HOW DID DEVELOPED COUNTRIES INDUSTRIALIZE?
The History of Trade and Industrial Policy: The Cases of Great Britain and the USA

Mehdi Shafaeddin

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Comments on this paper are invited and should be addressed to the author, c/o Editorial Assistant*, Macroeconomic and Development Policies, GDS, United Nations Conference on Trade and Development (UNCTAD), Palais des Nations, CH-1211 Geneva 10, Switzerland. Copies of the ***UNCTAD Review***, ***Discussion Papers*** and ***Reprint Series*** may also be obtained from this address. Extracts of new ***Discussion Papers*** are available on the web site at:

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* Tel. 022-907.5733; Fax 907.0274; E.mail: nicole.winch@unctad.org

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Mehdi Shafaeddin

United Nations Conference on Trade and Development, Geneva

To examine the case of early industrializers, we concentrate in this paper on the history of trade policy in Great Britain and the United States as two examples, and also refer to the cases of Germany and France. Our analysis in this paper indicates that it is a fallacy that early industrializers could have developed their industrial sector without infant industry protection. Indeed in all cases, to develop their industries, they went through an infant industry protection phase and heavy government intervention in the foreign sector. Nevertheless, the degree of protection and government intervention varied from one country to another. The United States was the motherland of infant industry protection not only at the intellectual level but also in actual fact. Despite the fact that the Industrial Revolution contributed to the rapid industrialization of Great Britain, its industrial sector benefited from trade protection and other forms of government intervention in the trade flow through the Navigation Act and by means of political power and even military power.

Moreover, government intervention in both cases was not confined, although it was more significant, to foreign trade. The governments concerned intervened in the domestic economy – particularly in the United States – directly and indirectly, to assist capital accumulation, institutional development and infrastructural build-up and to provide training, research and development (R&D), etc. In neither case can trade policy alone explain industrial and export success. In both countries, capital accumulation, infrastructure and institutional development played a significant role. In both cases, as well as France and Germany, agricultural development, often helped by protection and other forms of government intervention, was accompanied and facilitated by the process of industrial development. Moreover, while high domestic savings was crucial in financing their capital accumulation, in both countries foreign investment played a noticeable role at the early stages of their industrial development. Yet, in all countries, even when the industrial sector was mature, protection was used as a means of bargaining power in bilateral trade negotiation and trade treaties.

INTRODUCTION

> "Political economy, in matters of international commerce, must draw its lessons from experience."
>
> F. List (1856), 631

There has recently been a lot of discussion in the literature on late industrializing countries, particularly East Asian ones, as there were some common features that the late and early industrializers did not share. There is no general theory of trade and industrial policy. Each country has specific conditions and requires specific policies at any particular period. Nevertheless, one could draw some common lessons at the general level from the experience of early as well as late industrializers through induction. We shall show in this and a separate paper how history will tell us that:

- With the exception of Hong Kong, no country has developed its industrial base without prior infant industry protection; and there are some similarities as well as differences between early and late industrializers in terms of factors contributing to successful industrialization.
- In the process of industrialization and export expansion, functional and selective government intervention in trade has been an important factor. Moreover, government intervention for capital accumulation, infrastructural and institutional development, as well as growth of food supply, has also played a significant role in the industrialization of both groups.

Since there is often confusion about the history of industrialization of such early industrializers as Great Britain, the case of this country in particular as a forerunner of industrialization will be reviewed in support of these points, particularly the first one made above as far as earlier industrializers are concerned. Subsequently we shall consider the United States and make a brief reference to Germany and France. It will be seen that, in the process of catching up, the late industrializers have shown many common features with the early ones.

I. EARLY INDUSTRIALIZERS: THE CASE OF GREAT BRITAIN

Many writers attribute the industrial development of Great Britain basically to technical changes during the Industrial Revolution (1760-1830). Alfred Marshall's motto on trade and industrialization was "the many in the one, the one in the many" ("many tendencies have gone to the making of each industry and each economic situation" and "almost every important tendency is so far modified by the conditions under which it operates") (Marshall, 1920). Nevertheless, he refers in passing to the role of trade policy, misinterpreting List's concept of "nationality". To Marshall, the "spirit of economic nationality in England is a sort of cultural issue related to patriotism" and a "pride in their [Englishmen] work, as in their military" (*ibid.*, p. 32). Hence, the roots of success of industrialization in the 19th century are "some fundamental character of Englishmen". Moreover, while attributing the success in "massive industries" to the "age of steam", he argued that around the 1860s "Later on she [England] obtained further advantage through her policy of free trade and opening of her market to the world" (*op. cit.*, pp. 10 and 89).

Marshall's interpretation of trade liberalization gives the impression that he believed that the earlier policies of trade restriction were a disadvantage and detrimental to the industrial development of Great Britain.[1] This is a view shared by Adam Smith and other liberal and neoliberal economists advocated

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[1] It should be mentioned that although elsewhere Marshall (1923, p. 218) referred to some advantages of infant industry protection in an "undeveloped country", on the whole he rejected the argument.

earlier in 1776 (Smith, 1776), who argue that Great Britain achieved its industrialization despite its protectionist policies. It is true that inventions and innovations during the Industrial Revolution were main contributing factors to the process of acceleration of the industrial development of Great Britain (Craft, 1995). Nevertheless, List (1856) correctly argues that the process of industrialization had its roots in early times, i.e. a few centuries before, initiated by Elizabeth I (1553-1603) with trade restrictions, and later on continued by James I (1603-1625) and Charles I (1625-1649). In fact, before the Industrial Revolution substantial industrial activities existed in Great Britain. According to an estimate, in 1700 this sector accounted for 18.5 per cent of the male workforce and 20 per cent of total income of the country (Craft, 1995, table 3.1). Tariffs which were initially low were sharply increased in the 1690s, although mainly for revenue purposes (Davis, 1966). Initially Great Britain adopted protectionist policies which facilitated processing of woollen cloths. While earlier on wool had constituted the main export item of the country, protection resulted in manufacturing and later on in export of woollen cloth (List, 1856, ch. IV). The process of protection continued well into the Industrial Revolution and beyond until around the 1860s. This was in spite the theoretical argument surrounding the controversy over free trade and protection initiated by Adam Smith in 1776, when he published his book *"An Inquiry into the Nature and Causes of the Wealth of Nations"*. As of 1820, Great Britain showed the highest rate of tariffs on imports of manufactured goods (50 per cent) in Europe (see table 2). Moreover, English agriculture was heavily protected and her navigation enjoyed mild protection (Bairoch, 1993, p. 19).

A. Some common features with late industrializers: trade policy

The process of infant industry protection and industrialization of Great Britain, as a leading industrial country, has certain features in common with late industrializers that are worth emphasizing. As far as trade policy is concerned, three points are relevant. First, infant industry protection was selective. The process which started with protection of woollen products, cotton products and iron, was extended later on to other metals, wrought leather, ship-building and fisheries, and subsequently to flax, and silk. Local production was usually protected *vis-à-vis* imports. For example, imports of silk and cotton were prohibited from India which had advantages over Great Britain in terms of raw materials and working experience. The protection included not only quantitative restrictions but also penalties on consumption. When ship-building was developed, Great Britain secured for her own vessels sea transport and fisheries through the Act of Navigation (effective in 1651), which was an instrument of protection. Subsequently, the industries mentioned above became "the centre of the industrial, commercial and maritime power of England" (*op. cit*., p. 112).

The selection of cotton products and iron in particular made Great Britain the "workshop of the world" (Deane, 1965, p. 87). In 1780, "the cotton industry was backward, small and unable to compete with Indian calicoes or muslins in either quantity or price unless protected" (*ibid*, p. 88). The choice of the cotton industry for protection was not only due to the availability of new machinery introduced owing to technological change but also to the availability of cheap labour (women and children) in general and skilled labour in particular, as well as its potential to act as a leading industry in production and export. By 1815, cotton textiles accounted for 40 per cent of Great Britain's total exports; the ratio reached 50 per cent in 1830 (*ibid*, p. 94). As the first country to reap the benefits of technological change, Great Britain enjoyed the innovator's profit.

The cotton textile industry did not initially provide many linkages with the rest of the economy. Cotton was imported and textile machinery developed in the second quarter of the 19th century. Nevertheless, it acted as a leading sector in the sense of pioneering industrialization. Further, innovations which contributed to productivity enhancement in the cotton textile industry spread from this industry to others. By contrast, the iron industry, chosen for industrial expansion in the last quarter of the 18th century, provided strong forward and backward linkages. Raw iron was produced at home and iron was the input to steel production, steam engines, etc. (Deane, 1965, ch. 7). In fact, the steam engine was first used in the iron industry itself as well as in the cotton textile industry.

Secondly, only after the Industrial Revolution was well established and when Great Britain had consolidated its industrial base did it start to follow around 1850 a free trade policy after some gradual tariff reduction. In 1786 Great Britain reduced – but only with France – some of its tariffs on trade on a limited basis through the Eden Treaty, but the war with France, which began in 1793 and continued until the early 19th century, led to the reversal of the situation (Deane, 1965, p. 203). The war ended in 1815. In the 1820s, trade expanded and manufacturers recovered some confidence. Hence, Huskisson reduced some tariffs moderately in 1824-1825. Nevertheless, in 1826 Great Britain was still more protectionist than she had been before the war of 1793. Import duties were about 53 per cent in the late 1820s, as compared with 57 per cent in the early 1820s and less than 30 per cent at the end of the 18th century (*ibid*, p. 204). Some trade policy reform and "liberalization" began in 1833, but it was during the 1840s that import duties on a large number of items were reduced (1842 and 1845), the Corn abolished (1846) and the Navigation Act repealed (1849) (Kenwood and Lougheed, 1994, ch. 4). Further tariff reduction took place in the 1850s, and the 1860s was the beginning of completely free trade. At this time, Great Britain was in an advantageous position *vis-à-vis* other countries not only because of the development of its industrial base but also because of the destruction of the industrial basis of its competitors in Europe (Marshall, 1920, pp. 90-91). In fact, one could argue that the protection of infant industries in Great Britain lasted too long. At any rate, in the mid-19th century its industries were mature enough to compete in the internal as well as international markets. Trade liberalization intensified the pattern of specialization in production and export of manufactured goods, for which the country had attained a comparative advantage. Moreover, it led to the growth of imports of agricultural goods. In fact, while agricultural production doubled between 1800 and 1860, it stagnated during the period 1860-1913 (O'Grada, 1995, p. 145). Generally speaking, it was in the interest of Great Britain at the time to open up its doors to raw materials and agricultural products imported from abroad and to intensify specialization in production of manufactured goods. The manufacturing sector enjoyed increasing return to scale, while agriculture was characterized by diminishing return (Furtado, 1970, p. 28). The intensification of trade liberalization after the 1850s took place at a time when transport costs were declining considerably as a result of the technological change which allowed an increase in the size of vessels.

From a static comparative advantage point of view it was also in the interest of countries exporting raw material to follow the free trade policy of Great Britain and to export raw materials to Great Britain in exchange for manufactured goods. Great Britain's advocacy of universal free trade was on the basis of the perception that it would provide the country with export markets and access to raw materials, as discussed in the last section of this chapter. The free trade policy of Great Britain was followed both in the continent and elsewhere for over at least two decades. On the continent, the industrial base of European countries was damaged by the war, so they needed foreign sources of supply. Moreover, they were in search of cheap raw materials. The commercial treaty signed with France (1860) allowed Great Britain access to other markets through a most favoured nation (MFN) clause, because France had signed treaties with other countries (Marshall, 1920, pp. 89-91). In short, Great Britain began its trade liberalization after over two centuries of protection, and even then liberalization only took place gradually over a period of almost 30 years. Moreover, to exploit foreign markets, Great Britain also advocated free trade, or enforced it, in other countries and in its colonies. The process of trade liberalization elsewhere helped her to increase exports and the output of her industrial sector. It should be added that Great Britain began to reverse its trade policies in 1881, when the "Fair Trade League" was introduced. In the early 20th century, proposals where made under the "Tariff Reform League" to protect some industries and to set up a preferential system for the Commonwealth. These ideas were partially adopted in 1916 during the First World War, but Great Britain stopped its policy of free trade in 1932 during the Great Depression (Bairoch, 1993, pp. 26-28).

Thirdly, prior protection of the domestic market was a vehicle for cost reduction necessary for international competition. "... the growing richness of her home markets lowered the cost of production of those of her exports which conformed to the law of increasing return and therefore enabled her to sell more of them abroad" (Marshall, 1920, p. 65). In other words, it was the domestic market that allowed realization of increasing return and export expansion. But Marshall fails to admit that the domestic market was protected.

Great Britain's experience contrasts with those views that argue against infant industry protection and in favour of universal liberal trade policy, without taking into account the need for prior development of the supply capacity. Obviously, when exportation became feasible, it in turn contributed to cost reduction and further realization of scale economies. In fact, demand from France for a standardized pattern, for use in the army, played an important role in the development of mass production of textiles in Great Britain (Marshall, *op. cit.*, p. 59).

B. Complementary measures

Finally, the experience of Great Britain also shows that to accelerate the pace of industrialization certain complementary measures are essential. For example, Great Britain paid close attention to the development of agriculture at the early stages of industrialization and acceleration of development. It is true that during the Industrial Revolution agricultural productivity increased rapidly due to the adaptation of new technology, changes in methods of production and changes in attitudes and institutions, as well as owing to increases in capital-intensive methods of production (Deane, 1965, ch. 2; O'Grada, 1993). But it is also true that government policy towards agriculture played an important role, particularly in the promotion of production of staple foods at early stages of industrialization. While increases in demand for agricultural products created new opportunities for innovation, the government protected the sector from import competition. At the same time increases in farmers' incomes contributed to the expansion of their purchasing power to obtain industrial products, thus providing a more secure domestic demand for these products, which in turn enjoyed protection (Deane, 1965, p. 50). The supply of food products as wage goods also secured its availability in the cities. Government policy was geared to keeping agricultural producer prices high to make farming profitable. Moreover, agriculture was protected from imports by the Corn Bounty Act of (1614-1689) and later by the Corn Law of 1815.[2] Moreover, it prohibited sale of imported grain to millers, unless the home price exceeded beyond a limit. Exports of some agricultural products, e.g. wheat, were also subsidized (Ashton, 1948, p. 145).

Science and art were important factors in rapid industrialization because they provided new forms of power and new machinery and knowledge (List, *loc. cit*). Nevertheless, acceleration of supply capacity would not have been feasible without the expansion of investments and savings. Over the period 1770-1850, when GDP growth rate was high, the estimated investment income ratio increased from 4 per cent in 1700 to 8.5 per cent in 1800 and 10.8 per cent in 1840 (Craft, 1995, p. 45). It declined afterwards between 1850 and 1913 when rates of GDP growth also decelerated. In the later period, the investment/GDP rate for Great Britain was lower than that of the United States, which showed a high

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[2] The first Corn Law was in fact passed in 1434.

rate of about 22 per cent, and of Germany, Italy, France and Japan (Floud and McCloskey, 1995, table 1.9); so also was the ratio of investment in producers' equipment to GDP (*ibid*, table 1.11.). While reduction in the interest rate around the beginning of the Industrial Revolution provided an incentive for investment, increases in savings were motivated by incentives for re-investment of profit (Ashton, 1948). The innovator's profits provided a means of self-financing for investment in new machinery and in new techniques of production. The innovator's profit, or entrepreneurial profit, is defined as the difference between the income of an innovating entrepreneur and the income of other entrepreneurs subsequently using the same method when it is spread out. Since the Industrial Revolution started in Great Britain, for a while other nations were denied the innovator's profit. Great Britain also invested abroad in colonies, in plantations and even in some manufacturing. On balance, however, foreign savings (borrowing from abroad) also played an important role in the acceleration of industrial capacity at the early stages of development (Ashton, 1948, pp. 107-108).

Development of infrastructure, roads, waterways and railways, etc., was another factor which played a significant role in the acceleration and consolidation of industrial production and exports. Two-thirds of the railway network available in the early 20th century had been built by 1820 (*op. cit.*, p. 89). Initially textile industries were located close to sources of water power (Marshall, 1920, p. 139).

Acceleration of industrial development after 1760 was also facilitated by creation and development of necessary institutions. The Bank of England, established in 1694, was a tool for public borrowing. To finance the private sector for industrialization, small and provincial banks and banking houses were created to channel savings from one part of the country to another to match demand. Private banks which were initiated in 1716 and developed slowly until 1760, increased rapidly in number, reaching 400 in 1793 and 900 in 1815. Further, in 1798 savings banks were created to mobilize the savings of small savers and the working class. The number of these banks reached 350 in about 20 years (Marshall, *op. cit.*). In 1830 the number of depositors in these banks reached 378,000 (Deane, 1965, p. 175). To encourage the habit of thrift among the working class, "friendly societies" (savings clubs) were created and consolidated in the 1790s. In 1801 about 7,000 of them existed all over the country. Moreover, to finance investment, and facilitate proprietary capitalism, the stock exchange and finance houses were created (Lazonick, 1991). To encourage investment, the law of partnership was passed to promote a sense of corporation. To guarantee against investment risks, insurance services were rapidly developed.

In contrast to Adam Smith's view, individualism in its strict sense, was inimical to modern industrial development. Hence, although initially the Parliament was averse to corporate firms, ultimately attempts were made to develop corporate sense, team work attitude and the sense of partnership necessary for the development of firms and efficient administration of resources (Lazonick, ch. V). To encourage corporate enterprises, the Joint Stock Company Act was passed in 1856. The introduction of shares in railways and canals, etc., by the government encouraged development of corporate enterprises in these fields. To develop interfirm relations attempts were made to set up a federation of British industries and Chambers of Commerce.

Development of corporate sense was not confined to owners of capital but was also spread to labour, which tried to organize itself through trade unions. The right of trade unions was recognized by the Combination Act of 1800. In 1760, labour was immobile from one place to another and from one occupation to another owing to the lack of apprenticeship and training. As a result, the utilization of established capacity was difficult. At the beginning of the Industrial Revolution capital and labour markets hardly existed. By 1830 both markets were developed to a sophisticated extent. A capital market was developed, as mentioned above, by the development of the stock exchange market and modern financial institutions, and, in addition to the development of the labour market, facilities for targeted training and research were provided (*loc.cit.*, and Marshall, 1920, ch. V). As a result of the expansion of the transport infrastructure, transport costs fell, thus helping the domestic market to become more integrated and new areas to be added to Great Britain's international trading relations (Craft, 1995). Moreover, after 1688, the State assisted development of markets by repealing restrictions and encouraging courts to neglect the enforcement laws that hampered private exchanges and initiatives (*ibid.*).

C. Change in the nature of government intervention over time

It is true that the British Government did not intervene in the economy as much as the governments of Germany, Japan and other late industrializers did. In fact, the government had been in retreat from the domestic economic field more than a hundred years before the Industrial Revolution due to the reaction to mercantilism policies. Adam Smith's work itself was an intellectual reaction to mercantilism. During the period 1760-1830, the private sector was very active, even in investment in social overhead capital such as roads, water canals, docks, railways, etc. (Deane, 1965, ch. 5). Nevertheless, it is also true that the government's role in industrialization was not passive (Deane, 1965, ch. 13). Government intervention was significant in the field of foreign trade, navigation and imperial economic relations with its colonies until the 1850s. In fact, Adam Smith regarded the Navigation Act as "the wisest of all commercial regulations of England" (Smith, 1976, p. 431). More importantly, he argued that without government intervention, transition from farm and cottage to factories and cities would not have been smooth (Ashton, 1948, p. 140). After all, the government provided the legal framework for institutional development, enforcing contracts and preserving property rights, and contributed to the development of infrastructure and markets, and provided public services (O'Brien, 1995; Goldsmith, 1995; Ashton, 1948; Streeten, 1993).

The Industrial Revolution itself was actively promoted by the government. "One of the myths that has grown up about the Industrial Revolution in England is that it happened in the absence of, rather than because of, government intervention; that government's role in the process was to efface itself as rapidly as possible in order to allow private enterprise to pursue its beneficent part in generating sustained economic growth" (Deane, 1965, p. 2197).

Nevertheless, even after the 1850s when foreign trade was liberalized, government intervention continued. What actually happened was that the nature of government intervention changed over time. Before 1760 the government intervened through the "use of government rules and restrictions on economic activities", which were tiresome and ineffective. Between 1760 and 1850, a lot of these regulations were removed, particularly those restricting mobility of labour and capital in order to provide an "enabling environment" for the private sector. Instead of these tiresome and ineffective restrictions, the government began in the early 19th century to take a more positive and effective role and deeper interest in the economy. "There was indeed a revolution in the technique and philosophy of the government ..." (*ibid*, p. 231). "The real objective of the philosophical radicals ... turned to be not freedom from government but freedom from inefficient government; and efficiency meant effective and purposeful intervention in the economic system as opposed to ineffective and aimless intervention" (*ibid*, p. 232). The government intervened not only in the social sphere but also in economic relations. For example, the Railway Acts of 1840 and 1842 regulated the operation of railway companies. Similarly, the government intervened in the financial market through the Bank Charter Act, and in foreign trade through accepting the responsibility for political control of trade, as was the case with the blockage of Canton in China in response to the action taken by the Chinese Government against opium smugglers. As a result, the Chinese had to admit British merchants on the terms dictated by the British Government. In addition to the central government, the local governments also intervened in various forms in economic activities. In short, even after the 1850s, government intervention in the economy did not cease; it just took different forms.[3]

Another point to emphasize here is that the need for government intervention in the case of an early industrializer was less than in the case of a late industrializer. In Great Britain, despite the Industrial Revolution, the pace of technological change was slow, depending on the development of new inventions. In a late industrializer, the introduction of new technology was rapid because technology existed elsewhere. There are also other reasons.

[3] For more details on the role of the government in the British economy in the 19th century, see Deane (1965, ch. 13).

II. DIFFERENCES BETWEEN EARLY AND LATE INDUSTRIALIZERS

There are three main differences between an early industrializer and a late comer, with their implications for acceleration of development and trade and industrialization policies. First, for Great Britain the pace of technological change was relatively speaking slow; it was a function of inventions and development of science. It is true that the pace accelerated during the Industrial Revolution as compared with the previous period. Nevertheless, the availability of new technology was limited by the flow of knowledge at the national level. For a late comer the situation was different; the availability of the stock of technology elsewhere provided the country with the possibility, theoretically speaking, of rapid technological change through innovation by imitation, adaptation and modification. It should be mentioned, however, that for late industrializers, who began their industrialization in the late 17th century and early 18th century, imported technology was not easily available. The British Government prohibited exports of machinery, and this prohibition remained in force until the 1830s. Moreover, the use of machinery in the colonies was also prohibited (Reinert, 1996). Generally speaking, for a late industrializer, rapid development or application of technological change becomes a necessity to catch up with the early industrializers and bridge its technological gap. Acceleration of industrialization is a crucial issue; hence there exists an important element of time constraint (Gerschenkran, 1962). The more backward an economy, the greater the need for acceleration of supply capacity. Gunnar Myrdal (1970) argued that technological change provided industrializers in the 19th century with an advantage because the availability of technology itself provided the opportunity to industrialize faster. By contrast, he argued, it is a disadvantage for a late industrializer in the 20th century, mainly because of its negative impact on the terms of trade of raw material exporters *à la* Prebisch. Furthermore, the deterioration in the terms of trade increases the pressure on the current account requiring import control. Consequently "the choice of line for [import] substitution is usually not open for rational planning", thus resulting in unplanned protection of non-competitive high-cost industries.

Secondly, in Great Britain, in its early stages of industrialization economic power in the industrial sector was defused because of the small size of firms. Nevertheless, later on technological change was associated with the increase in the size of firms and concentration of economic power where firms were more active. As a result, a latecomer would be facing strategic activities of established firms of the early industrializer(s). The later a country embarks on industrialization, the more difficult it is to overcome barriers to entry at the international level because of the concentrated market structure.

Thirdly, the combination of time constraints, technological gap, the domination of increasing return to scale raises the need for capital investment. The more backward a country's economy, and the later it embarks on industrialization, the heavier the pressure upon the levels of consumption of the population (Gerschenkran, 1962).

The pressure on consumption is heavier yet for another reason, that is, the population pressure. It is true that population growth accelerated in Great Britain during the Industrial Revolution as a result of development of science. Nevertheless, the rate of the population growth in late industrializers is usually higher mainly because of the rapid reduction in the death rate made possible as a result of the existence of the stock of medical knowledge in early industrializers. At the same time, in late industrializers the introduction of foreign taste and luxury imported goods increases demand for luxury consumer goods by the rich.

Fourthly, the higher the required rate of growth of the supply capacity, the more the need for a faster rate of social and institutional changes. In other words, the later a country embarks on industrialization, the more rapid the need for social and institutional changes. One important advantage of late industrializers is the availability to the country of not only foreign technology but also other foreign resources, skills, capital in the form of FDI, aid, etc.

In short, the later a country starts its industrialization, the more acute the need for acceleration of growth in supply capacity, capital accumulation and socio-economic and institutional change. The higher the required rate of change and the more inadequate the market forces in attaining them, the higher is the need for government intervention. Similarly, the later a country begins to industrialize, the shorter the time span available for temporary infant industry protection and for attaining international competitiveness, transition to export promotion and trade liberalization.[4] In fact, the evidence confirms both points.

III. LATE INDUSTRIALIZERS IN THE 19TH AND EARLY 20TH CENTURIES: THE CASE OF THE UNITED STATES

All countries embarking on industrialization during this period relied on infant industry protection. Moreover, the later a country started such a process, the more pronounced was the role of the government.

The case of the United States is sometimes mistakenly regarded as an example of a country whose government stayed in the background. It is not correct. It is true that it intervened in the economy less than the government did in Germany, Japan or other East Asian countries. Nevertheless, it is also true that it started its industrialization earlier and was under less time constraint. Yet its intervention both in foreign trade and domestic economy was important. Not only "the modern protectionist school of thought was actually born in the United States", but "it was also the mother country and the bastion of modern protectionism" (Bairoch, 1993, pp. 23 and 30). The protection lobby was so strong in the United States

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4 Note also that nowadays there is usually more international pressure on late industrializers to liberalize trade.

in the 19th century that a Pennsylvanian legislator referred to "man" as "an animal that makes tariff speeches" (*idem.*).

The first Tariff Act of the United States regarded to have contained elements of protectionism was that of 1789, which discriminately imposed import duties on 38 items. Raw materials were exempted from import duties and drawbacks were granted for all commodities re-exported within twelve months (Ashley, 1920, pp. 134-135). Whether that Tariff Act actually aimed at protection or not is a matter of speculation, since between then and 1916 over 25 tariff acts were passed for financial purposes (*ibid*., p. 138).

A. Intellectual background

Hamilton (see McKee, 1934) initiated the debate on industrialization through infant industry protection in 1791 in his famous report to the Congress. Hamilton argued that since international trade is not free, Europe is more advanced in manufacturing and its industries enjoy governmental aids, which contributes to the destruction of new industries in other countries (*ibid.*, p. 205); that if the United States followed free trade, it would suffer from "unequal exchange" because competition with established manufactures of other nations on equal terms is impracticable (*ibid.*, pp. 201 and 204/5); and that "it is for the United States to consider by what means they can render themselves least dependent on the combinations, right or wrong, of foreign policy" (*ibid.*, p. 202). It is interesting to note that many developing countries today make the same point when faced with foreign-designed trade policies on which they receive advice.

To continue, Hamilton proposed a system of protective duties, prohibition and pecuniary bounties based on other countries' successful experiences as a means of temporary infant industry protection (McKee, 1934, pp. 234-276). Moreover, he argued in favour of selective protection, i.e. a system of premiums targeted at "particular excellence or superiority, some extraordinary exertion or skill ... in a small number of cases" (*ibid.*, pp. 242-243). In such a system imported inputs would be exempted from duties, except for a few cases. Further, the government should control the quality of goods produced, and facilitate transportation. For selecting industries for protection he proposed five criteria:

> ... The capacity of the country to furnish the raw materials; the degree in which the nature of the manufacture admits of a substitute for manual labour in machinery [allowing increases in labour productivity]; the facility of execution [technological simplicity]; the extensiveness of the uses to which the articles can be applied [the extent of the domestic and market linkages]; its subserviency to other interests, particularly the great one of national defence [strategic nature of the commodity] (*ibid.*, p. 249).

After proposing a list of such articles, he also refers to the need for *government intervention* in other areas in the process of industrialization, particularly in order to encourage inventions and promote institutions necessary for industrialization. In his view, the role of the government is complementary to that of the private sector and significant at early stages of industrialization:

> In countries where there is great private wealth, much may be effected by the voluntary contributions of patriotic individuals; but in a community situated like that of the United States, the public pursue must supply the *deficiency of private resources* [our italics]. In what can it be useful, as in prompting and improving the efforts of industry? (*ibid*., p. 276)

Hamilton provided the intellectual background for infant industry protection and other forms of government intervention necessary for industrializing the United States and raised the feelings of the politicians in favour of protection. However, two factors contributed to the practice of protection initiated with the Tariff Act of 1816. The first was the unification of the United States, which began in the late 1770s and was completed in 1800. It made pursuing unified trade policies *vis-à-vis* other countries possible. Second, the war between France and Great Britain in the early 19th century reduced the supply and increased the price of imported manufacturers to the United States (Kenwood and Lougheed, 194, p. 69). Moreover, the Anglo-American war of 1812-1814 required drastic increases in government revenue. Hence, import duties on most items were increased and imports of some other items were prohibited. Such developments provided stimulus to domestic industries, proving the benefit of protection, particularly in the case of woollen products, cotton textiles, iron, glass and pottery (Ashley, pp. 140-144).

B. Evolution of protection

With the termination of the war, the government signed in 1815 a commercial treaty with Great Britain to avoid discriminatory duties on each other's products exposing the local economy to the British export. The subsequent jump in imports (11 times in 18 months) led to a call for protection of domestic industries in order to expand production of basic items of manufacture and strengthen the defence capacity of the nation.

The process of infant industry protection which lasted a couple of centuries in Great Britain was shortened considerably to around a hundred years in the case of the United States.[5] The protection of infant industries began with the Tariff Act of 1816. It was moderate at the beginning but intensified up to the early 1830s (mainly in 1824 and 1828), despite the fact that the Southern States, which were mainly agricultural producers, were against protection of manufactured goods. The tariff system consisted in a combination of *ad valorem* and specific duties in order to protect, as Great Britain had done, selected light industries. The protection of infant industries began with cotton cloth, iron, and wool.

[5] For a detailed history of protection in the United States, see Ashley (1920) and Goldstein (1993).

Under the pressure of the Southern States, particularly South California, however, duties were gradually reduced in the 1830s, and after a rise for a short period between 1842 and 1846, trade liberalization was reinforced between 1846 and 1861 (Ashley, 1920, ch. 2). As a result of such premature liberalization, American industries suffered (List, 1856). While Europe was reinforcing trade liberalization, the United States reversed the process of its trade liberalization in 1861 to finance the Civil War and protect domestic industries. According to table 1, the high tariff rates introduced in the early 1860s continued over 1860-1880, while US competitors in Europe were following a policy of free trade, despite the fact that the Civil War had ended in 1865. In fact, protection was reinforced during 1875-1883 and between the late 1880s and 1913, with short intervals of slight tariff reduction during the periods 1883-1886 and 1894-1897, when the Democrats where in power. More importantly, throughout the period manufacturing goods enjoyed higher tariff rates than other goods, and the real rate of protection was higher than the nominal rate (Bairoch and Kozul-Wright, 1996, pp. 5-14). Among manufactured goods certain items were more privileged. For example, in the late 1880s cotton and wool gained higher protection than other goods, and in the McKinley Act of 1890 particularly higher tariffs were imposed on textiles, iron, steel, glass, and tin plates. These products were among important export items of European countries (*ibid.*, p. 70; Ashley, *op. cit.*).

The new protectionist tendencies after the Civil War were the main contributory factors to the rapid expansion of manufacturing production during 1870-1890, not only in the North but also in the Southern States. By then it was believed that most established manufacturing industries of the United States gained maturity and were capable of competition in internal and international markets. Nevertheless, the protectionists presented new arguments for protection in the McKinley Tariff Act. McKinley argued that protection should not be temporary because it is required for the expansion and exploitation of the domestic market, for the defence of labour interest (whose wages were higher than those in Europe) and for attaining national self-sufficiency. It was within this context that protection was also extended to agriculture.

The McKinley Act also initiated two new processes. The first was the use of reciprocity in international trade in order to secure foreign markets for exports of established US industries. Fresh provision for reciprocity was introduced in the Dingley Act of 1897 and Manufacture's Reciprocity Convention of 1901. The second was the extension of protection to more sophisticated industries, or in a sense the introduction of the second round of import substitution. While duties on established industries such as steel rails and metal manufactures were decreased, the duties on ready made clothes, Brussels carpets and other textiles, plate-glass and tin plates were increased. Further, subsidies on the production of some items were introduced (Ashley, 1920, ch. IV).

The McKinley Act was later on complemented by the Dingley Tariff Act of 1897, which reinforced protectionism. Once again the intensification of protection resulted in rapid economic

Table 1

Import duties and tariff rates in the United States: 1789-1990

	All products *Rates of duties calculated to imports (%)*		*Manufacture products* *Average tariff rates*	
Period	*Total imports free and dutiable*	*Dutiable imports*	*Year*	*Tariff rates (%)*
-	-	-	1789	7.5-10
-	-	-	1792	15-20
1821/24	-	44.62	1816	35
1825/28	-	50.3	1820	35-45
1829/31	50.8	54.4	1824/32	40
1842/46	25.3	31.9	-	-
1857/61	16.3	20.6	1866	25-60
1867/71	44.3	46.7	1875	40-50
1891/94	22.9	48.9	-	-
1908/13	20.1	41.3	1913	44
1914	14.9	37.6	1914	25
1923/27	14.1	37.7	1925	37
1931/33	19.0	55.3	1931	48
1935/38	16.4	39.8	-	-
1944/46	9.5	28.3	1950	14
1968/72	6.3	10.1	-	-
1978/82	3.5	5.8	1980	7
1988/90	3.6	5.4	1990	4.8

Source: Bairoch (1993), tables 3.1 and 3.3 and ch. 4, and Goldstein (1993), p. 48.

expansion. Nevertheless, the process of protection also contributed to the development of trusts and increased the monopoly of big business, believed to charge excessive prices. As a result, the Payne Bill, which became an Act in 1908, aimed at some reform of the tariff system with the two objectives of revenue raising and protection. For revenue purposes, duties on items not produced domestically, basically tropical products, were introduced for the first time or were increased. As regards protection, the Act reduced duties on some items but aimed at protecting shipbuilding, shipping and the expansion of exports of established products (*ibid.*, ch. VI).

The combination of maturity of most American industries and anti-protectionist pressure necessitated significant revision of the US trade policy, which brought about the Tariff Act of 1913. This act reduced overall tariff rates as well as those of manufactured goods (from 44 per cent to 25 per cent) and added a large number of products to the free list. Nevertheless, there still remained some discrepancies between the rates for manufactured goods and other products. Moreover, duties on some manufactured goods, e.g. clothing, were still very high (60 per cent) and some new items (e.g. chemicals) became subject to increased tariff rates, indicating that import substitution was shifted to yet more sophisticated products. Even in cases for which import duties were reduced, the "USA industry reached a stage of development at which it had little cause to fear foreign competition, except in a few special cases" (Ashley, 1920, p. 263). Moreover, as the First World War broke out the Tariff Act of 1913 was not given a chance to influence US industries.

It is interesting to note that throughout the period 1875-1913 when protectionist tendencies returned to Europe after the liberalization efforts of the 1860s and early 1870s, the United States showed the highest rate of tariffs on manufactured goods (see table 2). In particular, in 1875 US tariffs on these products were 250 to 260 per cent higher than those of Austria, Denmark, Russia and Spain, which had the highest rates in Europe.

Table 2

Average level of duties on various groups of products of European countries and the United States: 1875 and 1913

	Manufactured goods					*All products*
Country	*1820*	*1875*	*1913*	*1931*	*1950*	*1913*
Austria-Hungary	-	15-20	18-20	24	18	18-23
Belgium	6-8	9-10	9	14	11	6-14
Denmark	25-35	15-20	14	-	3	9
France	-	12-15	20-21	30	18	18-24
Germany	8-12	4-6	13	21	26	12-17
Italy	-	8-10	18-20	46	25	17-25
Japan	-	5	30	-	9	n.a.
Russia	-	15-20	84	-	-	73
Spain	-	15-20	34-41	63	n.a.	37
Sweden	-	3-5	20-25	21	9	16-28
Switzerland	8-12	4-6	8-9	19	-	7-11
Netherlands	6-8	3-5	4	n.a.	11	3
Great Britain	45-55	0	0	n.a.[b]	23	0
United States	25-55	40-50	44[a]	48	14	33[a]

Source: Kozul-Wright (1995) and Bairoch (1993), p. 40.

a Until October.

b Five for 1925.

Had the First and Second World Wars not broken out and the Great Depression of the late 1920s-early 1930s not occurred, perhaps the United States would have continued trade liberalization. But these events provided a further cushion for protectionism until after the Second World War, when the process of liberalization started (in 1931, the average tariff rate on manufactured products of the United States was 48 per cent, i.e. four per cent higher than the rate before the trade reform of 1913). After the Second World War, because of their lack of supply capacity European industries were not able to compete with US industry. In fact, the US objective then was to liberalize international trade not only in the United States but also elsewhere (as Great Britain did when it consolidated its industrial base in mid-19th century) to provide markets for its industries. This is how the first round of trade liberalization through GATT started in 1948.

C. Intervention in other activities

The extent of the US Government's intervention in the domestic economy, like that of the British Government's, was less than its intervention in foreign trade. Further, it is perhaps true that it also intervened less in the domestic economy than did the British Government during the early periods of industrialization. Nevertheless, this should not imply that the government left non-trade issues to the operation of market forces. In fact, the government continuously intervened in the economy directly and indirectly; it not only played an enabling and restraining role through the provision of such public goods as law and order, the right to property, and the enforcement of contracts (issues advocated by Adam Smith) but, more importantly, it intervened in the economy extensively to promote development and industrialization, particularly in areas of capital accumulation – physical, social, infrastructure, human – encouragement of technological development, organizational change and institutional build-up (Goldsmith, 1995). For example, for capital accumulation, in addition to the provision of financial capital and the creation of the regulatory structure (through the Bank of the United States and its successors and the National Banking Act of 1863), the government invested directly in infrastructure. Direct involvement of the federal and local governments in investment in the railway network and the building-up of a demonstration telegraph by the federal government for experimental purposes are just two examples (*ibid.*). Direct engagement in R&D and education and training are two other examples. It is interesting to note that Marshall (1920) appreciates the importance of the railroad network and of the reform of the educational and training system in the industrialization of the United States. Yet, he does not refer to the important role played by the government in these respects.

In organizational and institutional issues, in order to facilitate mass production and benefit from economies of scale, the State pushed the enlargement of companies by allowing and assisting them to incorporate joint stock companies easily by various means, such as granting charters. In fact, the corporation was first recognized as a government agency because the government empowered it to undertake public work and pursue public ends (Goldsmith, 1995). Hence, the government was crucial in the creation of "managerial capitalism", where economic decisions are coordinated largely within firms. Later on, around 1890, when the combination of protection and creation of large firms threatened domestic competition and undermined the position of small and medium-sized firms, the State passed the Sherman Act to eliminate the monopoly power of large firms in the domestic economy.

D. The impact of trade policy and government intervention

The United States observed a very high rate of growth during the 19th century, when it followed protectionist policies. The estimated annual average growth rate of the United States over the period 1829-1831 to 1909-1911 is 2.4, as against 1.2 for Western Europe. In particular, the intensification of protectionism after 1860 allowed the country to accelerate growth and catch up rapidly with Great Britain in terms of GDP per capita, technological development and export performance. As shown in table 3, its growth rate of per capita income in fact bypassed all major European countries between 1870 and 1913.

Table 3

Rate of growth of per capita income in various countries: 1820-1950

Period	*USA*	*GB*	*France*	*Germany*
1820-1870	1.23	1.24	0.8	0.6
(1850-1870)	(1.8)			
1870-1890	1.6	1.12	0.9	1.4
(1870-1880)	(2.1)			
1890-1913	1.94	0.9	1.6	1.8
(1890-1910)	(2.0)			

Source: Kozul-Wright (1993); Bairoch (1993 p. 53).

Nevertheless, the economic performance of the United States during the period concerned cannot be attributed to its trade policy alone. Here again, as in Great Britain, a number of complementary factors played an important role. First of all, capital accumulation was very high and accelerated, particularly in non-residential activities, during 1870-1910, as shown in table 4. A high rate of domestic savings was the main source of financing investment. But FDI was not negligible either. For example, during 1880-1890 net capital flows constituted 5.2 per cent of gross domestic fixed investment and about one quarter of the total stock of FDI worldwide was in the United States (Kozul-Wright, 1995). Secondly, agricultural development played a significant role in facilitating industrialization. The facts that land resources were abundant and migrant labour assisted their exploitation were not sufficient conditions for development of the agricultural sector. Here again, the State played an important role, in particular through provision and encouragement of institutional build-up. In fact, the government's role in institutional build-up in general was important.

Table 4

Indicators of capital accumulation in the United States: 1850-1940

Capital in manufactures			*Ratio of gross fixed non-residential investment to GDP (current market prices)*	
Year (1)	*$ million (2)*	*Ratio[a] (3)*	*Period (4)*	*Ratio (5)*
1850	533	-	1871-1880	11.5
1860	1009	1.89	1881-1890	12.2
1870	2118	2.10	1891-1900	15.8
1880	2790	1.32	1901-1910	15.7
1890	6525	2.34	1911-1920	12.5
1900	9874	1.51	1921-1930	12.7
1910	18490	1.94	1931-1940	9.7

Source: Columns 2 and 3: Marshall (1920), p. 154. Column 5: Kozul-Wright (1995), p. 96, based on Maddison (1991), table 2.3.

a Ratio of the value of capital in the year concerned to that at the beginning of the previous decade.

Would the rate of growth of manufacturing value added (MVA) and exports of manufactured goods have been higher in the absence of protection? This is a hypothetical question that cannot be easily answered. Some, however, have argued that in the case of cotton textile, which was one of the earliest industries subject to infant industry protection, protection was prolonged. The textile industry was sheltered from imports through embargo between 1808 and 1815. Subsequently, it was subject to high tariff protection from 1816. Protection was unnecessary, it is argued, after around 1824-1832, as the industry had reached maturity during that period (Taussig, 1914). Even if the large tariff of 1816 was necessary, was intensification of protection of the textile industry in 1824 and 1828 needed for expansion of output and exports? To answer this question, it is argued that between 1816 and 1840 value added in New England's textile increased by more than twentyfold (Bils, 1984, p. 1033). Had protection been reduced, the output of the industry, particularly for products of higher quality, would have reduced drastically as liberalization would have been premature. Moreover, as the industry was subject to decreasing costs, its ability to improve its competitiveness abroad would have been reduced (Bils, 1984; Temin, 1988).

The tariff policy of the time also affected the choice of product mix. The United States specialized in coarse textiles because the tariff rate on them was higher than on fine fabrics. The relevant part of the Tariff Act of 1816 was designed by Francis Lowell, a textile industrialist who had vested interest in low quality textiles subject to competition from India (Temin, 1988, p. 897). Hence, production of low quality cotton textiles increased. By contrast, fine yarns were not sufficiently protected, so they had mostly disappeared by the 1830s. Hence, without protection, coarse production may not have survived to compete eventually in the internal and international markets (Harley, 1992). Only around mid-1846 domestic production costs were around c.i.f. prices for British textiles (*ibid.*, p. 566-581). Exports of plain cotton cloth, which began in the late 1820s, reached their peak in the 1850s.

It may be argued that, under pressure from import liberalization, American cotton cloth would have become more competitive. Nevertheless, the experience of fine cloth indicates the contrary:

> Without protection, the American antebellum cotton textile industry, even with its half-century of technological accomplishments, could have attained no more than a fraction of its actual size (Harley, 1992, p. 580).

IV. OTHER COUNTRIES[6]

It is worth stressing that all other industrial countries have developed their manufacturing industries through infant industry protection and government intervention. For example, after its unification (Zollverein) Germany, which started in the 1820s, began protecting its industries in the 1840s. Protection was reinforced in the 1850s and the early 1860s, but was softened in 1866 when trade liberalization was dominating Europe. In the mid-1970s a new movement began in favour of the joint protection of manufactures and agriculture that was instigated as a result of the economic crisis of 1873. Subsequently, the Tariff Acts of 1879 and 1880, introduced by Bismarck, aimed at intensifying the protection of the manufacturing sector and agriculture.

By 1890 most German manufacturing industries were maturing, and the government's policy on protection entered a new era. To secure foreign markets for German trusts and cartels, reciprocity trade

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[6] This section is mainly based on Ashley (1920).

treaties were signed with a number of neighbouring countries. Under these treaties the partners benefited form preferential treatment in exchange for preferential access to a highly protected German market. The General Tariff Act of 1882 protecting both agriculture and industry was reinforced in 1891. During this period, at the intellectual level the argument in favour of "educational tariffs" (i.e. infant industry argument) was replaced by the argument in favour of protective tariffs as a means of negotiations. This was supported by Professor Schomoller and Professor Conrad in particular.

To encourage exports, the government also took a number of other measures. For example, the Tariff Act of 1891 exempted from import duties those raw materials which could not be produced at home; further tariffs on intermediate goods were not supposed to interfere with exports. Moreover, export bonuses were first introduced, and were applied more systematically from 1897 onwards.

Another argument which intensified in the early 20th century was the need for a balance between the development of industry and agriculture advocated by Professor Wagner. To do so, he argued, agriculture should be heavily protected. It was on this basis that the Tariff Act of 1903 intensified the protection of agriculture but left tariffs on manufactured goods unchanged, except for some capital goods benefiting from higher tariffs. Further, the system of drawbacks was introduced, and imports of goods for processing, or repairs, and re-exportation became free (see Ashly, 1920, for more details).

By 1913, when the First World War started, Germany was one of the three main industrial powers after the United States and Great Britain. In fact, in the production of some products, for example certain non-ferrous metal, it ranked second (Ashley, 1920).

Ashley is correct in emphasizing that the government's tariff policy was not "the most important cause of progress of Germany". No doubt a number of other factors contributed to her industrial development including, as in the United States, the unification of the country, the development of the railway system, and the German's zeal for solid education facilitated by the academic training system (Marshall, 1920, ch. 7). Nevertheless, without infant industry protection, the county would not have been able to develop its industrial base to compete with the established British and US industries. Alfred Marshall is correct that free trade among German States made feasible through Zollverein was crucial to the development of German industries. But he is not correct to attribute development of the country to free trade, on the basis of the establishment of free trade among German States alone, ignoring protection of their collective markets from imports from other countries.

The history of protection in France is somewhat similar to that of Germany, but France started earlier. After its unification in the late 1780s, the internal tariffs on trade among various States were abolished, and a moderate tariff of 5 to 20 per cent was introduced in 1790, imports of some goods were prohibited, but imports of raw materials were free. The French tariff on manufactured goods, for which the protectionist lobby was strong, rose steadily during 1805-1810. Later on some imports were licensed and protection of manufactured goods was further intensified during 1820-1826, when protection was also generalized in the agricultural sector. In the 1830s (i.e. after the revolution of 1830-1836) duties on certain agricultural goods were reduced, but once again duties on some light manufactures were sharply increased. Two factors contributed to some degree of trade liberalization during the 1840s to 1950s. First, by then the industrial and agricultural development had made some progress, so a policy of extreme protection did not seem necessary. Second, French industrialists were interested in cheap raw materials and machinery imports. Third, the advocacy of free trade by the British Government influenced French politicians. Hence, significant reductions on 113 items were made in the Tariff Act of 1840, which remained more or less unchanged until the beginning of 1853. Moreover, trade treaties were signed with Great Britain and other European countries, except Portugal, for the reduction of tariffs on bilateral basis. The period 1850-1875 witnessed further liberalizations, as was the case in general in Europe. However, in the mid-1870s, tariffs were increased moderately, before following the example of Germany to increase tariffs as a means of negotiation and agricultural protection.

The easing of protection during the trade liberalization of 1860-1880 together with the economic depression of the 1870s and 1880s led to the stagnation of the economy in general, particularly the manufacturing sector. Consequently, the protectionist lobby requested denunciation of trade treaties and intensification of protection. This time the quest for protection was made to respond to growing competition, particularly from the United States, in the fields of agriculture and manufacture. As a result, a new tariff law was passed in 1892 with two objectives: to increase moderately protection of the manufacturing sector and agricultural products, and to improve the bargaining position of the government in bilateral negotiations for signing trade treaties. For the latter purpose a system of minimum and maximum scales of duty were introduced: the maximum rate would be applied to those countries with whom France had no trade treaty, and minimum tariff would be given in exchange for the lowest tariffs. In addition to significant increases in tariffs, bounties for shipbuilding and subsidies for shipping that had been introduced in 1881 were increased.

There was little change in the protection policy of the government between 1892 and 1909 when maximum tariffs were increased considerably (a maximum tariff was equal to the minimum one plus 50 per cent), and some minimum tariffs were raised in order to increase protection of metal products and machineries.

The industrial development of France is sometimes attributed mainly to cheap products and to the artistic inclination of the French people (Marshall, 1920, ch. IV). But once again without infant industry protection, France could not have developed its manufacturing industries. The intensification of protection after 1880 helped the expansion of French industries, but France could not reach the same level of industrialization achieved by the United States and Germany.

To develop their industries, all other present industrial countries also went through a period of infant industry protection, although to varying degrees, as indicated in table 1. In Europe, while most countries had some tariffs in the first half of the 19th century, mainly for revenue purposes, most of them embarked on the protection of their industries around 1880, after continental Europe reverted to protectionism. Canada started in 1879, and Australia and New Zealand in the 1860s (List, 1856, and Bairoch, 1993).[7]

V. RECENT TRADE LIBERALIZATION COMPARED WITH THAT OF THE 19TH CENTURY

As mentioned earlier, Great Britain secured its industrial leadership and began to liberalize its international trade in the mid-19th century. As far as the interests of Great Britain – as an industrial country of the time – *vis-à-vis* non-industrial countries are concerned, one could draw an analogy between the situation during that period and that of more recent years. At the time English GDP and exports were growing fast and the economic success of the country was attributed to free trade, not to its previous infant industry protection and government intervention. Being in a favourable competitive position in terms of technological development, the country could afford to open up its market to foreign goods. Its competitive position in particular was improved owing to the introduction of the steam engine in railways and shipping. To secure markets abroad, the government also advocated liberal trade policies in other countries. To persuade other countries towards liberalization, three measures were taken. The first was, as mentioned earlier in this paper, signing a trade treaty with France with the inclusion of a MFN clause whereby Great Britain gained access to other European countries. It is interesting to note that during 1870-1891 there was a severe depression in Europe. Secondly, the so-called "unequal treaties" were imposed on developing countries of the time from 1810-1850, forcing them to eliminate all import duties. Thirdly, all colonies were forced to give free access to all products of the mother country and even to give preferences to products of the mother country in their public procurement. In some cases, they were allowed to impose an import duty of 5 per cent for the purpose of raising revenues (this became known as the "5 per cent rule"), provided that compensatory equal taxes were imposed on domestically produced goods (Bairoch, 1993 pp. 41-43). To open up markets elsewhere, the government also attempted to impose retaliatory import duties on manufactured goods through the "Fair Trade League" initiated in 1881. The League was used as an instrument of reciprocity (*ibid*., p. 27). Finally, when a trade treaty was not accepted by a country easily it was imposed on it by a war. An example is the Opium War of 1839-1842 which aimed at making the vast Chinese territory available to British trade; the war ended with the treaty of Nanking, through which China lost its independence in custom for nearly a century.

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7 For a detailed history of trade policy in Europe, see Bairoch (1989).

The forced trade liberalization of the 19th century contributed to accelerating the rate of growth of exports and Great Britain's output in the manufacturing sector. At the same time, it resulted in the de-industrialization of those developing countries possessing some industrial base (e.g. India) and delayed industrialization of others (*ibid*., pp. 46-55). In other words, while liberalization benefited Great Britain, the major industrial country of that time, it had detrimental effects on the developing countries and territories.

The recent uniform trade liberalization undertaken by developing countries through Structural Adjustment Programmes (SAPs) has to a large extent similar characteristics. Here, many developing countries, even though independent, have not had a mature industrial base and have been in a very weak position because of their debt burden, which led to a crisis in the early 1980s. Despite their shortage of foreign exchange, exacerbated by the worldwide economic depression, they were persuaded, or forced, to open up their market, basically benefiting the industrial countries, which were their main source of supply of manufactured goods. Once again, the argument in support of trade liberalization was confused. This time the economic and export success of East Asian NICs was attributed to their recent trade liberalization rather than to their previous policies of infant industry protection and government intervention. In fact, some even deny that the governments of these countries had intervened severely in the process of industrialization and export expansion. On that basis, universal trade liberalization was advocated to all developing countries. However, the pressure on developing countries to liberalize was laid mainly indirectly through international financial institutions. These institutions forced developing countries to liberalize by imposing conditionalities attached to their lending. "Unequal treaties" of the 19th century were replaced with "unequal loan agreements" and "letters of understanding". If a country refused to comply, there would not be military pressure. It would, however, be denied loans by the international financial institutions and also the commercial banks. These banks often link their lending, or syndicate lending, to prior agreement of the applicant with the international financial institutions under the umbrella of Structural Adjustment Programmes. Similarly, the country would run the risk of being denied development aid by the donor countries. In other words, in the recent liberalization episode, the means to put pressure on developing countries has been economic rather than political.

This is not to deny that selective trade liberalization has beneficial effects, particularly for those developing countries which have developed their industrial base but need to become competitive. However, the impact of premature, universal and uniform trade liberalization on some developing countries in recent years is similar to that of the 19th century: many of those with a fragile industrial base became de-industrialized; most of those whose industrial base was negligible suffered from delayed industrialization (Shafaeddin, 1995).

VI. CONCLUSIONS

In examining the case of early industrializers, this paper has concentrated on the history of trade policy in Great Britain and the United States as two examples, and also referred to the cases of Germany and France. Our analysis indicates that it is a fallacy that early industrializers could have developed their industrial sector without infant industry protection. Indeed in all cases, to develop their industries, these economies benefited from an infant industry protection phase and heavy government intervention in the foreign sector. Nevertheless, the degree of protection and government intervention varied in different countries. The United States was the motherland of infant industry protection not only at the intellectual level, but also in actual fact. Despite the fact that the industrial revolution contributed to rapid industrialization in Great Britain, its industrial sector benefited from trade protection and other forms of government intervention in the trade flow through the Navigation Act and by means of political power and even military power.

Moreover, government intervention in both the United States and Great Britain was not confined to foreign trade, although it was more significant in that sector. The government concerned, particularly the United States, intervened in the domestic economy directly and indirectly to assist capital accumulation, institutional development and infrastructural build-up, and to provide training, R&D, etc. In neither case can trade policy alone explain industrial and export success. In both cases, capital accumulation, infrastructure and institutional development played a significant role. In both countries, as well as in France and Germany, agricultural development, often helped by protection and other forms of government intervention, facilitated the process of industrial development. Moreover, while high domestic savings were crucial in financing their capital accumulation, in both Great Britain and the United States foreign investment played a noticeable role at the early stages of their industrial development. In all cases, even when the industrial sector was mature, protection was used as a means of bargaining power in bilateral trade negotiation and trade treaties.

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