

## **Trade Liberalization, Industrialization and Development: Experience of recent decades**

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“We cannot go back to the past. But neither should we fail to recognize the failures of the present.” (Stiglitz, 2005:32).

## **Introduction**

Is trade liberalization conducive to industrialization and development? The purpose of this article is to argue that trade liberalization is necessary for industrialization if: it is regarded as a part and parcel of a dynamic and flexible trade and industrial policies; undertaken at the right time, gradually and selectively. More importantly, trade policy is to be an ingredient of a comprehensive set of industrial and development policies and measures to enhance the capabilities of firms for establishing industries, making them efficient and upgrading them. By contrast, if it is undertaken, pre-maturely, rapidly and uniformly, i.e. across-the-board, it will lead to de-industrialization and unemployment; it will lock the country into specialization in production and exports in primary commodities and at best natural resource-based products, and/or labour-intensive stage of assembly operation.

To do so, we will first review the background to, and features of, the trade liberalization hypothesis (TLH). Subsequently, to examine the validity of TLH, we will first shed some light on the historical experience of the successful early and late industrializers in section II. Then, we will refer to, in section III, the results of trade liberalization forced on colonies during the colonial era. The increased need for infant industry support in the case of late industrializers and the characteristics of trade liberalization during recent decades, as compared with that during colonial era, will be studied in sections IV and V. Section VI will be devoted to the examination of available evidence on the result of trade liberalization episodes during more recent decades. In section VII the contrasting experience of China and Mexico will be

examined. In the final section, we will conclude the study and discuss the policy implications of our findings for developing countries.

### **I. Trade Liberalization Hypothesis: Background and features**

The dominant views of scholars on trade and industrial policies have gone through considerable changes since the great depression of the 1930s, shifting from one extreme to another. The great depression led to beggar-my-neighbour policies in industrialized countries of the time and across-the-board import substitution in developing countries. Nevertheless, import substitution, as an official trade and industrial policies of developing countries, began only after the Second World War. During this period until the early 1980s two tendencies have been observed. The first was the one observed in East Asian countries following the initial experience of the Republic of Korea. Facing a severe balance of payments constraint around 1958, Korea began to stimulate exports of manufactured goods. Experiencing some success in export expansion, the combination of import substitution and export promotion became the official policy of the government till around the mid-1990s, when the industrial structure of the country became, more or less, consolidated. Learning from Japan, the country began a process of dynamic trade policy - resembling the flying geese model, which initially restricted imports of some consumer goods, but left imports of intermediate inputs and machinery relatively free. Subsequently, through gradually liberalizing imports of those consumer goods, it tried to penetrate the international markets. To do so, the government provided some export subsidies. Meanwhile, it embarked on import substitution of some imported intermediate products used in the established industries. When such industries reached the stage of maturity, it began liberalizing them, and embarked on manufacturing some

machineries and heavy industries by providing them with government support. This dynamic process of mixed import-substitution/export penetration and upgrading of the industrial structure continued till more recent decades (Shafaeddin, 2005.c; Lall, 1996; Huang, 2002; Amsden, 1989).

A somewhat similar process, although not necessarily exactly the same, took place in a few other East Asian countries/territories i.e., Singapore, Hong Kong and Taiwan Province of China (the so-called “gang of four”).

In the meantime, many developing countries continued a long process of “traditional import-substitution” i.e., across-the-board protection - as against temporary infant industry protection - as an element of a dynamic trade policy. These countries gradually faced balance of payments problems, which extenuated after the oil price rise of 1973-74 and the subsequent debt crisis.

In the early 1970s, I. Little *et al* (1970), confusing infant industry argument with “traditional import substitution”, and misinterpreting the Prebisch thesis on industrialization, attributed the success of the “gang of four”, to “outward oriented industrial strategy” (see also Baldwin, 1969). Subsequently, a number of other neo-liberals such as Kruger (1974 and 1978), Balassa (1978 and 1980), Bhagwati (1978) made strong arguments against infant industry thesis and presented their “trade liberalization hypothesis”. Thus across-the-board trade liberalization became an ingredient of conditionalities of Structural Adjustment Programmes (SAPs) and Stabilization Programs (SPs) of the International Financial Institutions (IFIs) in the early 1980s. In the early 1990s the IFIs went further by propagating the “Washington Consensus” initiated by John Williamson (1990).

### *Elements and features of TLH*

While the views expressed by various Neo-liberals and Neo-liberal institutions are not exactly the same, one may outline the common elements of the trade liberalization hypotheses as follows.

- Removal of import quotas, import licenses and other quantitative restrictions, or their initial replacement with tariffs;
- Subsequent reduction of the level, and dispersion of import tariff rates;
- Devaluation of national currency in order to compensate for the removal of protection or remedy overvaluation of the exchange rate;
- Removal of export taxes and subsidies; and
- Privatization of ownership of productive firms.

The emphasis was placed on: outward orientation and market orientation; uniformity of the nominal tariff structure; and universality of the hypothesis i.e., universal applicability of the TLH. Outward orientation requires, it was argued, neutrality of incentives for production for both the domestic and international market. Market orientation implies the lack of, or minimum, government intervention in the economy and in the flow of trade. Uniformity of the nominal tariff structure would imply the need for across-the-board trade liberalization of various sectors and industries. The ultimate goal is zero tariff rates for all activities. Nevertheless, a low and across-the-board tariff rate of 10 to 20 *per cent* is exceptionally accepted, for revenue purposes, by some neo-liberals. Similarly, it is argued that devaluation will provide uniform incentives for all tradeables (Kruger, 1978, ch.4). Universality implies that the hypothesis is applicable to all developing countries, irrespective of their level of development and industrial capacity, and to each country over time.

Neo-liberals seem to regard trade liberalization an end *per se*, rather than a means to industrialization and development. Some neo-liberals argue, in fact, that developing countries should undertake unilateral trade liberalization even if developed countries do not do so! (Corden, 1993; Kowalski *et al.*, 2009, OECD).

Even when some government intervention is accepted, it is to “enable” or “facilitate” a country’s “current comparative advantage” [read static comparative advantage] rather than achieving dynamic comparative advantage and development (Lin Justin in Justin and Chang, 2009). Williamson (1990: 19), an advocator of “Washington Consensus”, confesses that “none of the ideas spawned by...development literature...plays an essential role in motivating the “Washington Consensus”.

### *The philosophy behind TLH*

The TLH is based on the assumption that trade liberalization leads to static and dynamic efficiency gains through stimulating investment, export expansion, GDP growth as well as export and output diversification in favour of manufactured good (Bhagwati, 1988b: 36; Kruger, 1980: 92 and 288; World Bank, 1987: 21-2). In the particular case of the World Bank, in more recent years the Bank admits the failure of across-the-board liberalization, risk in indiscriminate opening of capital account, the importance of “country specificities” in drawing policies, and a superior performance of countries which have not followed orthodox policies.

In retrospect, it is *clear* [own italic] that in the 1990s we often mistook efficiency gains for growth. The “one size fits all” policy reform approach to economic growth and the belief in “best practices” exaggerated the gains from improved resource allocation and their dynamic repercussions, and proved to be both *theoretically incomplete and contradicted the evidence* [own italics]. Expectations that gains in growth would be won entirely through policy improvements were unrealistic. Means were often mistaken for goals-that is, improvements in policies were mistaken for

growth strategies, as if improvements in policies were an end in themselves (World Bank, 2005: 11).

Yet, in the end it recommends “across-the-board”, uniform and “accelerated” trade and financial liberalization, significant devaluation, deregulation of domestic and foreign investment, etc. (See World Bank, 2005; and Shafaeddin, 2006d for more details).

The philosophy behind TLH is the theory of static comparative cost advantage, although sometimes lip services are paid to the dynamic issues. Such a philosophy has also been the basis of conditionalities imposed on developing countries not only by IFIs, but also by developed countries directly, through multilateral (WTO), bilateral, regional trade agreements, and practices of donors since the early 1980s. In the negotiations through Economic Partnership Agreement (EPA), the EU, in particular, demands trade liberalization by the ACP countries (most of which are least developed countries), on reciprocal basis, and tries to impose “WTO plus” conditions on them.

Has trade liberalization led to export expansion and diversification? Has it stimulated investment, and growth of MVA and GDP?

## **II. Experience of successful industrializers<sup>1</sup>**

The historical evidence on the performance of successful early and late industrializers is not supportive of the TLH. In fact, the experience of all of them, including Great Britain (GB) as a first industrializer, indicates that with the exception of the territory of Honk Kong Province of China, all have gone through an infant industry phase. Hong Kong Province of China was a city territory; moreover, its ability to upgrade its industrial structure was limited. While different countries did not follow exactly the same path, all learned from the experience of others; the USA learned from GB, Germany from the USA, Japan from Germany and the Republic of Korea from Japan, etc. (Shafaeddin, 1998). In all cases the

government's functional and selective intervention was not confined to trade; the state also intervened through other means, directly and indirectly, to encourage savings, to promote investment, to develop agriculture and the necessary institutions and infrastructure, and to provide facilities for training. FDI was also used and targeted at specific areas to enhance industrialization. In all cases, including Great Britain, industrialization began on a selective basis, although to a different degree, and continued in the same manner until the industrial sector was consolidated. When their industries matured, the industrial countries began to liberalize selectively and gradually.

In all cases industrialization was supported by attention to and growth in the agricultural production. The Corn Laws in Great Britain (see below) and protection of rice production in Japan and other East Asian countries are only two examples.

Premature trade liberalization, whether by early industrializers, by colonies or in more recent decades by developing countries, has been disappointing. In the particular case of the USA, when the country tried to liberalize prematurely during 1847-61, the industrial sector suffered and the country had to revert to protectionism.

All main early industrializers tried to open the markets in other countries when their industrial sector matured by using tariffs, as a tool of bargaining, in trade negotiations, or even by force or political pressure (see below).

#### *The particular case of Great Britain as a first industrializer*

There is ample literature on the use of infant industry support by such countries as the USA, Germany, France, Japan, Republic of Korea, etc., which industrialized after Great Britain. But it is interesting to note that contrary to some of famous classical and neo-classical economists such as Adam Smith and Alfred Marshal, Great Britain, the first early industrializer, also undertook infant industry protection.



### **Great Britain, the first industrializer**

The process of industrialization of Great Britain had its roots in a couple of centuries before the industrial revolution of the 18<sup>th</sup> century although it accelerated the process. By around 1700, industrial production accounted for about 20 per cent of total income of the country. Trade restriction, began by Elizabeth I (1553-1603), sharply increased in 1690, and continued until around the 1860s. “As of 1820, Great Britain showed the highest rate of tariffs on imports of manufactured goods (50 per cent) in Europe” (Shafaeddin, 2005a: 157 and Table 7.2).

The process of industrialization of the country has some common features with those of other successful early and late industrializers. Protection was selective, and trade policy was dynamic and flexible. Protection started with woollen and cotton cloths and iron, and eventually extended to shipbuilding and restriction on transportation through Navigation Act (1651). The agricultural sector was also protected through the Corn Law of 1434 followed by Corn Bounty Act (1614-89) and Corn Law of 1815. The Government prohibited sale of imported grain to millers, unless the home price exceeded beyond a limit. Moreover, exports of some products such as wheat were subsidized.

The Government also intervened extensively, particularly after 1760, in other areas: to encourage savings, investment and scientific activities; to develop infrastructure, road, waterways, railways; to provide facilities for training; to establish necessary institutions etc. The Bank of England was established in 1694; small and provincial banks, banking houses and private banks were established in 1716; saving banks were established in 1798. To encourage investment, the law of partnership was passed, joint stock companies were initiated, insurance services were developed and the stock market was created.

When Great Britain consolidated its industrial base, after over two centuries of protection, the Government began reducing its tariffs gradually, over a period of nearly 30 years, beginning in 1833; the Corn law and Navigation Act were abolished in 1846 and 1849, respectively, before following a policy of free trade (around 1850-1860). Further, the nature of Government intervention changed in other areas. Many ineffective regulations were abolished between 1760 and 1850. Around the early 19<sup>th</sup> century the government began to take more positive role in the economy, but its intervention did not cease even after the 1850s (Dean, 1965: 232).

Source: Based on Shafaeddin (2005a: 156-165).

A. Marshal (1920) attributed the industrialization of the country to industrial revolution, cultural issues related to “the spirit of economic nationality...patriotism... and the pride in their [Englishmen] work... (Ibid.: 32), and the introduction of the policy of free trade around 1860s (Ibid.: 10 and 89). A. Smith (1776) maintained that Great Britain achieved industrialization despite its protectionist policies. The historical evidence contradicts these views (see Box 1).

### **III. Impact of forced trade liberalization imposed on colonies**

Free trade policy was forced on colonies, semi-colonies and independent countries through the so-called 5 per cent rules and “unequal” bilateral treaties, mostly during the first half of 19th century. According to this rule, 5 per cent was the maximum tariff rate allowed on any import item to colonies of Great Britain. When a country did not submit, military force was employed (e.g., the imposition of the opium war of 1839-42 on China). To deprive the colonies of using new technology, Britain prohibited exportation of machinery to, and their use in, the colonies, until 1830s. “High value-added manufacturing activities were outlawed in the colonies and [export of] competing items from colonies to England were banned. Instead, production of primary products was encouraged” (Chang, 2005; Oxfam, 2005: 60-61).

The results of the forced liberalization were sluggish growth, de-industrialization and destruction of handicrafts of the colonies (Bagchi, 1982: 32-39). The Latin American countries modified their commercial policies from 1880 onwards, while some other countries did so between 1913 and the great depression of 1929 (Bairoch, 1993: 41-42 and Chapter 8). As can be seen in Table 1, during the height of compulsory liberal trade regimes (1800-1880), growth in per capita income was negative in the “Third World”. Only after 1880 when the third world began to regain its policy autonomy gradually, the per capita income of the group began to accelerate (See also Chang, 2005b: 30-34). Generally speaking, “in all parts of

developing world economic growth accelerated after the end of imperialism” (Ibid: 32). Growth also accelerated during 1950-80 as the remaining colonial territories got independence and were able to implement their own trade policy.

Table 1: Annual average growth<sup>a</sup> rates in per capita GNP, 1800-1950

Period	Third World <sup>b</sup>	Developed countries
1800-1830	-0.2	0.6
1830-1870	0	1.1
1870-1880	0	0.5
1880-90	0.1	0.9
1890-1900	0.2	1.7
1900-1950	0.45	1.34
1950-1080	1.7	3.4

Notes: a: Three-year average; b: Excluding China.

The “de-industrialization” effects of the forced liberal trade policy imposed on the third world was between 85 to 95 per cent; i.e., in the absence of trade liberalization the size of the manufacturing sector of the Third World would have been 85 to 95 per cent larger (Bairoch, op. cit.: 88). For example, in the case of Indian textiles, it is estimated that the destruction of the textiles industry was between 55 to 75 per cent of national consumption around 1870-80 and 95 to 99 per cent during 1880-1900 (Bagchi, 1982: 32-9 and 82-3; Chang, 2005b: 61).

#### **IV. The increased need for infant industry support in late industrializers**

In the case of Great Britain, the process of infant industry support lasted over 200 years before the country consolidated its industrial structure. By contrast, to be able to catch up, the time pressure on late industrializers has increased over time, particularly during most recent decades (Shafaeddin, 2005a). The more backward is a country, the greater is the need for the acceleration of the process of industrialization in order to catch up with the early industrializers. Yet, the wider will be its competence gap. While the need for government intervention in the process of industrialization has

increased, the policy space of the late comers has shrunk. To begin with, the pace of technological development has accelerated and the technological gap between the industrial countries and late industrializers has increased. In the case of Great Britain the emergence of new technology was dependent on invention, which was a slow process. For the late industrializers, some technology is already available elsewhere. Therefore, there is a need for application, adaptation, or imitation of the existing technology. But, technology is not available readily and freely. Further, as the pace of technological development accelerates and technology will become more complicated, the longer will be the period needed for technological learning (Lall, 2004).

Second, during the industrial revolution firms were relatively small. Over time, the size of established firms of industrial countries has enlarged and international market power has become more and more concentrated. Thus monopoly and oligopoly power has increased at the international market. Large established firms enjoy advantages of increasing return to scale. Barriers to entry for newcomer firms have increased, *inter alia*, because of strategic behaviour of large firms which can exercise their Schumpeterian “creative destruction”.

Third, the combination of the time pressure, the technological gap, capital intensity of production and large scale of operations increases the need for investment and saving, thus putting pressure on consumption. At the same time, the change in taste due to the appearance of foreign goods rises amongst the population, which increases demand for luxury consumption reducing savings necessary for investment (Gerschenkron, 1962).

Fourth, even if the required savings were available, the higher the needed rate of growth for catching-up, the faster would be the required rate of social, institutional and infrastructural changes, thus the greater the need for government intervention to deal with these issues.

In more recent decades, the risks of investment by new firms have also increased. According to Lazonick (1991), a newcomer firm faces risks related to productive uncertainty (the risk related to the development of a product and the utilization of productive capacity) as well as competitive uncertainty (related to the rivalry of established firms-TNCs). One can add risks related to the fallacy of composition (Bleker and Razmi, 2007), development of protectionism in the main international markets, increased exposure to world demand and increased frequency of boom and busts during international business cycles, volatility in foreign exchange market.

FDI provides marketing channels to international markets, but the objectives of TNCs are different from the development objectives of the host countries and their contribution to development is limited unless they are managed. Even then they can only supplement capabilities of local firms.

The increase in risks requires providing new-comer firms with higher rewards (expected income). In other words, the new-comer firms need more support and greater degree of nurturing than before. Yet, the policy space of developing countries has declined for the reasons mentioned below.

## **V. The characteristics of trade liberalization during recent decades**

One can draw an analogy between the trade liberalization during recent decades with those imposed on colonies during 18th and 19th centuries. For example, when Great Britain consolidated its industrial base and enjoyed technological supremacy, the Government opened its market to imports. Meanwhile, it tried to open up markets of colonies for its exports through so-called unequal treaties (1810-50) and 5 per cent rules, together with equal taxes imposed on their domestically-produced goods. If a trade treaty was not accepted by a country, it was forced on it by war (e.g., Opium War of 1839-42 was imposed on China). All colonies were forced to give preference to products of the mother country (Bairoch, 1993: 41-3). The Fair Trade League Act of 1881 (through which retaliatory import taxes were imposed on imports of manufactured good from colonies) was used as an instrument of reciprocity to open up markets of other countries. Further, as mentioned earlier, England prohibited exports of machinery to colonies.

During recent decades, developed countries try to open up markets of developing countries by other means. For example, according to Peter Mandelson, EU's trade commissioner, "The aim of our trade policy should be to achieve better market access for European goods and services worldwide" (Mandelson, 2005). He has repeated this statement in different forms many times on various occasions (Curtis, 2006). Thus developing countries have been pushed through SAPs, SPs of World Bank and IMF, and bilateral trade agreements to open up their markets (Chang, 2005a: 10; Shafaeddin, 1998). To do so, unequal treaties were replaced by "unequal trade agreements" and letters of credits; denial of loans or financial aids by IFIs and donors has replaced military intervention. For example, according to EU officials "poor

countries will receive EU aid and improved treatment on trade if they sign up to deepening liberalization.” (Curtis, 2006: 3). Reciprocity is imposed on low-income countries through EPA rather than through Fair Trade League Act. When 10 per cent import duties are allowed exceptionally for fiscal reasons, it is also recommended that 10 per cent VAT be imposed on the sale of similar domestically-produced goods. Production of high value-added products in developing countries is not prohibited, but it is constrained by unfair competitive pressure by imports, and hampered by tariff peaks and escalations and arbitrary and unjustified anti-dumping and countervailing measures (Shafaeddin, 2010a). Exports of machinery are not prohibited, but transfer of technology to developing countries is restricted through TRIPs. Further, severe loss of policy space is experienced by developing countries through such other WTO agreements as TRIMs, GATS, Subsidies and Countervailing Measures (ASCM) etc. (Shafaeddin, 2010). Summarizing the impact of the first three agreements - TRIPs, TRIMs and GATS - Professor Wade concludes that “With a touch of hyperbole the agreements could be called a slow-motion Great Train Robbery” (Wade, 2005). More policy will be lost if demands of developed countries during the Doha negotiations are met and the EPA, with its “WTO plus” conditions, comes into effect. In fact, if EPA is finalized, it would be the last nail in the coffin of industrial sectors of ACP countries which are at early stages of development (Oxfam, 2008; Shafaeddin, 2010).

In short, during recent decades the means of pressure on developing countries to liberalize across-the-board, universally, and most often prematurely, has been economic rather than political or military. But the result has been the same as that during the colonial era: de-industrialization of countries at early stages of industrialization. We will return to this issue below.

## **VI. Recent experience in trade liberalization<sup>2</sup>**

While across-the-board import substitution and prolonged protection have led to inefficiency and failure, the experience of developing countries in implementing TLH during recent decades has also been disappointing. But, the neo-liberals and the neo-liberal oriented institutions try to convince us to the contrary (See Sachs and Warner, 1995 and 1997)<sup>3</sup>. The studies undertaken by the neo-liberals suffer from many methodological problems. In fact, the results of cross-sectional studies undertaken by other scholars have revealed no, or little, evidence that there was any statistically significant correlation between trade openness and economic growth in recent decades (Rodriguez and Rodrik, 2001; Rodrik, 1997; Wacziarg and Welch, 2003; ECLAC, 2002; Di Maio, 2008). More importantly, UNDP (2003) finds a positive correlation between a country's tariff rate and growth rate for the period 1990s. There is also some evidence that trade liberalization has led to de-industrialization of low income countries, particularly in Sub-Sahara Africa (Bennel, 1998; Shafaeddin, 1995; Noorbakhsh and Paloni, 2000; Thoborn, 2001)<sup>4</sup>.

According to Professor Stiglitz: "Today the inadequacies of Washington Consensus reform [in genera] are apparent..." (Stiglitz, 2005: 31). He maintains that stabilization policies do not ensure either growth or stability; the benefits of trade liberalization are questionable particularly that "workers move from low-productivity jobs to unemployment" instead of moving to high-productivity jobs; capital market liberalization does not necessarily lead to faster growth and exposes the countries to higher risks; privatization often leads to higher prices of utilities; the adverse social consequences of wrong policies imposed on developing countries has been seen in many countries (Ibid.: 16-18).



The results of our own studies on the experience of developing countries in trade liberalization are mixed, depending on the stage of industrialization of the country which undertakes liberalization and the way it has been done. We have studied a sample of 50 developing countries, for the period 1980-2000. Then, we repeated the analysis for the period 2000-2004 in order to examine possible impact of the lag between liberalization and economic performance as well as the degree of vulnerability of the countries during economic slowdown in the early years of the decade (Shafaeddin, 2006a and 2006c). The study for the 1980-2000 period shows that twenty countries experienced rapid expansion of exports of manufactured goods. In several countries, mostly East Asian NIEs, rapid export growth was also accompanied by fast expansion of industrial supply capacity (MVA) and upgrading. In these countries, after they had reached a certain level of industrial maturity, trade liberalization took place gradually and selectively. By contrast, the performance of the remaining countries, mostly in Africa and Latin America (majority cases), has not been satisfactory. These countries embarked, in the main, in the 1980s, on a process of structural reform including uniform and across-the-board and often pre-matured trade liberalization. They further intensified their liberalization efforts in the 1990s. Consequently, half of the sample countries, mostly low income ones, have faced de-industrialization. In cases where manufactured exports grew extremely fast, e.g., Mexico, MVA did not accelerate and little upgrading of the industrial base took place. During the 1990s Mexico achieved annual average growth rate of manufactured exports of about 30 per cent, yet its corresponding growth rate of MVA did not exceed beyond 4 per cent as against an average of 7.5 per cent for Malaysia, Thailand, Indonesia, and Singapore (Shafaeddin, 2005a, Table 2.1) as against its own MVA growth rate of about 7 per cent in the 1960s.

In the case of low-income countries the example of Ghana is telling. Despite two decades of reform, Ghana's annual average growth in MVA was significantly negative during the 1990s (-3.5 per cent). Further, the liberalization efforts did not encourage exports of manufactured goods beyond some wood processing, the production capacity of which in the late 1990s remained, in fact, below the level of the mid-1970s (ibid.: 46-48). Although in growth performance the country has somewhat improved in subsequent years, mainly due to high commodity prices, the sustainability of growth is questionable as their investment has not picked up much.

The reform programmes designed by IFIs also failed to simulate private investment, particularly in the manufacturing sector; the I/GDP ratio fell even in cases where the inflow of FDI was considerable - this included Mexico and a number of other Latin American countries. While trade liberalization changed the structure of incentives in favour of exports, the balance between risks and return went against the manufacturing sector and in favour of non-tradable activities and speculation in properties. In contrast to traditional import substitution strategy, the outward orientation strategies reduced the incentive for investment in manufacturing sector due to reduction in its profit margin resulting from competitive pressure from imports. At the same time, it increased the risks of investment for the reasons mentioned earlier.

Generally speaking, in the "majority of cases" trade liberalization has led to the development and re-orientation of the industrial sector in accordance with static comparative advantage. Resource-based industries and some labour-intensive activities, such as assembly operations, expanded in most countries and little upgrading took place. In fact, some labour-intensive industries also shut down leading

to significant layoffs as resources did not shift to new activities, except for shifts to resource-based and speculative activities, as predicted by neo-liberals.

The performance of two categories of industries in the particular case of Latin America was, however, exceptional, that is industries that were near maturity and/or had been dynamic during the import substitution era. Both categories continued to be dynamic in terms of production, exports and investment. The aerospace industry of Brazil is an example; it was near the stage of maturity after years of nurturing, and benefited from trade liberalization as the competitive pressure from imports made it more efficient despite the initial difficulties it encountered (Shafaeddin, 2006a) .

The result of the study of the same sample countries for the period 2000-04, indicated that the differential performance of the “minority group”, in general, continued, in relation not only to the “majority group”, but also in relation to its own performance during the 1990s. Further, the majority group, particularly Mexico, Costa Rica and low-income countries, showed more vulnerability to global slowdown. Export processing zones are responsible for the bulk of exports of Mexico and Costa Rica (See Paus, 2005, on Costa Rica). The performance of other countries which have also concentrated on EPZ, by liberalizing FDI, is not much better than that of Costa Rica and Mexico. One example is Mauritius; it not only has not been able to upgrade its production and export structure, but also its pace of export growth has slowed down (Shafaeddin, 2009). Only China is an exception; its performance stands out as compared with Mexico. The contrasting experience of the two countries requires a closer attention as they share many similarities as well as differences in their policy performance and the role of government (see below).

On the basis of the aforementioned studies, we have concluded that “where there is a correlation between export growth and output growth [manufactured goods] a causal relation goes from output to exports rather than the other way round (Shafaeddin, 2006c)<sup>5</sup>. This is particularly true in the case of low-income countries such as least developed countries.

#### *Least developed countries*

LDCs are at the early stages of industrialization. Hence, one would expect, based on the experience of other countries (Chenery and Syrquin, 1985), that the share of MVA in their GDP should have increased during the last couple of decades. Yet, premature trade liberalization during the 1980s and early 1990s was accompanied with de-industrialization of most LDCs (Shafaeddin, 1995 and 1996). The neo-liberals’ response is that low-income countries should intensify trade liberalization in order to improve their performance (IMF, 2001). Has the situation improved during the following period when trade liberalization has been, in fact, intensified in these countries, particularly in African LDCs? (Shafaeddin, 2009, Table 11) The data, however, indicates that de-industrialization has been intensified since 1990. We have taken MVA/GDP ratio as an indicator of the degree of industrialization. Accordingly, Table 2 shows that on average the ratio has declined between 1990 and 2006, influenced mainly by the performance of African LDCs. Nevertheless, the average figure for Asia is heavily influenced by the performance of Bangladesh, Cambodia and Laos. When these countries are excluded, the share of Asian LDCs declines from 12.9 per cent in 1990 to 10 per cent in 2006. Furthermore, de-industrialization seems more pronounced in countries which are, relatively speaking, at earlier stages of industrialization. Thus 36 per cent of countries which

show decrease in MVA/GDP ratios, over the same period, figure among those with MVA/GDP ratios of less than 10 per cent in 2005-6 (based on tables 2 and 3). The corresponding figure for countries which show an increase in the ratio is 29 per cent. On the basis of the same sources, out of 24 countries which do not show a decline, two countries show no change (Eritrea, Sao Tome and Principe) and 14 depict marginal changes of 0.1 per cent (Djibouti, Ethiopia, Gambia, Haiti and Madagascar), 0.2 per cent (Guinea and Togo), 0.3 per cent (Somalia and Sudan) and 0.6 per cent to 0.9 per cent (Uganda, Tanzania and the Yemen). Such small changes during more than a decade cannot be regarded as progress in industrialization.

Note that the increases in the MVA/GDP ratio cannot be necessarily attributed to trade liberalization in all cases. Countries with noticeable increases in the ration include Cambodia (10.6 per cent), Equatorial Guinea (9.3 per cent) Mozambique (8.5 per cent), Liberia (8.1 per cent), Laos (5.4 per cent), Afghanistan (4.7 per cent), Myanmar (1.8 per cent), and Bangladesh (1.5 per cent). Nevertheless, with the exceptions of Equatorial Guinea and the last two countries, all are among special cases which had suffered from low capacity utilization at the initial period due to a war or internal conflict. Equatorial Guinea enjoyed expansion of oil revenues and the increases in the ratios for Bangladesh and Myanmar is small. In fact, if the related ratio for 2006 is compared with that of 1980, it declined slightly in the case of Myanmar and remained the same for Bangladesh (UNCTAD, 2008, Annex Table 5).

Generally speaking, the degree of de-industrialization will be revealed further if one compares the MVA/GDP ratios for 2006 with 1980 or 1970. In the first case, 25 out of 40 countries for which data are readily available show declines in the ratios, and two cases show no change (Based on op. cit.) Again, the exceptional cases

Table 2: Changes in the share of MVA in GDP of LDCs<sup>a</sup> (1990-2006)

Year	LDCs				Other developing countries <sup>b</sup>	
	All	Asia	Africa & Haiti	Islands	All	Major exporters of manufactured goods
1990	10.5	12.1	9.7	6.1	22.5	25.6
2000	10.2	13.2	7.7	6.4	23.2	27.1
2006	9.8	13.8	7.5	6.4	24	28.5

Notes:

a: all variables are in current terms

b: 10.7 for 1980.

c: Excludes LDCs

Sources: Shafaeddin (2009), based on UNCTAD, 2008a, Table 8.3.2.

Table 3: Changes in the share of MVA in GDP of LDCs (2005-06)

MVA/GDP: per cent	Asia		Africa		All LDCs	
	Increased	Decreased	Increased	Decreased	Increased	Decreased
Less than 5	-	5	5	3	5	8
5-10	3	2	7	8	10	10
10-15	-	-	4	3	4	3
15-20	2	-	2	2	4	2
20-21	1	-	-	-	1	-
Total	6	7	18	16	24	23
Per cent in total No. for each region	46	54	53	47	51	49

Source: Calculated by the author, based on UNCTAD, 2008b, Table 3.

mentioned above figure in the list of countries where the ratio went up. The results of comparison with the 1970s will be even more dramatic (See also Sundaram and Arvin, 2008, Table 7).

While a number of factors, including structural weaknesses, may have contributed to de-industrialization, the influence of premature liberalization cannot be denied (Shafaeddin, 2006c and 2009). During the last two to three decades, quantitative trade restrictions have been eliminated and tariff rates have been reduced drastically. In

particular, tariffs on imports of manufactures have been reduced significantly ranging from 33.5 per cent to 83.2 per cent (Shafaeddin, 2009, Table 14).

## **VII. Comparative experience of China and Mexico<sup>6</sup>**

As mentioned earlier, among countries with some industrial base the performance of China in particular stands out as compared with Mexico. Their comparative performance, provides a good opportunity for testing the neo-liberals' hypothesis vis-à-vis developmentalists. In 1978, MVA accounted for 44 per cent of GDP of Mexico; the ratio was around 40 per cent for China around 1980. Both countries started opening up their economies to foreign trade and FDI, and reforming their economies more or less around the early 1980s. Mexico, however, intensified its trade liberalization, through WTO (1986), NAFTA (1995) and relied heavily on market forces in general; it is regarded as the champion of trade liberalization and economic reform (ECLAC, 2002). China's reforms in trade, financial, capital and labour markets continued in the 1980s and 1990s; it acceded to WTO in 2001. Export processing zones have been mainly responsible for export expansion in both countries.

During 1980-2000, Mexico showed considerably faster expansion of exports of manufactured goods than China, but unlike China, such a rapid expansion was not associated with acceleration of growth of MVA and GDP. Further, unlike China, its rapid growth of exports could not be sustained after 2000; the I/GDP ratio fell; public investment was cut and the national private investors hardly responded positively to liberalization. Unlike China, FDI crowded out domestic investment in the case of Mexico, and the trade balance ratio for its manufacture sector (exports-imports/exports) deteriorated (For details see Pizarro and Shafaeddin, 2010); little increase in value added and upgrading have taken place in its export processing

zones; there has also been a shift from investment to resource-based industries and less risky investment, than productive activities, such as residential construction (Shafaeddin, 2005b: 50-52 and Table 3.3). China has developed comparative advantage in production of non-electronics capital/technology intensive products (mostly produced by SOEs) and in exports of assembled electronic products. Unlike Mexico, it has improved its comparative advantage in production of components and finished items of electronic products and other intermediate goods.

In short, Mexico has intensified its static comparative advantage, and the prospect for its rapid growth of exports of manufactured goods is slim. By contrast, China managed to upgrade its industrial structure to achieve dynamic comparative advantage accompanied with rapid growth of export and MVA. How has China performed better than Mexico?

#### *Differences in policies of the two countries*

In nutshell, the answer to the above question is the difference of the two countries in their approach to trade and industrial policies as well as learning. Mexico followed the recommendation of neo-liberals who are proponents of market-led industrialization, rapid and across-the-board liberalization and “learning by trading”. It was assumed that the market would take care of R&D, technological development, learning through trade and FDI. By contrast, China pursued a strategy advocated by neo-developmentalists and the proponents of “capability building theory” who stress gradual and experimental liberalization, functional and targeted government intervention, “learning by doing” and development of capabilities of domestic firms, particularly in technology.



More specifically, unlike Mexico, the Chinese Government targeted some strategic industries, particularly IT industries (in 1986), through SOEs or government support for private firms, while being responsive to market forces. The Government developed an

Table 4: Development of China's National Innovation System

Policy	Dominant feature	Year Established
Key technology R&D programme	Encouraging efforts in key technology	1982
Resolution on reform of S&T system (CCCCP)	Adopting flexible system on R&D management	1985
Sparkle system 5	promoting basic research in agriculture	1985
863 programme	High-tech promotion	1986
Torch programme	High-tech communication, high-tech zones	1988
National S&T achievements spreading programme	Promoting product communication	1990
National engineering technology research centre programme	Technology transfer and communication research	1991
Climbing programme	Promoting basic research	1992
Endorsement of UAEs by SSTCC	promoting university and industry linkage	1992
S&T progress law	Technology transfer, S&T system reform	1993
Decision on accelerating S&T progress (CCCCP)	Promoting URI-industry linkage	1992
Law for promoting commercialization of S&T achievements	Regulating the commercialization of S&T	1996
Super 863 programme	Commercialization, break-through in key areas	1996
Decision on developing high-tech industrialization	Encouraging technology innovation and commercialization	1999
Guidelines for developing national university science park	Accelerating the development of university science parks	2000

Source: Gallagher and Shafaeddin (2010), Based on Xiwei and Xiandong (2007).

institutional framework for Science and Technology (S&T) development, a national system of innovation and learning through R&D and training. It also provided some incentives to MNCs and directed them to specific activities.

A sophisticated system of national innovation, for basic research as well as R&D, was developed as is shown in the following table. The Chinese Academy of Science, Ministry of Information Technology and 4 other ministries were involved in providing guidance to S&T development. Universities, research institutes, public and private enterprises, including foreign firms, were also involved. The 1986 programme of 863, 1988 Torch programme, 1992 “climbing programme”, 1995 “decision on Accelerating Scientific and Technological Progress”, and 1996-2000 and 2001-5 plans targeted development and intensification of technology and provision of training for 6 high-tech industries as well as energy. Some technology parks were also established for the purpose; commercialization of technology was encouraged. By 2003, 18,669 R&D institutes were established. As is shown in Table 5, expenditure on R&D expanded considerably faster in China than in Mexico. The share of business enterprises in total R&D expenditure of China also increased from 43.3 per cent in 1996 to over 68 per cent in 2004.<sup>7</sup> By contrast, in the case of Mexico, it increased only from over 22 per cent in 1996 to about 32 per cent in 2004 (Gallaher and Shafaeddin, Table 5 based on Xiewei and Xiangdong, 2007 and UNESCO, Ibid). Although foreign enterprises have become more active in R&D in China as compared with Mexico (see below), national enterprises took the lead in technological development.

According to the World Bank sources, each year more patents are filed in China than the whole of Latin American countries. More importantly, as late as 2002, 112103 patents were granted to the Chinese firms as against 20,296 granted to foreign firms (MOST, 2006).

Table 5: Expenditure on R&D in Mexico and China (1996-2005)

		Share in GDP	Per capita (\$)
Mexico:	1996	0.31	22.4
	2004	0.41	40.4
China:	1996	0.57	15.7
	2005	1.34	89.6

Note: GDP is in PPP.

Source: UNESCO's online database on Expenditure on R&D.

*The Role of the Government in development capabilities of domestic firms*

In addition to its direct involvement in activities on R&D, the Chinese Government provided a high level of support for tertiary education, training and skill development. For example in 2005, the number of graduates in the field of S&T was over 1000 per million of population; Government expenditure on tertiary education per student was equal to 90 per cent GDP per capita as against 48 per cent for Mexico (World Bank, 2008). In the field of training, the number of graduates from vocational schools increased from 79,000 in 1978 to 1,700,000 in 2005 when there were 198,566 vocational schools in the country.

For developing capabilities of domestic firms, a division of labour was established between private firms and SOEs. The objective of the former was to exploit short-term opportunities for profit-making. The latter concentrated on long-term goals through development of new products while benefiting from “National Science and Technology Diffusion” programme and Export Development Fund (Gallagher and Shafaeddin, 2010; Li and Xia, 2008).

Chinese firms also cooperated with MNCs, particularly in R&D. In the case of Mexico, FDI was negatively correlated with R&D. Maquiladora (foreign) firms provided little linkages with, and technological spill-over to, the domestic firms (Pizarro and Shafaeddin, 2010). Further, a large number of Mexican firms were closed down as a result of their inability to compete with MNCs. For example in the IT industry alone 13 important domestic firms were closed (Gallagher and Shafaeddin, 2010, Table 13 based on Woo, 2001; Rivera, 2002). In the case of China, MNCs have become increasingly involved in R&D as they were

provided incentives and initially made engaged in participation with national firms (Walsh, 2003). Eventually, many MNCs established R&D facilities in China, and the number of foreign firm R&D centres is estimated to have reached 120 to 400 in 2003 (Walsh, 2003: xiv).

As the capabilities of the Chinese domestic firms were enhanced in contrast to Mexico, FDI crowded in domestic investment. But FDI was basically managed not only by directing it to targeted industries, but also by other means. For example, initially, licensing FDI was conditioned to transfer of technology. In 2001 this condition was dropped, but various incentives were provided to MNCs to get them engaged in R&D.

The IT industry was designated as a “pillar” strategic industry of China in 1988 (MOST, 2006). Top MNCs in the IT industry (IBM, HP, Toshiba, and Compaq) were invited to form joint venture with local firms such as Legend, Great all, Tonture and Star. The condition was that the MNCs transfer technology to the joint venture and engage in training. Further, the government decided to invest over \$120 billions in the IT industry by the end of 2005 (Walsh, 2003: 71). As a result around 2005, the IT firms engaged in R&D in China included four foreign-owned, 22 joint venture and 13 privately-owned domestic firms and SOEs (Gallaher and Shafaeddin, 2010, Table 12). As domestic firms developed their own capabilities, supported directly by the government, the MNCs became more willing to transfer technology. By 2000, Legend emerged as the biggest seller of PCs in Asia Pacific region and China. After acquiring IBM in 2005, it became the world’s third largest PC maker (Spooner, 2005). Domestic manufacturers together have dominated 70% of the domestic market for PC (Walsh 2003: 108). Founder, Datang and Huawei became giant firms in laser typesetting and electronic publishing, 3G (TD-SCDMA) technology, and telecommunications, respectively. China has developed its own brand of mobile phone and high definition disc payers (Fan Gao and Watanabe, 2007). IT products

have become the major items of exports; in 2007-8, electronic products constituted the top three export items of the country.<sup>8</sup>

### **VIII. Concluding remarks and policy implications**

Mexico and China have followed different approaches to trade liberalization and industrialization. Mexico, following neo-liberal approach, relied on market forces and has been regarded the champion of trade liberalization. In particular, the Government believed in learning technological development mainly through trade and relying on MNCs. By contrast, China has attempted gradual and experimental approach to trade liberalization, and meanwhile has continued nurturing technological development through measures and policies for developing technological capabilities and skills of domestic firms. It has targeted IT, and a number of other industries; embarked on institutional development; created a national system of innovation for technological development. Thus, it has managed to increase domestic value added in these industries which started, like Mexico, through assembly operations. The country also continued its rapid growth of exports, MVA, and GDP after joining WTO. By contrast, Mexico has achieved little in building up capabilities of domestic firms, increasing value added in exports and growth of MVA and GDP. Furthermore, the country has become more vulnerable to external factors than China is, as is evident during the recent financial crisis, despite the fact that its X/GDP (28.5) ratio in 2008 was far smaller than that of China (37.8).<sup>9</sup> In 2005, Mexico depended on the USA's market for over 85 per cent of its exports and 54 per cent of all its imports. Since the early 2000s many MNCs have been relocating their plants from Mexico to China.

The performance of China is consistent with the literature on capability building theory and views of proponents of neo-developmentalism (Wade, 1990;

Amsden, 2000; Pause and Gallaher, 2008; Chang, 2005; Shafaeddin, 2005a; Lall, 2004).

*Can the experience of China be replicated by other countries?*

China's impressive success in enhancing capabilities of its domestic firms raises a question whether its experience can be replicated by other developing countries. Although, development policy is country specific as socio-economic features of various countries are different, and the experience of the country cannot be generalized, certain lessons can be learned from its experience as compared with that of Mexico. First, trade policy cannot be considered in isolation from industrial and other development policies of a country. In particular, there is a need for industrial policy (Lall, 2004; Rodrik, 2004 and 2007; Wade, 1990 and 2007; Shafaeddin, 2006b; Di Maio, 2008).

Second, capability building of domestic firm is crucial for industrialization, but market alone is not capable of developing such capabilities in various categories of developing countries as well as a country over time. Developing countries can be classified into three categories: those with little industrial capacity, such as low-income African and other least developed countries; countries with some industrial capacity developed during the import substitution era, such as Brazil; those with considerable industrial base which have also penetrated into the international market successfully, such as East Asian NIEs. The main problem of the first group is to establish production capacities; that of the second group is to make existing production capacities efficient and penetrate into international markets. The burning issue for the third groups is to upgrade their industrial structure. Market forces alone are not adequate to deal with any of these issues. Capabilities of Government should

be developed to formulate and implement policies for capability building at the firm level.

Third, trade and industrial policies should be not only development oriented and country specific, but also selective, mixed, flexible, performance-linked, dynamic and predictable (Shafaeddin, 2005c). The flexibility and dynamism of trade policy, in particular, characteristics of trade policy can be exemplified by change in the structure of tariffs during the course of industrialization as shown in the self-explanatory table below.

Table 6: Evolution of average tariffs for various groups of industries at different phases of industrialization

Phase	RB&LI	LT	MT	HT	Manufactures (Average)
I	20	0	0	0	5
II	10	40	0	0	12.5
III	0	30	50	0	12.5
IV	0	20	40	40	25
V	0	10	30	40	20
VI	0	0	15	25	10
VII	0	0	5	15	5
VIII	0	0	0	0	0

Notes: RB: Resource-based industries  
 LI: Labour -intensive industries  
 LT: Low-technology-intensive industries  
 MT: Medium technology-intensive industries  
 HT: High technology-intensive industries

Source: Akyuz (2005: 27).

Trade and industrial policies should be also supplemented by development of what I call “non-price factors”, and development of agriculture - in order to enhance the supply of wage goods. Further, provisions of incentive should be linked to performance requirement of firms; i.e., incentive be provided in exchange for performance, and support should be time bound and temporary. FDI should be also managed and targeted to areas which can contribute to development objectives of the host country.

Fourth, regarding “non-price factors”, the process of industrialization requires “COU-Ps-INs” (Shafaeddin, 2005c and 2010b). COU stands for: Create capacity, Operate it efficiently and Upgrade the industrial structure. To do so, incentives are necessary but not sufficient. There is a need for a number of INs and Ps. The INs include Investment, Input, Infrastructure, not only transport and communication but also other facilities such as marketing channels, distribution network etc., Institutions, Innovation and Information (Streeten, 1987). We use information here in its wide sense of the term which includes knowledge, science, R&D as well as market information which requires investment in human resources through education, skill development and training.

The Ps stands for Political stability, Predictability of policies, Participatory Politics, Pressure for Performance, Public-Private Partnership, respect for Property right and last, but not least, Production capabilities of local firms in the value chain and Productivity. Here, we use production capabilities in a wider sense than supply capabilities, thus it also includes such factors as organizational issues, which also contribute to productivity, marketing etc.

There are also two INs which are to be avoided. These are instability in exchange rates and inflation, which are largely related to agricultural development, stability in exchange rate, control of capital flows and macroeconomic policies.

Development of food production and other wage goods is essential, particularly during the early stages of industrialization, in order to ease the pressure on the balance of payments and the inflationary tendencies, thus contributing to competitiveness of manufactured goods in the internal and international market.

Of course, implementing a trade policy framework outlined above is constrained by WTO rules. Nevertheless, there is still some room to manoeuvre under



WTO rules, particularly for least developed countries. This is so, provided developing countries do not lose their remaining policy autonomy through bilateral and regional agreements (Rodrik, 2004; Di Maio, 2008; Amsden, 2000) and do not submit to conditionalities of IFIs' proposals of developed countries through NAMA and particularly EPA (Shafaeddin 2010a). "What constrains sensible industrial policy is largely the willingness to adopt it, not the ability to do so" (Rodrik, Ibid: 32).

There is also a need for some changes in the WTO rules to make them development friendly. For this purpose, as well as negotiation through EPA, NAMA and other trade agreements, developing countries should follow a bottom-up approach rather than a top-down one. In other words, rather than going to the negotiating table, and agreeing with some issues without having been clear about their own trade and industrial policies (as they have done so during the Uruguay Round), they should be clear about their trade and industrial policies before going to the negotiating table (Shafaeddin, 2005c). The aftermath of the recent global economic crisis and intensive intervention of developing countries in the market provide a good opportunity for developing countries to bring up the limitations of market forces in the process of industrialization and development, and argue in favour of different trade and industrial policies, thus a different international trading system. Neither the WTO rules nor the static theory of comparative cost theory is god-given.

## Notes

<sup>1</sup> This and the following section are based mainly on Shafaeddin (2005a:156-162).

<sup>2</sup> This section is based mainly on Shafaeddin (2006c and 2009).

<sup>3</sup> Also, see the various literatures of the World Bank and IMF, particularly that of the World Bank (1987 and 1993). For a brief survey see Shafaeddin (2006a).

<sup>4</sup> For a survey see Shafaeddin (2006a).

<sup>5</sup> It is interesting to note that in an unusual recent paper, a staff member of the IMF also has concluded that in 24 cases, out of 71 “so-called” export-led growth episode, “are more likely to be characterized by ‘growth driving exports’ (Yang, 2008: 1).

<sup>6</sup> Based mainly on Gallagher, K.P. and M. Shafaeddin (2010).

<sup>7</sup> The total number of people engaged in this activity increased from 804,000 in 1996 to 1,152,617 in 2004, and the share of the business community in the number of personnel engaged increased from 46 per cent in 1996 to 60 per cent in 2004 over the same period (UNESCO, Ibid)

<sup>8</sup> Based on UNCTAD (2009, Table 3.2.D).

<sup>9</sup> Ibid.: Table 8.3.1.

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