

TRADE DISRUPTION, INDUSTRIALISATION, AND THE SETTING SUN OF BRITISH COLONIAL RULE IN INDIA

Towards the end of the 19th century, the technologies of the British industrial revolution began to spread to countries outside Europe and the USA. While colonial India was no exception, her industrial performance in this period was unimpressive, particularly if compared to European offshoots such as Australia and Canada, but also if compared to a Japanese colony such as Korea (Kohli, 2004). A long-standing argument made both by nationalist politicians and prominent economic historians (Nehru, 1947; Bairoch, 1989) blames this modest performance on British trade policy. By keeping India open to imports of cheap British manufactures, they argued, the imperial power made it excessively hard for Indian industry to emerge. This argument is supported by the observation that Australia and Canada, by then substantially independent colonies, decided to protect their nascent industry behind a high tariff wall. Indeed, economists have found that countries with higher industrial tariffs industrialised faster in this period (Lehman and O'Rourke, 2012).

Figure 1. Trade between India and Britain in real terms

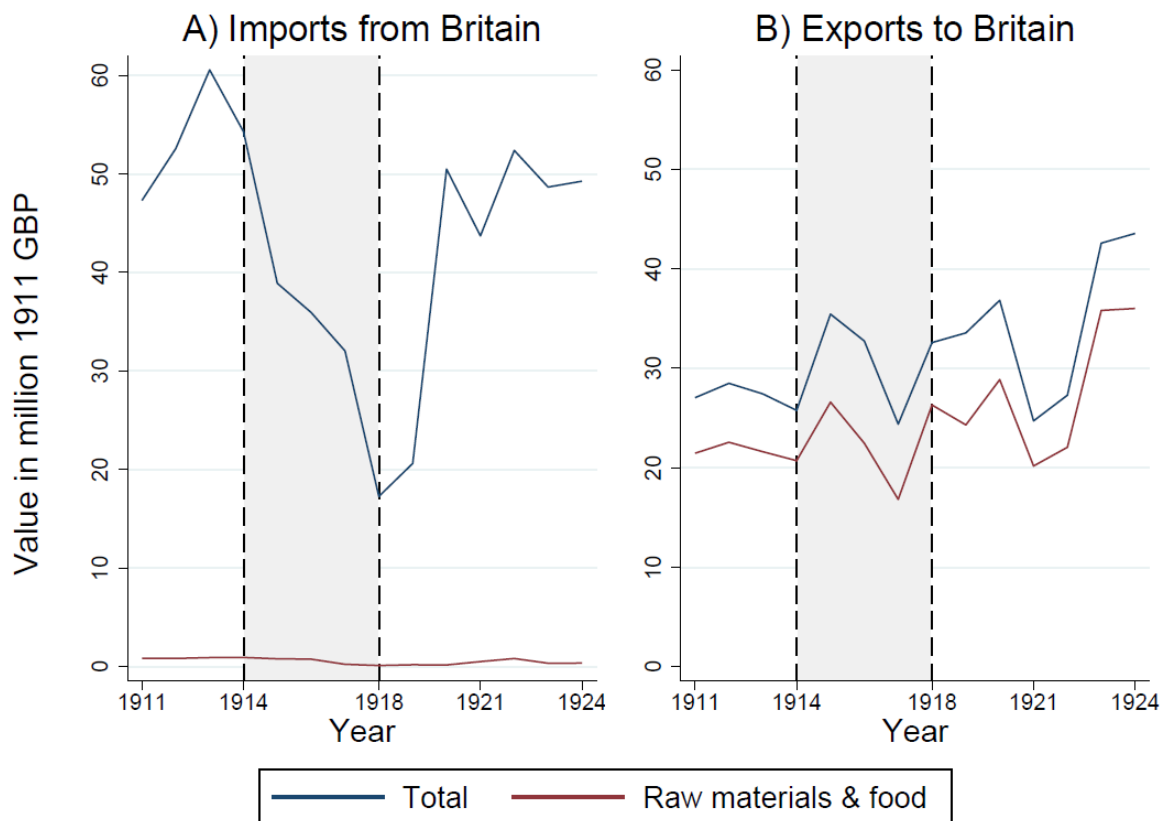


Figure 1. Indian imports from and exports to Britain in 1911 GBP (£). Following the classification in the Annual Statement of the Trade of the United Kingdom products are classified either as raw materials & food products, or manufactures. The difference between the blue and red line denotes Indian imports (exports) of manufactures from (to) the UK. Data from Annual Statement of the Trade of the United Kingdom.

Despite its popularity, the argument outlined above is by no means accepted by all. The problem is that social scientists can never observe the counterfactual scenario: what exactly would have happened to Indian industry, had Britain chosen to protect her from foreign competition, remains anyone's guess.

In our research (Bonfatti & Brey, 2020), we shed new light on what that counterfactual might have looked like. We do so by exploiting a historical experiment: World War I. During the war, Indian imports of British manufactures declined dramatically (see Figure 1), affording Indian industrialists a period of protection from British competition. Crucially, this collapse in trade did not affect all Indian districts in the same way due to differences in initial industrial composition. Taking advantage of this, we construct a district-level measure of exposure to the WWI trade shock 1913-17 for imports and exports. These measure are presented in Figure 2 Panel A) & B), where a darker colour indicates a more exposed district. Panel C) presents the corresponding change in Indian industrialization across districts 1911-21. By comparing industrial performance across districts with different exposures, we can estimate the impact of temporary protection on Indian industry. This allows us to make an educated guess as to what the performance of Indian industry would have been had Britain chosen to provide her with protection from foreign competition.

Figure 2. World War I trade shock and industry growth

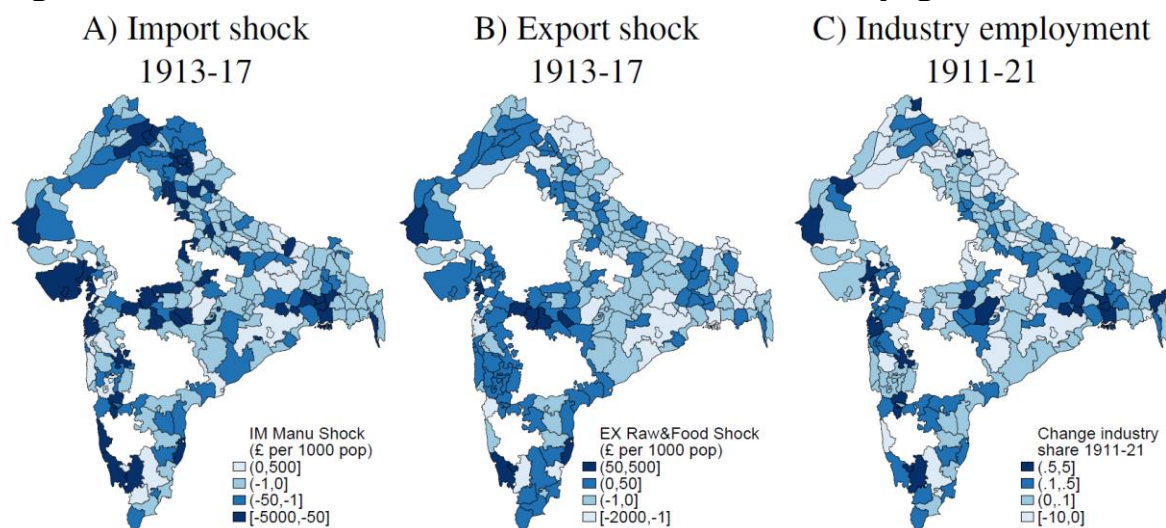


Figure 2: The figure illustrates the spatial variation of the key explanatory and outcome variables. Panel A) depicts exposure to the change in imported manufactures from Britain 1913-17 across British India. Panel B) depicts exposure to the change in exported raw materials & food to Britain. Panel C) depicts the change in industry employment share 1911-21. The depicted area covers the districts (British provinces and princely states) included in the censuses of Bengal, Bihar & Orissa, Bombay, the Central Provinces, Madras, Punjab and the United Provinces, representing 78% of the population of British India. Data from Census of India and Annual Statement of the Trade of the United Kingdom that we have newly digitized for our research project.

Based on a novel theoretical framework,¹ our empirical results clearly suggest that temporary import protection had a positive effect on Indian industry. Districts more exposed to the WWI import shock witnessed a more rapid increase in the share of population working in industry between 1911 and 1921, as compared to less-exposed districts. The effect is quantitatively important: we estimate that 29% of the industrial employment growth that occurred in India in this period can be attributed to the WWI import shock. Protection also made Indian industry more Indian, in the sense that it increased the share of owners and administrators of Indian origin (as opposed to European). We can rule out that the effect is due to disruptions to British productivities during the war due to a theoretically founded proxy and additional

¹ More detail on the theoretical framework can be found in the most recent version of our working paper Bonfatti & Brey (2020): https://www.dropbox.com/s/7r9vou1gntqcs7i/Trade_Industrialisation_Paper.pdf?dl=0

industry-port level evidence. In contrast, we do not find any effect of the WWI export shock by 1921.

We next study whether the positive effect of protection waned shortly after the war (as trade resumed), or rather persisted over time. We find that districts that experienced more protection during WWI were still more industrialised than they would have been without the war in 1926, and so they were in 1936 and 1951 (see Figure 3, Panel A). Reassuringly, we do not observe any pre-trends that districts more affected by the WWI trade shocks were already diverging before 1913 in terms of industrial employment share. It should also be highlighted that while we do not find any lasting effect of the export shock by 1921, we do observe a short-lived effect on industrial employment during WWI (see Figure 3, Panel B).

Figure 2. Effect of WW1 trade shocks over time

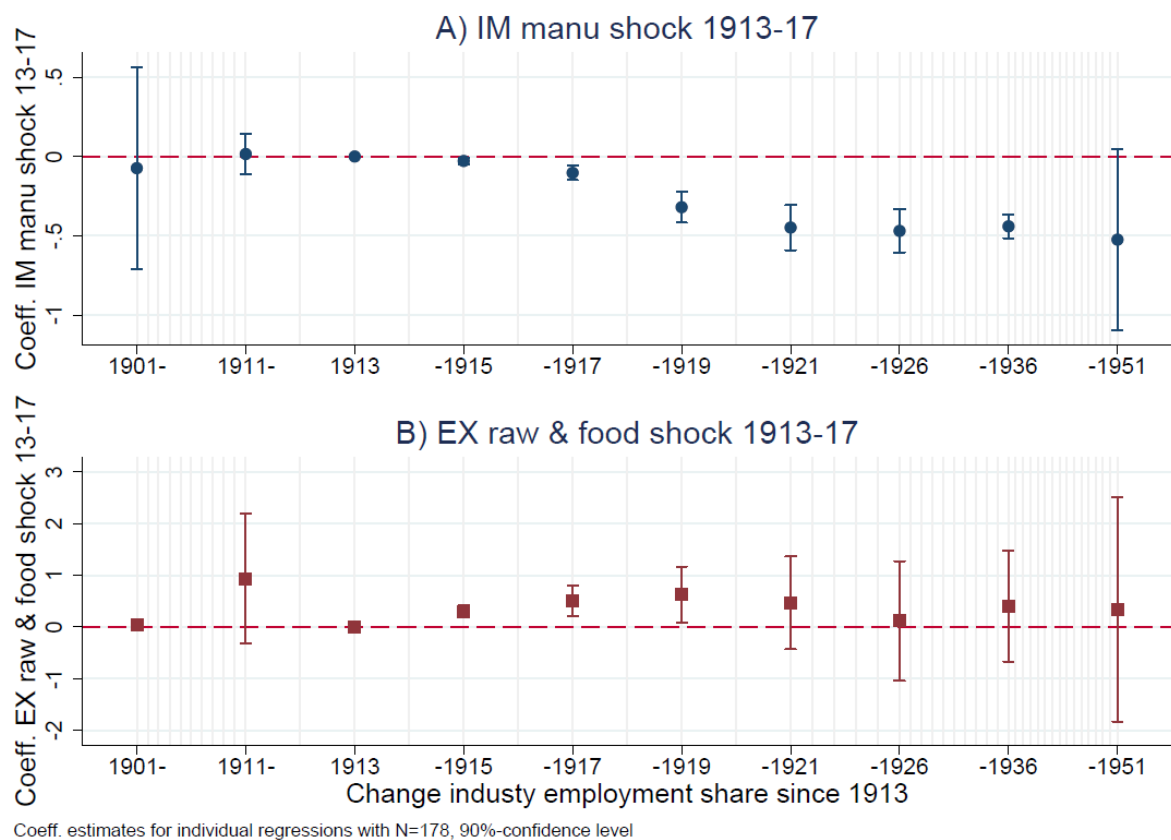


Figure 3: For all regressions the dependent variable is the change in the share of industry employment compared to 1913 for the respective years (1901 till 1951). Grey vertical lines visualize individual years. Coefficient presented for the import manufactures shock in Figure A) and export of raw materials & food in Figure B). Each presented coefficient based on an individual regression with 187 observations (N=83 in 1901, N=140 in 1911 (due to missing observations) and N=129 in 1951 (only India)). The number of observations is smaller than in the baseline sample as here we use data from the annual Factory Reports which cover only a subset of districts. Results unaffected by change in sample. Robust standard errors clustered on province sub-divisions.

These long-run estimates must be taken with more caution as many events that occurred till WWI may have influenced our estimate (e.g. increasing Indian protectionism after WWI, the Great Depression and WWII). Nevertheless, the fact that the effect of temporary protection appears to be persistent is significant: it suggests that parts of Indian industry had the capacity to learn, during the war years, how to stand on their feet even after the return of foreign competition. We indeed observe some direct evidence for this learning-by-doing in the form

of a spike in accidents between 1913-17 caused by machinery that dissipates over time. We also observe an accompanying increase in machinery imports.

In the second part of the research, we investigate a second hypothesis about the role of free trade in the political economy of colonial India. In earlier work, Bonfatti (2017) constructed a theory according to which the more a colony specialises in the production of raw materials and food, as opposed to manufactures, the less attractive rebellion against colonial rule becomes. Intuitively, colonial producers of raw materials are a group in favour of empire, since the empire makes it easier for them to sell their products. In contrast, manufacturers are a force against empire, since they face increased competition due to manufactures produced in the mother country. If this theory is true, then we should observe that Indian districts that industrialised more due to WWI, should later provide greater support to the Indian National Congress (INC), India's main pro-independence party. We test this hypothesis with our data. To measure a district's support for the INC, we adopt two alternative approaches. First, we use an internal survey that the INC conducted in 1922. Prominent party members from all over India were asked how much in favour they were of immediate civil disobedience, and of a boycott of British products. Second, we use local-level results in the 1937 election (the first Indian election with a large franchise) to measure the degree of support that each district gave to the INC.

Our findings are supportive of the theory that specialization in primary products made colonies more politically dependent on the mother country. In Indian districts that industrialised more due to WWI, INC members became more likely to support civil disobedience and a boycott of British goods by 1922. These same districts also became more likely to vote for the INC in 1937, to the tune of a 14.3% higher probability of the INC winning a local seat per each one percentage point increase in industrialization due to WWI.

These results improve our understanding of the ways in which colonial trade – and the international specialisation that it implied – likely benefited the imperial powers. In addition to lowering the price of imported raw materials and increasing the price of exported manufactures, colonial trade also made it less attractive for colonies to rebel. Presumably, this gave the imperial powers a freer hand in setting extractive colonial policies. Taking one step back, this also improves our understanding of the reasons why Britain kept colonial India open to free trade, while at the same time providing very little policy support to her industrialisation (Kohli, 2004). Not only would a policy of supporting Indian industrialisation have hurt British manufacturers, it would have also undermined the very foundations of Britain's colonial rule.

In summary, our study supports the notion that free trade made it harder for colonial India to industrialise in the early 20th century. The fact that even a short interruption to trade had a persistent effect suggests that some sectors of Indian industry had the potential to be competitive in the global economy and would have benefited from more protection in order to learn how to do so. Our results also suggest that colonial trade made it harder for India to negotiate her political relationship with Britain, with possible knock-on effects on the way in which India was treated more generally.

Three caveats are in order. First, our results are not rich enough to determine whether or not free trade made colonial India worse off on the whole: while it seems to have hindered industry, it certainly benefited Indian producers of primary products and consumers of manufactures. More research is required before we can consider all these effects together and

get a final estimate on the overall impact of free trade. Second, the notion that free trade was bad for industrial growth does not imply that any protectionist regime would have been better. Protectionist regimes can very easily get out of hand, and the experience of many developing countries (including India) in the second half of the 20th century clearly illustrates that excessive protection is bad for long-term growth. Finally, while many Asian and African colonies were forced to accept, like India, a liberal trade policy in the early 20th century, it is hard to know whether our results would generalise to those other colonies. Unlike those colonies, India had a pre-colonial past as a global centre of artisanal manufacturing. This makes it possible that we would find stronger results for India than for most other colonies.

REFERENCES

Bairoch, P. (1989). “European trade policies, 1815–1914”, in Peter Mathias and Sidney Pollard (Eds), *The Cambridge economic history of Europe Vol. 8*, Cambridge University Press.

Bonfatti, R. and B. Brey (2020). “Trade disruption, industrialisation, and the setting sun of British colonial rule in India.”, *CESifo working paper 8461*, most recent version: https://www.dropbox.com/s/7r9vou1gntqcs7i/Trade_Industrialisation_Paper.pdf?dl=0

Bonfatti, R. (2017). “The sustainability of empire in a global perspective: the role of international trade patterns”, *Journal of International Economics* **108**, 137–156.

Kohli, A. (2004). *State-Directed Development*, Cambridge University Press.

Lehmann, S. and K.H. O’ Rourke (2011). “The structure of protection and growth in the late nineteenth century,” *Review of Economics and Statistics*, **93**, 606-616.

Nehru, J. (1947). *The Discovery of India*. Meridian Books, London. ^[1]_{SEP}

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