Tariffs, Immigration, and Economic Insulation

A New View of the U.S. Post–Civil War Era

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> [T]he protective tariff yields little gain to the laborer, because continued immigration brings him new competitors.
>
> **—David Starr Jordan, "The Moral Aspect of the Protective Tariff" (1908)**

Immigration of epic proportions is a marker for the years from 1865 to 1910 in U.S. history. More than 22 million foreigners arrived during the period, unencumbered for all practical purposes by official immigration restrictions. When yet-to-be-employed immigrants stepped off the ships, they embodied streams of yet-to-be-produced goods and services. The present values of those goods and services went unrecorded and untaxed. To our knowledge, the only example of the present value of immigrants' earnings being recordable as U.S. imports is "immigrant" African slaves.[1] In contrast, the present values of streams of future goods and services implicit in imports of *physical* capital were recorded, and, where taxable, they were taxed.

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1. According to the U.S. Constitution, no federal ban on African slave imports could be implemented until 1808. Although most states had enacted separate bans well prior to the federal ban that became effective in 1808, South Carolina permitted slave imports between 1803 and 1807.

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Economists and historians have long characterized the era as one in which the United States followed a protectionist international policy. This characterization derives from the historically high tariff rate on dutiable goods during the period. If protectionism means high tariffs on dutiable goods, the characterization is accurate, but if it is intended to connote Americans' insulation from foreign competition, then it falls short. To be sure, the duty-free component of imports matters. However, the importlike consequences of immigration are also an obvious candidate for inclusion in any assessment of overall U.S. insulation. Explicitly factoring immigration into such an assessment is the objective of our efforts here.[2]

This examination takes on added importance in the light of on-going claims that late-nineteenth-century U.S. growth was somehow tied to Americans' insulation from foreign competition. The implication of this claim, of course, is that a new era of growth can be achieved by harkening back to the protectionist practices of this post–Civil War period. Our analysis undermines these claims significantly.

Post–Civil War U.S. Tariff Experience

To provide context, in this section and the next we present brief summaries of relevant U.S. tariff and immigration experience. Figure 1 presents tariff rates between 1855 and 1910, both as a percentage of *dutiable* imports and as a percentage of *all* imports.[3] Each series had reached a thirty-year low in 1860, at which point the 1861 Morrill Tariff reversed the course of protection. The Civil War subsequently sent protection beyond Morrill levels.[4]

Several points about post-1865 rates are noteworthy. First, a 10 percent across-the-board reduction of all U.S. duties took place in 1873, a reduction that was rescinded in 1875. Thereafter, tariff revenue as a percentage of *dutiable* imports fluctuated between 40 and 52 percent until 1910. The protectionist label for the 1865–1910 period in U.S. history traces to the persistence and historic height of this tariff measure.[5]

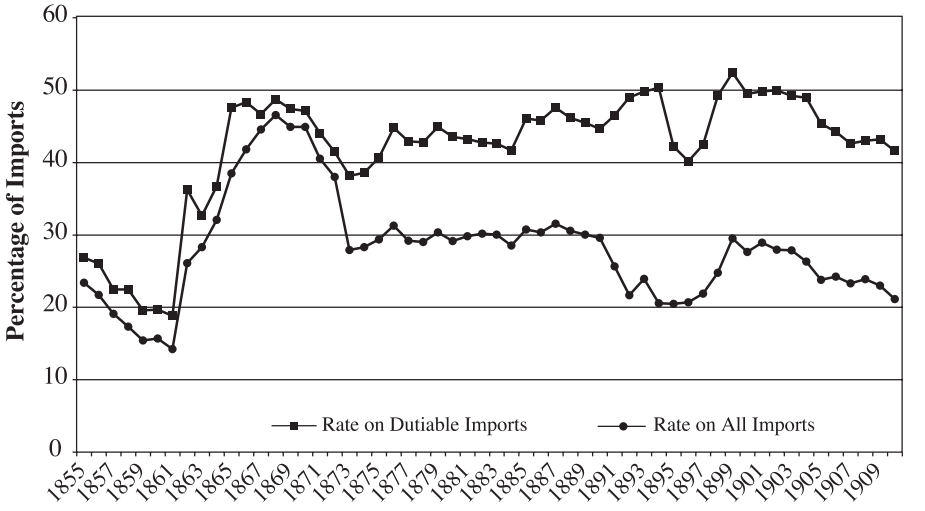
2. Van den Berg notes in passing that post–Civil War immigration undermines using official tariff rates as a yardstick for U.S. international openness during the period (2004, 269). However, the overwhelming theme among scholars is that the era was one in which the United States was insulated from foreign economic competition. Two contemporaneous accounts of tariffs during the period, Stanwood (1903) and Taussig ([1892] 1931), fail to mention that immigration weakened the insulating effect of tariffs.

3. It is well known that average tariff rates underweight high-tariff items and overweight low-tariff items. Nevertheless, the metric is widely used to describe economic insulation. Our investigation is unrelated to this weighting difficulty.

4. Many believe the Morrill Tariff to have been a Civil War finance measure. However, the House of Representatives approved the tariff in May 1860, prior to the exodus of Southern congressmen from the House. President James Buchanan signed the final legislation two days before Abraham Lincoln's inauguration.

5. For an interesting investigation of one tariff-making episode in the 1865–1910 period, see Irwin 1998b. It should also be noted that Hawke (1975) calculates *effective* rates of protection for various years during the period. More recently, McGuire (1990), Crucini (1994), and Irwin (1998a) examine the effects of this period's aggregate price-level changes on the restrictiveness of specific duties.

Figure 1
U.S. Tariff Rates, 1855-1910



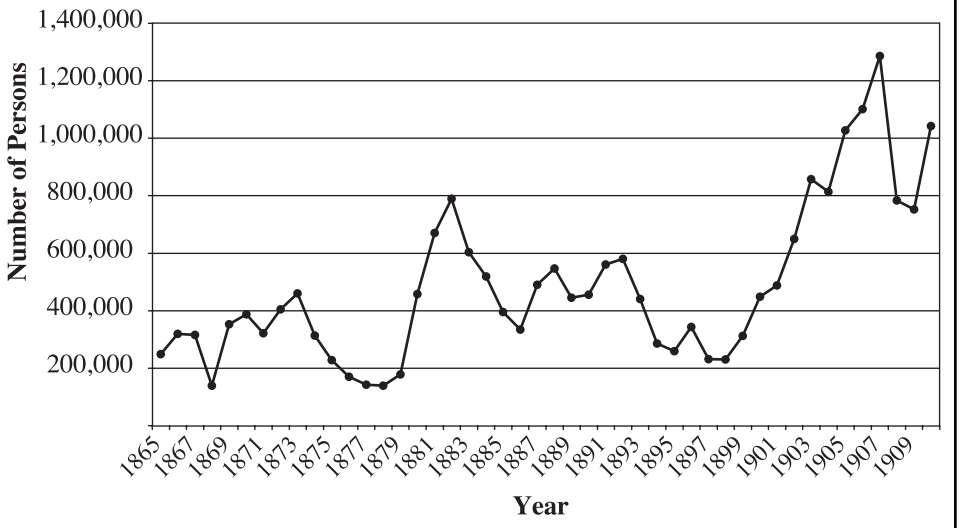
Second, nondutiable imports constituted an increasing percentage of all imports (dutiable plus nondutiable) as the period progressed. Because of this shift, tariff revenue as a percentage of all imports failed to sustain its Civil War levels. Two "breaks" mark the downward course of this latter tariff measure. The first break occurred in the early 1870s, when, as Taussig notes, duties on "purely revenue articles [for example, tea and coffee], such as are not produced at all in the country, [were] almost entirely abolished" (1931, 175). The second break, in the early 1890s, followed the elimination of the raw sugar duty, a significant source of tariff revenue (24 percent of all tariff revenue).[6]

Post–Civil War Immigration Experience

Figure 2 indicates annual immigration to the United States during the period. The traditional view is that this immigration was unencumbered by official restrictions—that not until the 1917 immigrant literacy tests and 1921 immigrant quotas did immigration come under restrictions.

6. Between 1872 and 1873, dutiable imports as a percentage of all imports fell from 91.6 percent to 73.2 percent. Between 1874 and 1890, this percentage ranged between a high of 73.2 percent (1874) and a low of 66.0 percent (1889). Between 1890 and 1891, dutiable imports as a percentage of all imports fell from 66.3 percent to 55.1 percent. By 1894, they had fallen further to 40.9 percent, whereupon the pre-1890 sugar duty was partially restored by the 1894 tariff. Between 1895 and 1910, this percentage ranged between a high of 58.0 percent (1901) and a low of 48.4 percent (1895).

Figure 2
Annual U.S. Immigration, 1865-1910



It should be noted, however, that from 1897 onward literacy tests were passed by the House of Representatives five times and by the Senate four times. The House twice overrode presidential vetoes, and the Senate overrode one veto, the latter in 1917, when the literacy test was enacted.[7]

Timmer and Williamson (1998) argue that U.S. immigration restrictions actually started appearing as early as 1865. However, most of the pre-1917 restrictions involved lists of "excludables" based on physical (and mental) health and economic condition. Straightforward enforcement of these exclusions would have had limited consequences for the inflow of functioning human capital.[8]

Table 1 presents decennial data from 1870 to 1910 on the presence of foreign-born persons in the United States. Note that despite the magnitude and variability of annual immigration, foreign-born persons in the United States constituted a relatively

7. See Goldin 1994 for an analysis of the movement toward immigration restriction in the United States between 1890 and 1921. Goldin argues that the margins of defeat for the pre-1917 literacy test proposals were so close that it is a "miracle" so many immigrants arrived in the United States between 1897 and 1917 (1994, 256). For a broader summary of U.S. immigration experience, see Hughes and Cain 2003 and Cohn 2001.

8. The most important of these pre-1917 restrictions was "the Chinese exclusion." In 1882, the U.S. government suspended Chinese immigration for ten years. The ban was extended for another ten years in 1892 and for yet another ten years in 1902. The number of Chinese excluded by the successive bans is necessarily speculative. Nevertheless, Chinese immigrants composed 4 percent of all U.S. immigrants in the ten years leading up to the 1882 exclusion. Goldin does not consider the Chinese exclusion, although she agrees with us that the other pre-1917 restrictions were not of "great quantitative significance" (1994, 225).

Table 1
Foreign-Born Persons in the United States

YEAR	Foreign Born as Percentage of Population	Foreign Born as Percentage of Labor Force	Foreign Born Labor-Force Participation Rate (%)
1870	14.4	21.6	48.5
1880	13.3	20.1	52.2
1890	14.8	22.4	55.1
1900	13.6	19.7	55.5
1910	14.7	20.9	55.7

Source: Kuznets 1971.

constant percentage of the population and the labor force. The data also make clear that foreign-born persons had a higher rate of participation in the labor force than did natives, no doubt owing in large part to approximately 60 percent of immigrants being male, and 70 percent of immigrants being between ages fourteen and forty-four.[9]

Analysis

Suppose an English nanny migrates to the United States and works for $300 per year. Alternatively, suppose an English seamstress is paid $300 per year for shirts she produces that are sold in the United States. Both the nanny and the seamstress represent competition for U.S. natives who are suppliers of labor. Only the seamstress's competition, embedded in the value of the imported shirts, is counted at the customs house (and may have a duty assessed on it). The nanny's services are tantamount to duty-free imports. To count only the competition that goes through the customs house when affixing a label of international economic openness—that is, to ignore the nanny—is clearly inadequate.

A theoretical literature in international economics deals with the substitutability of flows of goods and flows of factors across national borders. Mundell (1957), most notably, showed that impediments to the flow of goods encourage an offsetting flow of factors, just as limits on the flow of factors give rise to an offsetting flow of goods. Others—for example, Markusen and Svensson (1985) and Wong (1986)—have

9. Data on immigrant gender and age profiles appear in U.S. Department of Commerce (1960, 62), series C 133–38.

10. In a concluding comment, Mundell asks rhetorically whether late-nineteenth-century U.S. import restrictions were responsible for the period's large labor and capital inflows.

demonstrated that this substitution breaks down, or at least is moderated, as assumptions about production functions and technology across countries are varied.[10]

However, the extent to which post–Civil War immigration resulted from U.S. import protection does *not* affect the thrust of our investigation in this article. The fact remains: there were substantial and increasing numbers of foreign-born persons in the United States as the post–Civil War era progressed. Regardless of what explains their presence here, it is clearly inadequate to assess the international openness of the U.S. economy during the period without attempting to factor their presence into the metric.

How much did the foreign born earn during the years of the "protectionist" regime, and how do those earnings compare with official imports? Because there is no reason to assume that the foreign born produced only import substitutes, some might question the appropriateness of comparing or combining foreign-born persons' earnings with official imports, arguing that the procedure is tantamount to making an "apples and oranges" comparison or combination. We reject this challenge.

Virtually every summary of business and economic activity makes such comparisons and combinations. National-income accountants routinely compare or combine "apples and oranges" in compiling measures of national output. Relative and absolute money prices are the basis of these computations. Therefore, no matter what foreign-born persons produced in the United States in the post–Civil War era, it consisted of goods and services that (1) can be ascribed to a foreign origin, just as official imports are, and (2) can be given a monetary value, just as official imports are. Comparing earnings of the foreign born with official imports is analogous to comparing the market values of the California apple and orange harvests. Likewise, combining earnings of the foreign born with official imports is akin to combining the market values of the California apple and orange (and other fruit) harvests to measure the market value of the California fruit harvest.

It turns out that we can get a handle on earnings of the foreign born—at least for 1890, 1900, and 1910—in a relatively uncomplicated way. Moreover, these earnings data are such that we have little reason to suspect that earnings data for other years would differ significantly.[11]

Recall that the percentage of the foreign born in the U.S. labor force is available on a decennial basis between 1870 and 1910. The number of foreign born in the labor force follows from these percentages. The U.S. Department of Commerce provides estimates of annual labor earnings of *all* (including the foreign born) workers in

11. The perceptive reader will note that instead of viewing the earnings of foreign-born residents in any year as de facto imports for that year, one might view each year's immigrants as the arrival of foreign capital assets worth the present value of that group's future income streams. This view would entail developing expected earnings profiles for each year's immigrants, a daunting task to say the least. As will become apparent in upcoming material, the procedure that we adopt requires knowledge of the number of foreign-born residents in the labor force and their average earnings. In addition, our procedure avoids the problem of immigrants returning to their home countries.

Table 2
Foreign-Born Persons' Earnings and Total Imports in 1890, 1900, and 1910

YEAR	(1) Foreign-Born Persons' Earnings ($ Nominal Billions)	(2) Total Imports ($ Nominal Billions)	(3) Foreign-Born Persons' Earnings as a Percentage of Total Imports
1890	1.675–2.234	.766	219–292
1900	1.886–2.514	.831	227–303
1910	3.362–4.483	1.547	218–290

the U.S. economy from 1890 to 1910 (1960, 91–92, Series D 603–17). The two data sets intersect for 1890, 1900, and 1910. The number of foreign born in the labor force for those three years was 5.10 million, 5.74 million, and 7.81 million; annual earnings per capita in these years were $438, $438, and $574.[12]

Rote multiplication of the number of foreign-born workers in any year by that year's earnings figure yields a problematic measure of foreign-born persons' earnings for that year. The foreign born in any year were at various stages of their cultural and economic assimilation. Previous research has determined that this assimilation factor is a strong predictor of how earnings of the foreign born compared with earnings of the native born (see Blau 1980). That is, although immigrants typically began their U.S. economic lives on the bottom rungs of the economic ladder, they climbed the ladder rapidly to reach parity with their native-born counterparts within one or two decades. In fact, for incomes of the foreign born to exceed incomes of their native-born counterparts after the time lapse was not unusual.[13]

To deal with this difficulty, we assume that the foreign born earned either 75 percent or 100 percent of the average earnings of all Americans. Our comparisons of foreign-born persons' earnings and imports are presented in terms of ranges based on these percentages. This procedure may be easily adapted to alternative assumptions about relative earnings.

Column 1 in table 2 shows estimates of foreign-born persons' earnings for 1890, 1900, and 1910. Column 2 shows total imports (dutiable plus duty free) for the same years. Column 3 compares column 1 values with their counterparts in column 2. That

12. Nominal earnings of $438 for both 1890 and 1900 is not a typographical error.

13. Chiswick (1978) reaches similar conclusions about the foreign born included in the 1970 U.S. census. Some studies indicate foreign-born persons' incomes during the 1865–1910 period were similar to native-born persons' incomes (see, for example, Hill 1975); others indicate lower incomes for the foreign born (see U.S. Immigration Commission 1911; Higgs 1971; Shergold 1976; Eichengreen and Gemery 1986).

Table 3
Foreign-Born Persons' Earnings and Dutiable Imports in 1890, 1900, and 1910

YEAR	(1) Foreign-Born Persons' Earnings ($ Nominal Billions)	(2) Dutiable Imports ($ Nominal Billions)	(3) Foreign-Born Persons' Earnings as a Percentage of Dutiable Imports
1890	1.675–2.234	.508	330–440
1900	1.886–2.514	.464	406–542
1910	3.362–4.483	.786	428–570

is, column 3 presents foreign-born persons' earnings as a percentage of total imports. For example, if average earnings of the foreign born in 1900 were 75 percent of the average earnings for all U.S. residents, then earnings of the foreign born were 227 percent of total imports. If average earnings of the foreign born were equal to the overall U.S. average, earnings of the foreign born were 303 percent of total imports.

The results for 1890 and 1910 can be interpreted in a parallel fashion. Note the overall similarity of column 3 values in table 2 for each of the three years. This similarity, together with the fact that the foreign born accounted for approximately the same percentage of the U.S. labor force in 1870 and 1880 as in the years covered in table 2, gives credibility to the idea that the results shown in table 2 can be extended backward to 1870 and 1880.

Table 3 presents comparisons similar to those in table 2, except that table 3 compares foreign-born persons' earnings with *dutiable* imports. Columns 1–3 in table 3 are like their counterparts in table 2. Given that dutiable imports are a subset of all imports, column 3 values in table 3 are obviously greater than the corresponding entries in table 2. At the same time, however, these column 3 values enable us to appreciate the magnitude of these unrecorded and untaxed de facto imports (foreign-born persons' earnings) relative to imports that were recorded and taxed. For example, if average earnings of the foreign born in 1900 were 75 percent of overall average earnings in the United States, foreign-born persons' incomes were 406 percent of dutiable imports. If average earnings of the foreign born in 1900 were equal to the overall U.S. average, their earnings were 542 percent of dutiable imports.

It follows that the untaxed competition that was "outside the customs house" in the form of foreign-born laborers was anywhere from 2.18 to 5.70 times the amount of competition that was either potentially or actually subject to duty. This gives some notion of the relative importance of the open channel of competition—namely,

Table 4
Official and Amended Tariff Rates: All Imports in 1890, 1900, 1910

YEAR	(1) Tariff Rate: Dutiable Imports (%)	(2) Tariff Rate: All Imports (%)	(3) Amended Tariff Rate (%) All Imports plus Foreign-Born Persons' Earnings (%)	(4) Amended Tariff Rate as Percentage of Tariff Rate on All Imports (%)
1890	44.68	29.63	7.57–9.30	25.5–31.4
1900	49.35	27.56	6.85–8.43	24.9–30.6
1910	41.60	21.14	5.42–6.66	25.6–31.5

immigration—as compared to the restricted channel—namely, imported goods and services.

Recalculating Measured Tariff Rates

Official tariff rates measure tariff revenue as a percentage of imports.[14] Table 4 suggests another way to approach the issue of overall U.S. insulation in light of the massive immigration. Column 1 shows tariff rates on dutiable imports for 1890, 1900, and 1910. Column 2 shows tariff rates on *all* imports (dutiable plus duty free) for those three years. As outlined earlier, nondutiable imports accounted for a larger percentage of imports as the period progressed.

Column 3 of table 4 shows "amended tariff rates," which is defined here as tariff revenue divided by all imports *plus* the earnings of the foreign born—the recalculated tariff rate in light of immigration. Because earnings estimates for the foreign born are presented in ranges, the recalculated tariff rates are also shown in terms of ranges. Column 4 shows the amended tariff rates as a percentage of the corresponding official tariff rates on *all* imports. For example, when one allows for the de facto import content of immigration, the amended tariff rate in 1900 was 24.9 to 30.6 percent of what official statistics indicate.

14. Official tariff revenue in 1890, 1900, and 1910 was $227 million, $229 million, and $327 million, respectively (U.S. Department of Commerce 1960, 539, Series U15-20).

15. Some economists have attempted to develop alternatives to average tariff rates as a measure of economic insulation. However, none has allowed for the effects of immigration. For example, Leamer (1988) and Estevadeordal (1997) compare a country's actual trade to its expected trade based on a number of variables, most notably the country's factor endowments. The difference between actual and expected trade measures insulation. In a similar vein, Gwartney and Lawson (2000) have developed an index of economic

The Protectionism and Growth Theme

No one to our knowledge has attempted to measure the openness of the post–Civil War U.S. economy along the lines we suggest.[15] As noted in our introductory comments, a literature has been accumulating in which contributors argue, usually obliquely, that the rapid economic growth of the United States in the late 1800s was tied somehow to its high official tariff rate. Irwin captures the tone of the argument well: "Few observers have argued outright that the high tariffs *caused* such growth. Yet the association between high tariffs and rapid output growth is frequently noted in such a way as to leave the distinct impression that such causation is highly likely" (2001, 15, emphasis in original).

The theme of high tariffs with rapid economic growth has figured in a variety of publications in the past decade or so, running the gamut from prestigious professional journals and university presses to partisan polemics.[16] Relying on Bairoch's (1993) data, Chang, for example, argues that "the two best 20 year [gross domestic product] per capita growth performances during the 1830–1910 period were 1870–1890 (2.1 per cent) and 1890–1910 (two per cent)—both periods of particularly high protectionism. It is hard to believe that this association between the degree of protectionism and overall growth is purely coincidental" (2002, 30). Chang fails to note, however, that this period was a time of massive and open immigration to the United States. That this open immigration had an overwhelming impact on the U.S. economy, especially as compared to the trade in goods, seems to elude his analysis. Indeed, trans-Atlantic immigration as the driver of economic change is the theme of many economic analyses of the nineteenth century (see O'Rourke and Williamson 1999). Jeffrey Williamson argues that "mass migration alone can explain about 70 per cent of the real-wage convergence observed in the late 19th-century Atlantic economy" (1998, 2). To assess economywide insulation while ignoring this huge migration can only lead the analyst astray.

Chang (2002) also refers to O'Rourke's (2000) work that shows a positive correlation between the rate of protection, measured by tariff rates, and economic growth for a number of industrializing countries (including the United States) from 1875 to 1914. However, Irwin demonstrates that the positive correlation between high tariff rates and economic growth for seventeen high-income countries in the late nineteenth century is "driven by several key outliers: Argentina, Canada, *and the*

insulation that includes the tariff rate, the size of the trade sector, and measures of restrictions on capital flows. Our work supplements this literature by illustrating the impact immigration has on a standard measure of economic insulation. There is a precedent in the immigration literature for combining immigrant income and the value of imports. Borjas, Freeman, and Katz derive implicit labor supplies (1992, 213-19) from import data for the 1980s. Adding those estimates to actual immigrant labor data, they estimate the impact of trade and immigration in wage rates in the U.S. economy in the 1980s.

16. Contributions to this discussion include Bairoch 1989, 1993; Batra 1993; Fallows 1994; Eckes 1995; Lind 1995; Buchanan 1998; O'Rourke 2000; Irwin 2001, 2002; Chang 2002.

17. The correlation shrinks from 0.68 to 0.08. The seventeen countries are Netherlands, Belgium, the United Kingdom, Austria, France, Switzerland, Germany, Finland, Italy, Norway, Sweden, Denmark, New Zealand, Australia, Canada, Argentina, and the United States.

United States" (2002, 166, emphasis added). Absent the outliers, the correlation shrinks.[17] Like the United States, Argentina and Canada also experienced substantial immigration. Irwin argues that labor scarcity and land abundance meant that immigration could generate economic growth apart from high tariffs.

The thrust of our analysis is that substantial immigration makes the protectionist label for the United States and by extension for Argentina and Canada not so much wrong as *irrelevant*. The impact of high tariffs, clearly an insulating policy, was swamped by free immigration, a quintessential policy of economic openness. The relevant question is not whether the United States practiced trade protection for a subset of imported goods, but rather how open the U.S. economy was overall during the period. Using the tariff rate on a subset of imported goods to characterize the overall insulation of the U.S. economy is misleading, to say the least. Adding immigrant earnings to the value of imports generates a better measure of the overall degree of insulation for the economy during the period.[18]

Though a discussion of returns to scale lies beyond the purview of this article, it should be pointed out that immigration also enters the late-nineteenth-century U.S. growth equation in more ways than simply by undermining the alleged nexus between economic insulation and economic growth. Immigration also increased the overall size of the U.S. economy, thereby enabling U.S. industry to exploit the increasing returns to scale so often associated with expanded markets. In this respect, immigration substituted for international trade as far as achieving scale economies is concerned.[19]

International Flows of Capital

Just as people flowed into the United States unrestricted for the most part between 1865 and 1910, so, too, did foreign capital. For the bulk of the first thirty years of the period, the United States was a net importer of foreign capital; in the last fifteen years, it was a net exporter. Foreign investors could buy and sell U.S.-based assets without being subject to differential taxes, restrictions, or other attenuations of their ownership claims. Americans' unimpeded access to foreign capital surely enhanced the vitality of the U.S. economy. It suggests, moreover, that our revised measure of openness is *not* an understatement of the economy's openness to foreign competition.

At the same time, one must exercise care when considering how this access to foreign investors fits into our previous discussion. When foreigners invest in the United States, Americans are ultimately giving up claims on future U.S.-produced

18. Friedman (1974) argues that large-scale immigration biases standard measures of economic growth downward. As we do in our reassessment of official tariff rates as measures of economic openness, Friedman organizes his discussion around the post–Civil War U.S. immigration experience. Post–Civil War immigration thus figures interestingly in at least two "measurement stories."

19. The link between market size and scale economies traces at least to Adam Smith, who noted that the "the division of labour is limited by the extent of the market." Van den Berg (2004), drawing on Rosenberg (1994), emphasizes this connection between the size-of-market effects of nineteenth-century U.S. immigration and U.S. economic growth.

goods and services in exchange for current foreign-produced goods and services. The latter foreign-produced goods and services enter the United States under the same tariff schedule as other imports. For example, the present value of imports of British rails, financed by the sale of railroad companies' bonds to foreign investors, was included in U.S. import statistics and assessed the same duty as other imported rails.

Therefore, recording capital inflows as additional de facto imports, à la foreign-born persons' earnings, risks double counting. The imports of goods and services that capital inflows make possible are recorded and, where taxable, are taxed. Developing an alternative metric for free international capital flows goes beyond the scope of our investigation here. Nevertheless, Americans' free access to foreign capital can only buttress the thrust of this paper—namely, that the post–Civil War U.S. economy was considerably more open to international influence than most analysts and writers have acknowledged.[20]

Conclusion

The post–Civil War U.S. economy is commonly characterized as protectionist. That the period was also one of economic growth and national expansion is routinely used by modern-day protectionists as an argument against contemporary free-trade proposals. In the protectionists' view, "fortress America" was an essential component of national policy of the period. The discussion and data presented here suggest, however, that such an interpretation of the period is grossly misleading because it ignores the impact of the period's unrestricted immigration. Simply put, owing to free immigration, the supposed fortress was in fact one with gaping holes.

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20. See Gwartney and Lawson 2000 for an example of how to calibrate capital-market freedom.

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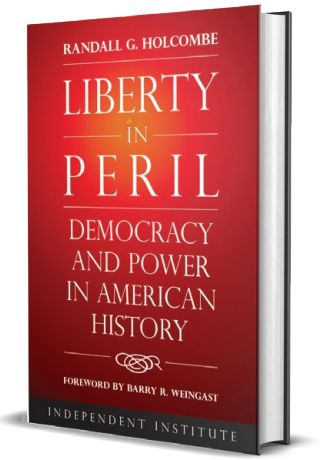

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