we hold the United States and RoW trade values fixed at their observed levels. If we assume that preferential access was trade diverting, by holding total trade values fixed at their observed levels, then the counterfactual British import share drops to 11.9%.

preferential policy, the share of Britain in Canada's manufactured imports exceeded the counterfactual share by 19.9 percentage points.

To address identification concerns that arise from shifting comparative advantage across trade partners and time, in column 4 we report estimates of Equation 7 using a sample that includes only imports from Britain. The impact of preferential market access is identified in this specification off changes in import volumes among British products covered by imperial preference, relative to British products that entered Canada free from duties, or products that were explicitly exempt from preferential access under the Acts.[35] In column 4, the coefficient on *PREFLEG* remains statistically significant and its magnitude even increases slightly.

In column 5, we again estimate Equation 7, but with import quantities, instead of import values, serving as the dependent variable. The rationale for this specification is twofold. First, the estimated impact of preferential access may, in part, result from changes in import unit values. Unit values may rise if preferential reductions were not wholly passed through to Canadian consumers. If British producers absorbed part of the tariff decrease—and this might be more likely in relatively secure British industries, such as woolen textiles—then the increase in imports values may simply be due to an increase in import prices. A second concern is that import unit values may have been falling differentially across trade partners. In this case, part of the relative increase in British import values could be due to increases in British relative to American and RoW import prices. In estimating the effect of the preferential margin on import quantities, the sample size is almost halved, unavoidably, because of the limited reporting of import quantities in the *Sessional Papers*. Still, we find that the coefficient of *PREFLEG* is highly statistically significant and in line with the coefficient from our preferred specification, reported in column 3.

[35] Obviously, in this specification, the partner fixed effects are dropped. As well, the interaction fixed effect only interacts the SIC3 industry and the year.

One of the themes to emerge from the scholarship on modern NRTPs is the heterogeneity in their effects, which prompts us to consider the heterogeneity in the impact of preferential market access across different product characteristics for British goods at the turn of the twentieth century. Table 4 presents regressions which interact *PREFLEG* with binary variables for each of four quartiles. In columns 1 and 2, the quartiles pertain to, respectively, import values and levels of legislative preference. The quartiles are defined over the sample of dutiable and non-exempt import products.[36] Column 1 reveals a clear pattern: the elasticity of imports with respect to the absolute margin of preference rises with the product-level value of imports. This result is not unreasonable because, as products are defined more narrowly, as suggested by lower import values, the substitutability among partner-specific varieties of the products decreases (Imbs and Mejean 2015). In column 2, the coefficient rises between the first and second *PREFLEG* quartiles, remains basically the same between the second and third quartiles, and then falls off between the third and fourth quartiles. Here, our interpretation is that low and negligible absolute preferential margins had a smaller (though statistically significantly positive) effect on import values, but once the preferential margin exceeded some threshold, the elasticity of imports to the preferential margin increases. At very high absolute margins of preference, once much of the potential for substitution toward British varieties has been realized, then the elasticity decreases again.

We re-estimate Equation 7 for each of 16 manufacturing industries—these industries are defined at a higher level of aggregation than SIC3—with only partner, year, and interacted partner-by-year fixed effects. Unsurprisingly, most of the coefficients are positive and statistically significant. However, one striking result is the negative and significant coefficient estimated for the iron and steel industry, which was one of the larger industries among Canada's manufactured

[36] The import value thresholds for each quartile are (approximately): $68,000, $87,000, and $103,000. The *PREFLEG* thresholds for each quartile are: 5.0%, 7.5%, and 9.9%.

imports, and one of the industries that has received the most attention in the historical trade literature. The result for iron and steel indicates that Canada's preferential policy did not counteract the rise of American iron and steel exports, which were most prominent in the United States' surge in manufactured exports. We interpret the sign of the coefficient as suggestive of possible endogeneity in Canadian tariff setting. As the United States became ever more competitive in certain SIC6-level iron and steel products, policymakers may have sought to offset this trend of increasing American comparative advantage by raising the duties which, by extension, raised the preferential margins under the Fielding tariff for these SIC6-level products. This interpretation is speculative, but the iron and steel industry should be distinguished from the other manufacturing industries. It is worth mentioning that the other large, widely studied industry, textiles, has a coefficient in line with the coefficient for the manufacturing sector as a whole.

Finally, as an alternative approach to estimating the impact of preferential market access on imports from Britain, we perform an event study, which can be expressed as:

$$\ln(M)_{s6,i,t} = \sum_{t=1892}^{1903} \beta_t \left(PREFLEG_{s6,i,t}\right)(\theta_t) + \gamma_{s3} + \delta_i + \theta_t + \gamma_{s3} \times \delta_i \times \theta_t + \varepsilon_{s6,i,t} \quad (8)$$

For each of the 12 years in the interval, a coefficient is estimated for the interaction between *PREFLEG* and a binary variable for the year. The coefficients and 95% confidence intervals are presented in Figure 5. Prior to 1897, the first full year of preferential market access, the coefficients are 0. Thereafter, the coefficients are statistically significant and positive. This approach confirms that the 1897 Fielding Tariff was an impactful and persistent piece of legislation.

VII. Conclusion

Our paper tells a story about three countries, viz. Canada, Britain, and the United States, and the results enhance our understanding of each of their economic histories. As for Canada, the finding that a 1 percentage-point increase in the preferential margin increased imports from Britain by

11.5% should leave no doubt as to the efficacy of Canada's early preferential trade policy, set out in the 1897 Fielding Tariff. This finding, identified from a theory-consistent, structural gravity model specification, amounts to a revision of several sources in the historical literature—the effect of the policy was more than "slight," as Saul (1960, p. 185) had described it. In this respect, Canada's pre-1914 preferential policy differed from the policies of the other Dominions, which had little impact on the geographic distribution of their imports (Sullivan 2001; Varian 2022). Another contrast is between Canada's initial extension of preferential market access in 1890s and its expansion of preferential market access in the 1930s. As we have found, the former affected Canada's imports. As Jacks (2014) has argued, the latter did not. Taken together, these findings suggest that Canada's economic integration in the British Empire—more precisely, its *trade-policy-determined* integration—was front-loaded.

Exports loom large within narratives describing the relative economic decline of late-Victorian Britain. A long-established literature has alleged that, in the late nineteenth century, Britain suffered from export-retarded growth, whereby a deceleration of exports caused a deceleration of industrial production and productivity (Meyer 1955; Coppock 1956; Feinstein 1996).[37] Yet, Britain's exports began to accelerate from the late 1890s onwards, with the annual growth rate rising from 2.0% p.a. for 1873-98 to 3.9% p.a. for 1898-1913 (Imlah 1958, pp. 97-8). The finding that British exports to Canada, a non-negligible export market, would have been one-half lower without preferential access goes some way toward explaining the improved export performance of Edwardian Britain.[38] Although a number of studies have served to portray Britain's

[37] More recently, Crafts and Mills (2020) have found that the deceleration of British productivity began in the 1870s, which, as they acknowledge, is temporally consistent with onset of export-retarded growth, as argued by Coppock (1956). For the most famous challenge to the export-retarded growth thesis, see McCloskey (1970).

[38] In 1903, the difference between the actual and estimated counterfactual values of manufactured imports from Britain was $30.2 million, or £6.2 million at the classical gold standard parity of $4.86 per

manufacturing sector as a somewhat defenseless victim of foreign trade policy, especially American, during the protectionist backlash prior to the First World War (Irwin 2000; Inwood and Keay 2015; Varian 2018), our paper shows that British manufacturing could benefit from foreign trade policy too. And it is likely that this benefit grew over time, commensurate with Canada's increasing market size during the "wheat boom" of the early twentieth century.[39] Extrapolating our findings even further into the future, a point of curiosity would be the extent to which Britain's fragile current account depended upon Canada's (unreciprocated) preferential policy during the sterling overvaluation of the 1920s.

Britain's relative economic decline coincided with the United States' relative economic rise. One of the manifestations of this rise was a surge in American manufactured exports (Irwin 2003). In few countries was the surge more evident than in neighboring Canada, a market where the United States enjoyed the advantage of distance but the disadvantage of trade policy, vis-à-vis its industrial competitor, Britain. That the United States sustained its increased share of Canada's manufactured imports, despite a substantial tariff preference for British goods, accentuates how very competitive American manufacturing had become during the 1890s.

This paper's contributions to the economic histories of individual countries should not distract from the more general lessons that it offers. Chiefly, the margin of preference matters, and care is required in the identification of the impact of the margin of preference. Whereas we find a statistically significant negative coefficient on our binary treatment variable in our intent-to-treat analysis, we find a statistically significant positive coefficient on our preferential margin variable

£1. The value of Britain's exports in that year was £290.8 million pounds; see Imlah (1958, p. 98). A back-of-the-envelope calculation, in partial equilibrium, indicates that Canadian preferences raised Britain's exports by 2.1%, equivalent to just over one-half year of British export growth at the 1898-1913 rate.

[39] From 1896-1913, Canadian real GDP increased by an impressive 6.3% p.a.; see *Maddison Project Dataset* (2020).

in our intensity-of-treatment analysis, after controlling for industry, trade partner, year, and industry-by-partner-by-year fixed effects. Another contribution of this paper has been to extend the literature on NRTPs back to the nineteenth century, documenting the efficacious pursuit of this form of trade policy long before its usage in the context of economic development.

Canada's adoption of a preferential trade policy as part of the 1897 Fielding Tariff had a sizable impact on the geographic distribution of Canada's imports, positively affecting its imports from Britain. However, in calling attention to the economic effect of Canada's preferential policy, this paper should not divert attention from what was perhaps the greatest legacy of the policy: the formation of the British imperial trade bloc, which was to last until the late twentieth century. Nevertheless, it may now be claimed that the consequences were not strictly political, but economic too.

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Table 1. Average weighted tariff, 1892-1903

	(1)	(2)	(3)
POST	-0.058***	-0.036***	-0.049***
	(0.012)	(0.008)	(0.003)
SIC3 fixed effects	No	Yes	Yes
Partner fixed effects	No	Yes	Yes
Year fixed effects	No	Yes	Yes
N	32,847	32,847	23,349
R^2	0.003	0.325	0.310

Notes: The dependent variable is the average weighted tariff. *** indicates statistical significance at the 1% level. Standard errors reported in parentheses have been clustered by SIC3 x Partner x Year. Columns 1 and 2 report results for all imports. Column 3 reports results for only dutiable and non-exempt imports. See the text for further details.

Table 2. Imports, 1892-1903 (Intent to treat)

	(1)	(2)	(3)
POST	-0.116	-0.457***	-0.420***
	(0.115)	(0.113)	(0.116)
SIC3 fixed effects	No	Yes	Yes
Partner fixed effects	No	Yes	Yes
Year fixed effects	No	Yes	Yes
N	32,847	32,847	23,349
R^2	0.314	0.290	0.313

Notes: The dependent variable is the inverse hyperbolic sine transformation of import values. *** indicates statistical significance at the 1% level. Standard errors reported in parentheses have been clustered by SIC3 x Partner x Year. Columns 1 and 2 report results for all imports. Column 3 reports results for only dutiable and non-exempt imports. See the text for further details.

Table 3. Imports, 1892-1903 (Intensity of treatment)

	(1)	(2)	(3)	(4)	(5)
PREFOBS	0.056***				
	(0.008)				
PREFLEG		0.012	0.115***	0.178***	0.098***
		(0.011)	(0.020)	(0.018)	(0.027)
SIC3 fixed effects	Yes	Yes	Yes	Yes	Yes
Partner fixed effects	Yes	Yes	Yes	No	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes
SIC3 x Year	No	No	No	Yes	No
SIC3 x Partner x Year fixed effects	No	No	Yes	No	Yes
N	23,349	23,349	22,413	10,735	11,136
R^2	0.316	0.313	0.456	0.354	0.581

Notes: The dependent variable is the inverse hyperbolic sine transformation of import values in columns 1-4 and of import quantities in column 5. *** indicates statistical significance at the 1% level. Singletons have been dropped in those columns including interaction fixed effects. Standard errors reported in parentheses have been clustered by SIC3 x Partner x Year in all columns 1-3 and column 5. In column 4 standard errors have been clustered by SIC3 x Year. Columns 1-3 and 5 report results for only dutiable and non-exempt imports. Column 4 reports results for Britain, including dutiable, non-dutiable, exempt, and non-exempt imports. See the text for further details.

Table 4. Imports, 1892-1903 (Heterogeneity across quartiles)

	(1)	(2)
PREFLEG x Q1	-0.330***	0.048**
	(0.028)	(0.022)
PREFLEG x Q2	0.110***	0.195***
	(0.019)	(0.027)
PREFLEG x Q3	0.292***	0.205***
	(0.022)	(0.023)
PREFLEG x Q4	0.490***	0.120***
	(0.021)	(0.023)
SIC3 fixed effects	Yes	Yes
Partner fixed effects	Yes	Yes
Year fixed effects	Yes	Yes
SIC3 x Partner x Year fixed effects	Yes	Yes
N	22,413	22,413
R^2	0.523	0.459

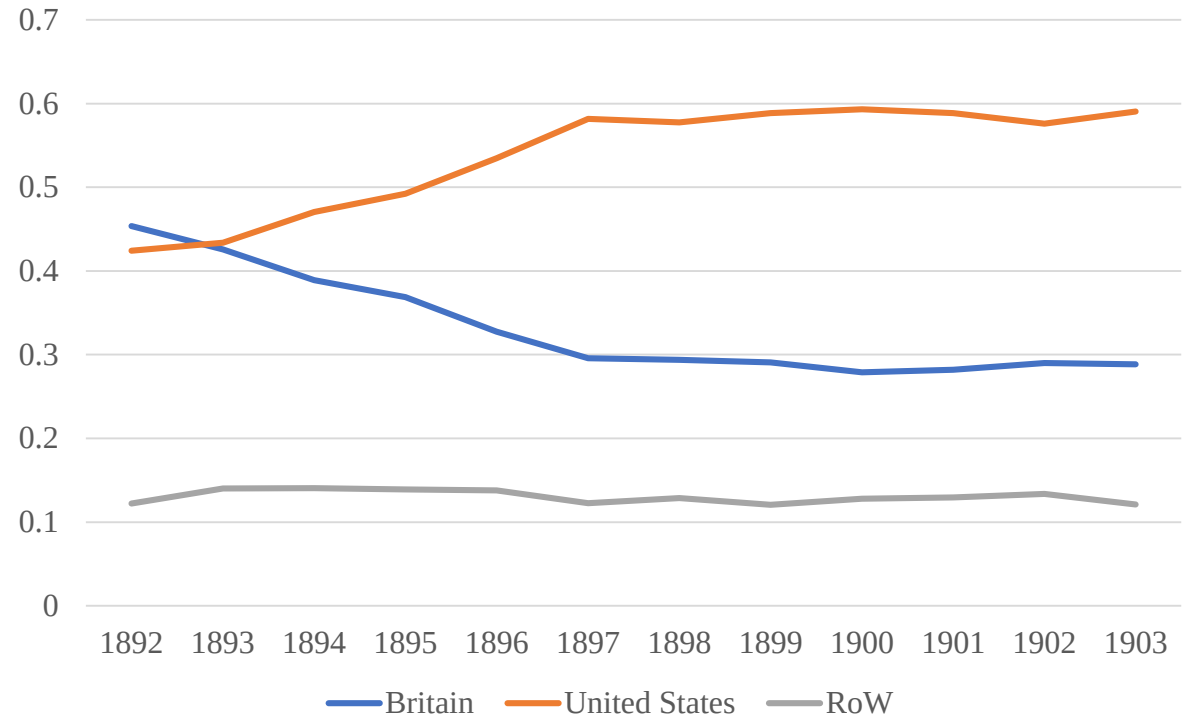
Notes: The dependent variable is the inverse hyperbolic sine transformation of import values. In column 1, import value quartiles are derived over dutiable, non-exempt imports. In column 2, legislative preference quartiles are derived over dutiable, non-exempt imports. ** indicates statistical significance at the 5% level and *** at the 1% level. Singletons have been dropped due to the inclusion of interaction fixed effects. Standard errors reported in parentheses have been clustered by SIC3 x Partner x Year. In both columns, the sample includes only dutiable and non-exempt imports. See the text for further details.

Table 5. Imports, 1892-1903 (Heterogeneity across industries)

	PREFLEG	N
Chemicals	0.026*** (0.006)	2,754
Clothing	0.370*** (0.078)	1,416
Electrical	-0.735 (1.124)	138
Food and Beverages	0.294*** (0.018)	3,180
Iron and Steel	-0.370*** (0.036)	3,699
Leather	0.251*** (0.031)	654
Miscellaneous	0.206*** (0.020)	1,719
Non-Ferrous Metals	0.247*** (0.075)	1,425
Non-Metallic Minerals	0.375*** (0.039)	1,803
Paper	0.253*** (0.023)	681
Petroleum	-0.263** (0.106)	267
Printing and Publishing	-0.160*** (0.012)	336
Rubber	0.666*** (0.089)	369
Textiles	0.102*** (0.031)	3,348
Transport Equipment	0.290*** (0.075)	687
Wood	0.430*** (0.064)	873
Partner fixed effects	Yes	
Year fixed effects	Yes	
Partner x Year fixed effects	Yes	

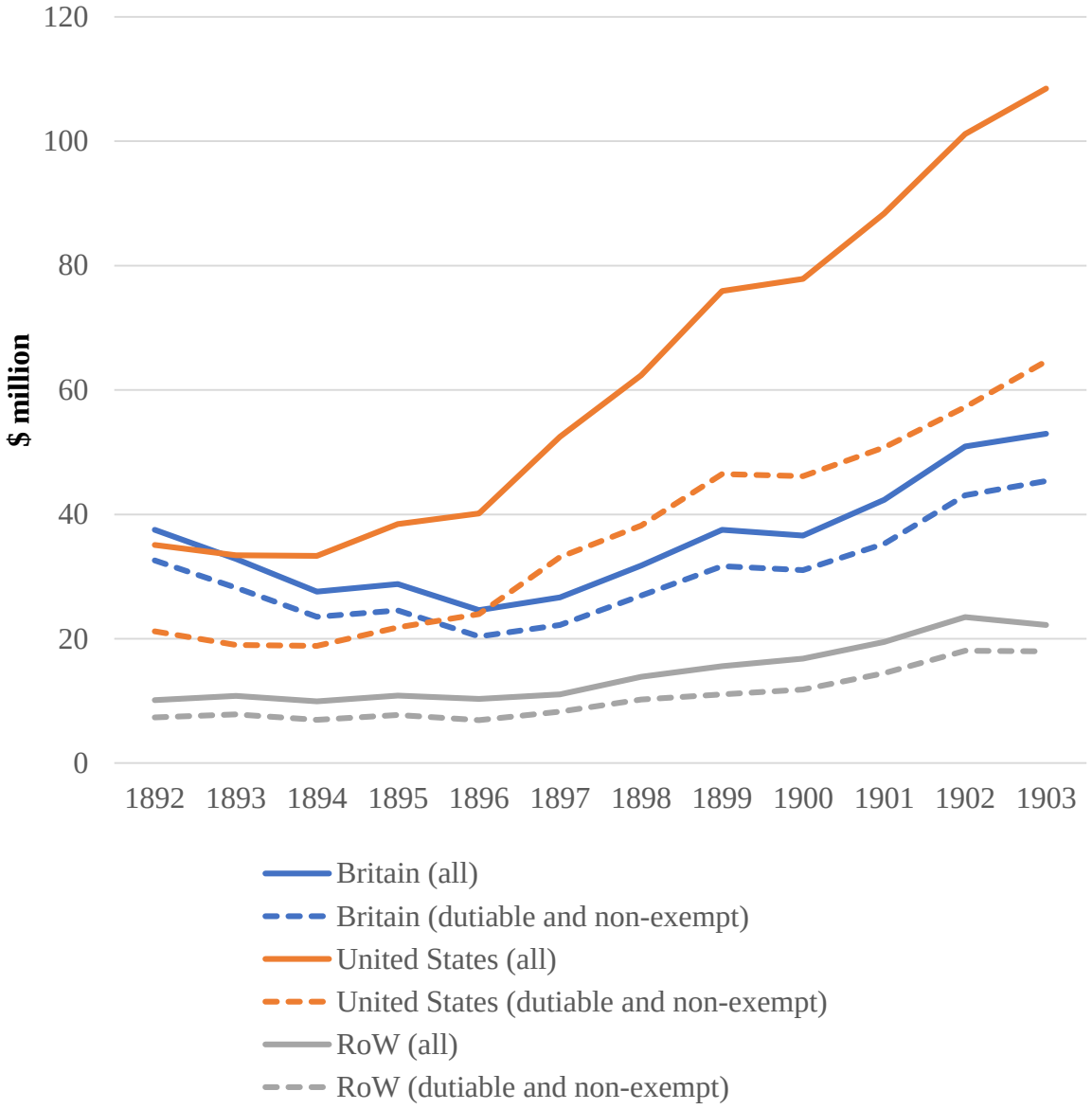
Notes: The dependent variable is the inverse hyperbolic sine transformation of import values. ** indicates statistical significance at the 5% level and *** at the 1% level. Singletons have been dropped due to the inclusion of interaction fixed effects. Standard errors reported in parentheses have been clustered by Partner x Year. The sample includes only dutiable and non-exempt imports. No regression has been estimated for tobacco because all of its constituent products were exempt from preferential reductions. See the text for further details.

Figure 1. Partner shares of Canadian manufactured imports, 1892-1903



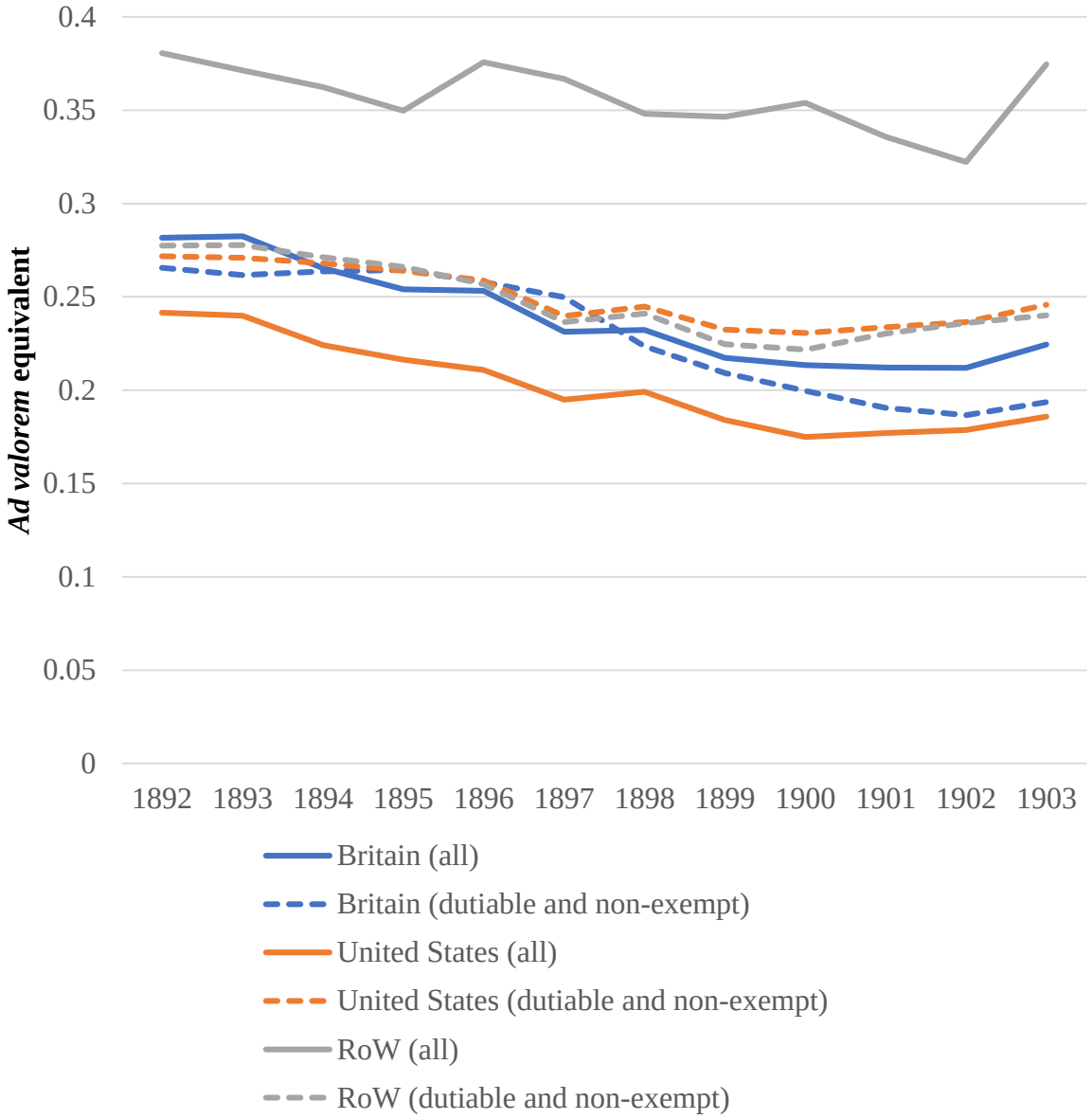
Source: Canada, *Sessional Papers* (1892-1903).

Figure 2. Value of Canadian manufactured imports, 1892-1903



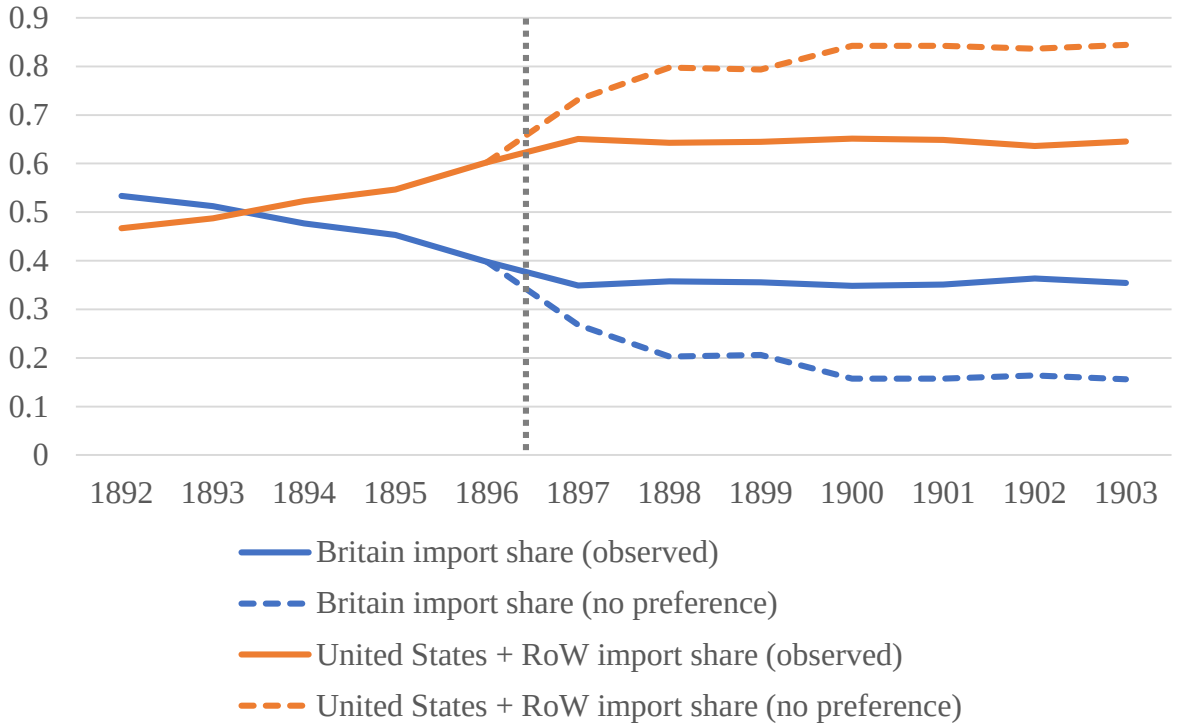
Source: Canada, *Sessional Papers* (1892-1903).

Figure 3. Canadian average weighted tariffs for manufactures, 1892-1903



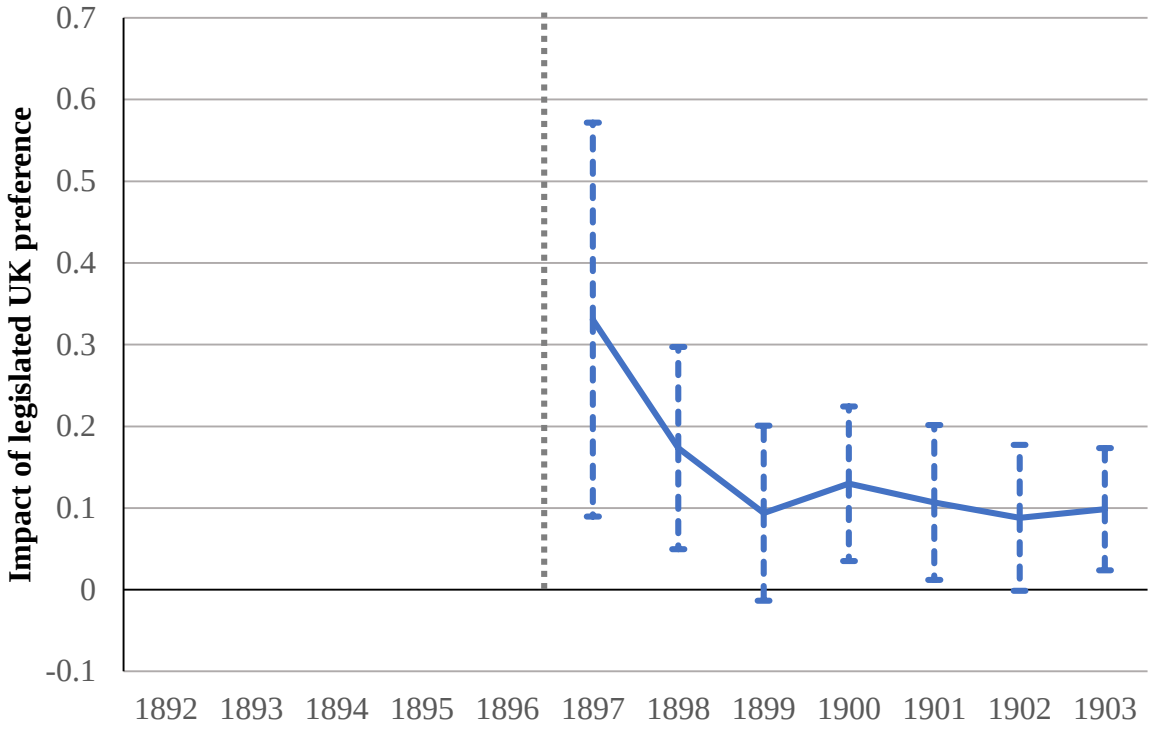
Source: Canada, *Sessional Papers* (1892-1903).
Notes: See text.

Figure 4. Observed and counterfactual shares of Canadian manufactured imports, 1892-1903



Notes: Counterfactual shares have been estimated using the coefficient reported in column 3 of Table 3. See text.

Figure 5. Event study of legislated preference, 1892-1903



Notes: Error bars are 95% confidence intervals. See text.