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STRUCTURE OF NOMINAL TARIFF RATES IN INDIA

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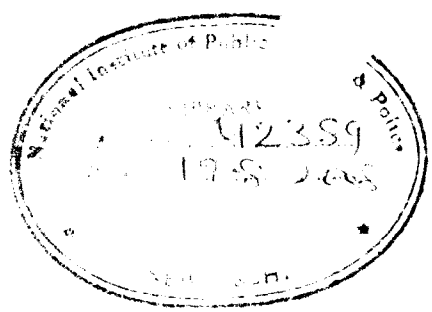

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FOREWORD

This is the first part of a comprehensive study on India's tariff structure and its effect on industrial development sponsored by the Ministry of Industrial Development, Government of India.

The study was planned in three parts. The focus of the first part is on the pattern of "nominal" and "realised" rates of customs duties. This part also deals with the concepts relating to tariff, the outline of the Indian tariff system, and analysis of tariff rates with quantifiable exemptions. A preliminary enquiry into the political economy of tariff protection is included in this part in an attempt to explain the differences in the nominal tariff rates across industries.

Such a study was felt needed as the rates of duties prescribed in the tariff structure do not always reflect the actual incidence of the duties because of exemptions and concessions allowed from time to time and information are of not available on these aspects for any recent year. The present study provides for the first time a detailed picture of the "realised" or actual incidence of customs duties for the 1980s covering 99 chapters of the tariff.

It is hoped that, the results presented in this painstaking study will be useful in practical work of ministries involved in the rationalization of tariff structure.

The report presented here was done by a team lead by Dr. B. Goldar, Dr. A.V.L. Narayana and Ms. Hasheem N. Saleem. Research Assistance for the project was provided by Mr. S. Arya and Mr. M. Khan. Discussions with Mr. B.V. Kumar, Director-General National Academy of Customs, Excise and Narcotics and data provided by the staff members of the Academy have greatly enhanced the quality of the report. Special thanks are due to Dr. Rakesh Mohan, for the keen interest he has shown in the project.

Amaresh Bagchi
Director

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STRUCTURE OF NOMINAL TARIFF RATES IN INDIA

1. Introduction

1.1 Trade policy, and in particular, tariff policy exerts a major influence on the process of development of an economy. The structure of tariff rates influences resource allocation among different sectors of the economy through the system of incentives it creates. Tariff policy also influences investments, skill formation, learning-by-doing and technological progress in the economy. Another question with which tariff policy is concerned is that of raising resources for the government for meeting its expenditure, especially development expenditure. All these make a study of tariff structure very important.

1.2 There have been a number of studies, official and unofficial, on the structure of tariff rates in India.[1] Some of the studies have estimated and analysed nominal tariff rates and effective rates of protection for all the major sectors of the Indian economy, while others have examined the extent of protection accorded to specific sectors of the economy by the structure of tariff rates (and other interventions in international trade). However, most of the available studies are dated, and the recent ones do not have comprehensive coverage.[2]

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1. These include Bhagwati and Desai (1970), Bhagwati and Srinivasan (1975), Panchamukhi (1978, 1986), Nambiar (1983), World Bank (1984), ICICI (1985) and BICP (1988).

Also, in these studies the authors have addressed themselves to a narrow range of issues relating to the tariff structure. In particular, the effect of the tariff structure on industrial performance has not been adequately analysed. Therefore, a major, comprehensive study on India's tariff structure is called for.

1.3 This study on India's tariff structure and its effect on industrial development has been sponsored by the Ministry of Industrial Development. The main objectives of the study are:

(a) Examination of the pattern of customs duty rates, statutory and realised, during the 1980s at the level of broad groups and detailed product classes;

(b) Analysis of the degree of protection accorded to Indian industries by the tariff structure, based on estimates of effective rate of protection, and

(c) Examination of the effect of effective protection on industrial performance reflected by indices like profitability, growth and export intensity.

This is an interim report of the study covering the first objective of the study mentioned above.

1.4 The report is organised as follows: Section 2 discusses some concepts relating to tariff. Section 3 provides an outline of the Indian tariff system. Macro dimensions of customs duties are discussed in Section 4. Analysis of tariff rates with quantifiable exemptions is presented in Section 5.

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2. One notable exception is a recent study of the World Bank (1989) in which tariff structure and the level of protection enjoyed by different industries have been analysed.

Analysis of realised rates of customs duty is presented in Section 6. Results of a preliminary enquiry into the political economy of tariff protection are presented in Section 7. In Section 8, a comparison is presented between tariffs rates in India with those in some other developing countries. The main findings of the study are summarized in Section 9.

2. Concepts

2.1 The terms `tariff' and `customs duty' are generally used interchangeably to denote a form of taxation on imports of commodities. Tariffs or customs duties are imposed the world over to subserve several objectives. The three main objectives are : (1) protecting domestic industry from imported goods with which it competes, (2) raising revenue for the government, and (3) improving the country's balance of trade and thereby the balance of payments position. In developing countries, tariffs or customs duties are often pitched at a high level with all these three objectives in view.

2.2. From the point of view of incentives for domestic industries, it is important to study how far domestic prices of industrial products are raised above the world prices by the imposition of tariffs. In this connection, it should be noted that tariff is but one of the many factors that drive a wedge between domestic and international prices. Thus, the difference between domestic and world prices of a commodity may be more than the amount of tariff duty, because there are quantitative restrictions on imports of that commodity. On the other hand, the difference may be less than the amount of tariff duty, because competition among domestic producers keeps the price low (in relation to what tariff permits) or there are government regulations on the price of that commodity. Also, the potential

protection arising from tariffs may not be fully utilised due to smuggling, under-invoicing of imports or corruption in the customs system.

2.3 The rate of tariff or customs duty fixed by the government on imports of a commodity may be termed as nominal tariff rate to distinguish it from implicit tariff rate which is defined as the ratio of domestic to international price of the commodity. Implicit tariff rate reflects both the effect of customs duties and the effect of various other factors mentioned above, including quantitative restrictions on imports. A study of the structure of implicit tariff rates is obviously more interesting than a study of the structure of nominal tariff rates. Indeed, in many empirical studies on protection to domestic industries, the analysis is based on estimated implicit tariff rates. However, one serious difficulty in working with implicit tariff rates is that these are very difficult to estimate satisfactorily. For computing implicit tariff rates one requires data on prices of commodities in domestic market and prices of these products or very similar products in international markets, which are, needless to say, hard to obtain. Nominal tariff rates, on the other hand, are obtained from published government sources or derived from data on actual imports and actual customs duty collection. The ratio of customs duty collection to the value of imports of a commodity is generally called the collection duty rate or the realised duty rate.

2.4 In this report, we examine only the structure of nominal tariff rates and do not go into the aspect of implicit tariffs. Thus, the study is concerned with protection to industries accorded by the tariff system and no attempt is made to quantify non-tariff protection. Also, we do not analyse the effective rates of protection which take into account tariff

rates on both output and inputs of a production activity and provide the net incidence of the protection system on domestic production activities. This will be undertaken later in the second phase of the study.

2.5 For analysing the structure of tariff rates, one has to take averages of tariff rates for different commodities. One may take simple averages or weighted averages. Again, one may take imports as weights or domestic production as weights. It has been argued in the literature that both import-weighting and production-weighting leads to some biases in aggregation. If imports are used as weights, the average tariff rate tends to get underestimated since high tariffs are normally associated with low imports. If domestic production is used as weights, the average tariff rate tends to get overestimated since high tariffs have a tendency to be associated with high levels of domestic production. Unweighted averages are free from these biases, but suffer from the limitation and these may give undue weights to unimportant items. It has been suggested, therefore, that domestic availability or supply (imports plus domestic production) should be used as weights.

2.4 Data on production of Indian industries are not available at sufficiently disaggregated level compared to the level of disaggregation at which tariff rates and import data are available. There is also a serious problem of matching industrial classification with trade classification. Therefore, in the study, simple averages and import-weighted average have generally been computed. Only in some cases production weights have been used.

3. India's Tariff System

3.1 The following types of customs duties are levied by the Union government on goods imported into India:

(a) Basic Customs Duty: Under Section 12 of the Customs Act, 1962, all goods imported into India are chargeable to a duty. This duty is popularly known as basic customs duty. The rates of duty are indicated in the First Schedule to the Customs Tariff Act, 1975.

(b) Auxiliary Duty of Customs: Under Section 4 of the Finance Act, an auxiliary duty of customs is leviable on all goods imported into India.[3]

(c) Additional (countervailing) Duty of the Customs: Under Section 3(1) of the Customs Tariff Act, 1975, an additional duty is leviable on goods imported into India. This duty is popularly known as countervailing duty. The rate of this duty is equal to the excise duty on like articles if produced or manufactured in India. If the rate of this duty is on ad valorem basis, the value for this purpose is taken as the sum of the value of the imported article and the customs duty (basic and auxiliary) on it. Also, under Section 3(3) of the Customs Act, 1975, an additional duty is leviable on certain specified articles in order to counter-balance the excise duty leviable on any raw materials, components and ingredients going into the production of those articles in India.

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3. Basic and auxiliary duty have the same tax base. Thus these can be added.

3.2 The basic duty rates specified in the First Schedule of the Customs Tariff Act, 1975 are often called the scheduled rates of basic customs duty. There are two categories of scheduled rates, namely, standard rate and the rate applicable to preferential areas. The preferential areas are known through separate notifications and they are generally governed by specific agreements, such as the Bangkok agreement.

3.3 The standard rates of basic customs duty are generally ad valorem. Only in a small proportion of cases, specific rates or combination of ad valorem and specific rates are applicable. The range of ad valorem rates of standard basic customs duty is from 0 to 300 per cent. The rates of 100%, 60% and 40% are very common. For a majority of items, one of these three rates is applicable. Thus, at the first sight, the structure of basic customs duty rates appears quite simple. But, in reality, the system of basic customs duty is very complex. This is so because the actual duty rates applicable on different goods, which are called the effective duty rates, are determined by the various exemption notifications issued by the government from time to time.

3.4 Because there are a large number of exemption notifications, the structure of effective basic customs duty rates is quite different from that of the standard basic customs duty rates. Basically, there are four types of exemption notifications:

(a) those providing customs duty exemption, by the same amount, to all items falling under tariff heading at a disaggregated level, say at 4-digit BTN code or 6-digit HS code (discussed later);

(b) those providing customs duty exemption to only some items falling under a tariff heading at a disaggregated level (4-digit BTN or 6-digit HS);

(c) those providing customs duty exemption to a commodity if it is used for a specified purpose;

(d) those providing customs duty exemption to a commodity if it is imported from a specified country.

Quantification of the first type of exemption notifications is easy, but for the second, third and fourth types, it is difficult. The second type of exemption notifications makes the customs duty rate differ among different items belonging to the same tariff heading at a highly disaggregated level, while the third and the fourth types make the tariff rate for a commodity differ according to use and source of supply.

3.5 Auxiliary duty of customs is announced on annual basis along with the Budget. The general rate of auxiliary duty of customs was 20 percent for 1980-81, 25 percent for 1981-82, 30 percent for 1982-83, 35 percent for 1983-84, 40 percent for 1983-84 to 1987-88 and 45 percent for 1988-89 and 1989-90. As in the case of basic duty rates, there are exemption notifications in respect of auxiliary duties. One notification specifies slab rates of auxiliary duty according to the basic rate of customs duty leviable. Also, it specifies auxiliary duty rates for petroleum products and for items which are subject to basic customs duty at specific rate or at a combination of specific and ad valorem rates. In addition, there are many notifications exempting a part or the whole of auxiliary duty in respect of items specified.

3.6 It has been noted above that all goods imported into India are liable to pay additional (countervailing) duty of customs equal to the excise duty for the time being leviable on the like article produced or manufactured in India. In this case too, various notifications exempt wholly or partly additional customs duty leviable on specified commodities.

Classification

3.7 The main purpose of the Customs Tariff Act, 1975 was to replace the First Schedule of the Indian Tariff Act, 1934 by a new schedule based on Brussels Tariff Nomenclature (BTN). The tariff schedule continued to be based on BTN till 1985-86. From 1986-87, the Harmonised System (HS) has been adopted.

3.8 In Brussels Tariff Nomenclature (BTN), also known as Customs Co-operation Council Nomenclature (CCCN) there are 1097 heading arranged in 99 Chapters which are themselves grouped in 21 sections. The grouping of the headings in Sections and Chapters is based on the general principle of classifying together, in the same group, all goods obtained from the same raw material and arranging them progressively, i.e., starting from the raw materials and processing to the finished products and articles. This principle has, however, been relaxed for a industry which uses a variety of raw materials. Each BTN heading is identified by a four-digit number: the first two digits represents the Chapter in which the heading appears, while the last two indicate its position in the Chapter.

3.9 While India's import tariff schedule in use till 1985-86 was based on BTN, the individual headings of BTN were merged to accord with the pattern of India's foreign trade. Where the BTN classification was found to be too detailed from the point of view of India's requirements, such headings were

merged into a single heading, but care was taken to ensure that these are adjacent headings only. In a number of headings (merged or original headings of BTN), separate sub-headings were created to provide for differences in rates of duty or to specify individual articles of importance in the import trade. To give an example, BTN headings 83.01 to 83.15 were merged into one heading 83.01/15. But, under this heading, three sub-headings were created 83.01/15(1), 83.01/15(2) and 83.01/15(3). Evidently, India's tariff schedule, used till 1985-86, did not correspond exactly to the BTN classification.

3.10 With the adoption of the Harmonised System from 1986-87, India's tariff schedule has become more detailed. For about 5 thousand 6-digit HS codes, tariff rates have been specified. The Chapter scheme has broadly remained the same. But, a number of items have been shifted from one Chapter (under BTN) to another (under HS).

Non-Tariff Protection:

3.11 An an instrument of protection, the Indian tariff system has been playing only a secondary role; much more important have been non-tariff measures of protection, including the import licensing system, canalization, the "actual user" policy, phased manufacturing programmes that provide for progressive import substitution, industrial licensing and government purchase preferences given to domestic producers.[4] How import licensing system and canalization regulates imports and protects local industries is obvious and does not require any discussion, except to note that more than half of the imports are canalized and only a small part of the items imported is free from the import licensing system. An additional barrier to the

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4. For discussion on these non-tariff protection measures, see India, An Industrialisation Economy in Transition, World Bank, 1989, Pp. 126-29.

flow of imports has been created by the "actual user" policy which disallows imports for resale by excluding intermediaries from importing. Phased Manufacturing Programmes (PMPs) and their accompanying "List Attestation" procedures are another non-tariff barrier, since under a PMP the concerned firm agrees to progressively replace imported materials, parts and components (including those under OGL) with materials, parts and components produced in-house or by other Indian firms. To ensure the implementation of the agreement, the import of all such materials, parts and components requires prior clearances by the sponsoring authority for the industry. The industrial regulatory system also acts as a non-tariff barrier since projects involving high foreign exchange outlay get less favourable treatment. Thus, the capital goods committee may not approve applications for industrial license for such projects or may require local sourcing of particular machinery and equipment.

3.12 Some comments on the interaction between the tariff system and non-tariff measures would be in order here. It should be noted first that many of the tariff duty exemption notifications are such that these enable particular industries or even individual firms to obtain their intermediate input and capital equipment at lower cost than others. As a result of such specific exemptions, the same product is frequently subject to varying import duty rates according to which firm or industry uses it, and for what purpose. This opens up profitable opportunities for reselling products imported with low duties to buyers who can only import with high duties or must buy in the local market at protection inflated prices. Detailed controls and checks are therefore necessary to prevent this kind of arbitrage. Clearly, for this reason, the administration of the customs tariff has to rely to a large extent on the import licensing controls and the "actual user" policy. Secondly, import licensing and other such restrictions on imports gives

rise to economic rents to be earned by persons who are permitted to import. Thus, tariff duty acts as an instrument in the hands of the government to mop up partly such economic rents. Finally it must be recognised that although there are various restriction on imports, Indian entrepreneurs do get around the controls, especially for imports of intermediate and capital goods and therefore the tariff system functions as a second line of defence for domestic industries producing import-substitutes.

Tariff and Domestic Indirect Taxes

3.13 Domestic indirect taxes (notably excise, sales tax and octroi) interact with the customs duty in a complex manner to affect the nominal protection that is available to local producers and the nominal protection faced by buyers. Since no sales tax is paid by purchasing firms who import on their own account while it has to be paid by Indian manufacturers competing with these imports, producer's nominal protection is less than the rate of customs duty (basic plus auxiliary). The higher the rate of sales tax, the lower is the level of protection to domestic producers given the rate of customs duty. For example, if the rate of customs duty is 140 percent, the rate of excise (= countervailing) duty is 20 percent and the rate of sales tax is 4 percent, the rate of protection to domestic producers is about 130 percent, which is 10 percentage points below the rate of customs duty. If the rate of sales tax is taken as 10 percent, the extent of protection to domestic producers goes down to 118 percent.

3.14 From the point of view of users, the extent of protection depends on both customs duty and countervailing duty. The effect of the countervailing duty depends on whether or not the user can get MODVAT offset. If MODVAT applies as in the case of material inputs used by excise licensees, user's protection is

the same as the rate of customs duty and therefore higher than producer's protection due to the effect of sales tax. If MODVAT does not apply (as in the case of capital goods) user's nominal protection is generally much higher than producer's nominal protection. To explain this point, let us consider again the example given above. Let the c.i.f. price of the imported commodity be Rs.100. With basic duty of 100%, auxiliary duty of 40% and countervailing duty of 20%, the cost of the imported article including customs duties is Rs.288. Thus, if MODVAT offset is not available, the user pays 188% more than the border price of the commodity. The domestic producers, on the other hand, receives a price, net of domestic indirect taxes, of Rs.240 if there is no sales tax, and Rs.218 if there is sales tax of 10%. Thus, the producer protection is only 140% with no sales tax and 118% with 10% sales tax. If MODVAT offset is available for the user, then the effective price of the commodity for him is Rs.240, i.e., he pays 140% more than the border price. In this case "user's protection" is closer to the extent of domestic producer's protection.

4. The Level of Import Tariffs in India: A Macro View

4.1 In this section, we consider the issue of import tariffs that have been imposed and revenue generated therefrom in India since 1974-75. We provide a discussion on the level of their incidence in India as compared to other countries in which indirect taxes play vital role. A macro view is also sought to be taken as to whether the level of import incidence observed in the Indian case has been as what it should be. The idea is to compare and contrast the Indian case with such other countries which had adopted more or less the same type of development strategies in the process of their industrial development. Furthermore, the role of customs duties will also be examined in this section as a source of revenue for the Central Government.

4.2 At t

duties in India play an important role as a fiscal instrument to mobilise revenue and also as an economic policy instrument to provide the intended level of protection to the domestic industries from import competition. India has pursued the path of self-reliance since independence by allowing only essential imports and following the strategy of import substitution. Thus the process of industrial development has been characterised by a plethora of tariff and non-tariff barriers to the import flows into India. The well known economic arguments for protection as advanced by Gunnar Myrdal and Raul Prebisch can be found in the seminal papers by Balassa (1980, 1982, 1989) on the strategies for industrialisation. It was suggested by Balassa that the process of industrial development of a country may be conveniently divided into two stages of import substitution. In the first stage of import substitution, Balassa points out, "with the exception of Britain at the time of the Industrial Revolution, and more recently, Hong Kong, all present-day industrial and developing countries protected their incipient manufacturing industries producing for domestic market. A number of present-day developing countries applied high tariffs or quantitative restrictions that limit or even excluded competition from imports."[5] They are characterised by high rate of protection with overvalued exchange rates. Balassa's study indicated that such high rates of protection and import prohibition, as in the case of Ghana, encouraged inefficient, high cost production in manufacturing industries. The second stage of import substitution is marked by replacement of intermediate and capital goods as well as consumer durables by domestic production. Thus, a high degree of protection is accorded to domestic industries on a continuing basis. But, inter-industry linkages assume greater

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5. Balassa (1980, p.7).

importance with the industrial growth at this stage. In the second stage of import substitution, the country may have an option to choose a particular type of industrial development strategy, which he classified as (a) inward looking and (b) outward-looking. At this stage, the achievement of high industrial growth rates requires the country to export manufactured goods. That means, in the case of outward-looking development strategy, the country would look outward and industry would grow by expanding its production mainly for exports. Alternatively, industrial growth may be accomplished at higher rates by catering largely to domestic market if there exists sufficient demand at home, in which case the country would look inward and there will be discrimination against exports. In either case, the objective of import substitution is pursued using high level of import tariffs and other quantitative restrictions on imports. Considering the level of industrial development that has taken place in India during the past one and half decades, it may be conveniently stated that a major reason for the high incidence of tariffs in India, as the later discussion will bring out, seems to be its preponderance over the objective of saving scarce foreign exchange through import substitution and also its continuing efforts to be self reliant. It is therefore, appropriate to place India in the group of such countries which adopted import substitution policies which are more inward-looking than outward-oriented. However, since not all imports have been substitutable by domestic production and particularly because the country has lacked certain natural resources like petroleum and edible oils in sufficient quantity, it became necessary for India to generate the required foreign exchange reserves for meeting the import bill on such products. Thus, exportation has more often been a necessity for earning foreign exchange than a deliberate plan strategy to achieve higher economic growth.

4.3 Growing budget deficit has also been another major reason to look for customs as a main of source revenue. Customs tariff is a convenient source of revenue because it is the first point tax on goods entering into the country, and also the most hidden form of taxation. Since customs tariffs have also been used as a major source of revenue generation in addition to protection, it culminated in building up of high tariff walls against imports into India vis-a-vis the tariff levels imposed by other developing countries under comparison. This revenue aspect singles out India from the rest of the world in so far as tariff levels are concerned.

4.4 As can be seen in Table 4.1, the share of customs duties in total taxes has grown steeply from 14 to almost 24 per cent between 1974 and 1990, while that of central excise has declined from 35 to about 30 per cent during the same period. More importantly, the share of direct taxes showed a marked decline from 22 per cent in 1975-76 to less than 14 per cent in 1989-90. Thus over time, customs revenue grew at a greater rate than most of other taxes in India. Its importance as a source of revenue is seen more (Table 4.2) clearly from the fact that all customs duties put together generated revenue worth about Rs. 18,000 crores in 1989-90 (budget estimate) while these were contributing a smaller sum of about Rs. 1236 crores in 1974-75, resulting in roughly a ten-fold increase over a period of fifteen years.

4.5 In India, customs duties consist of three components namely (i) basic customs (ii) auxiliary and (iii) additional duties, also referred to as countervailing duties on manufactures which are produced in India and subjected to Union excise duties. All the three types of customs revenue have rapidly increased over time. Table 4.2 shows revenue contribution of different customs duties in India since 1974-75. It is found that revenue

grew more rapidly after 1980-81 than earlier. Considering the auxiliary duty component, its revenue increased from Rs. 300 crores in 1980-81 to over Rs. 1240 crores 1983-84 and more than Rs. 2500 crores in 1985-86, i.e, the revenue from this component increased in multiplies, by more than 8 times. Its share in total customs revenue has thus increased to 27.6 per cent by 1985-86 from a meagre 9 per cent in 1980-81.

4.6 In contrast, basic customs and additional (countervailing) duties lost their shares in total customs revenue during the 1980s. The share of basic customs fell from about 64 per cent in 1980-81 to 56.4 per cent in 1985-86, while that of countervailing duties decreased from 27 to around 16 per cent. However, in absolute terms, the revenue contribution from these two components also witnessed an appreciable increase since 1980-81. The revenue from additional duties rose at a higher rate from about Rs. 985 crores in 1980-81 to Rs. 2529 crores in 1985-86 than the basic customs revenue which increased slowly from Rs. 2107 crores to Rs. 5164 crores in the same period. The foregoing revenue scenario seems to suggest that customs revenue has shown increasing trends in the recent past mainly due to increase in auxiliary duties. It is worth noting that other factors such as India's growing imports have also contributed to an increasing trend in customs revenue. Rapid growth of imports is traceable in turn to a pick up in the growth rate of the economy, liberalisation of import policy and depreciation of the rupee which has pushed up the rupee value of imports.

4.7 Consider the average realised incidence of import duties which has shown an increasing trend in India (Table 4.3). Upto 1980-81, the import duties as a percentage of total import value (CIF) hovered around 27 per cent, whereas by 1987-88 it has steeply gone up to more than 57 per cent. Making a comparison with other countries that had followed import substitution

strategies in their industrial development (Turkey, Brazil, Mexico), we observe that the import duty incidence in India is far high. In Brazil, it was hardly 10.7 per cent in 1975-76 and only 1.03 per cent in 1986-87. In Mexico, it was about 13.5 per cent in 1975-76 and 8.3 per cent in 1986-87. In Turkey, it was higher at 26 per cent in 1977-78 but nose-dived to about 3 per cent by 1987-88. In contrast, the countries such as Pakistan and Mynmar (Burma) have witnessed high incidence of import duties. These ranged between 17 and 32 per cent in the case of Pakistan and between 15 per cent and 54 per cent in the case of Mynmar. Other developing countries like Sri Lanka, Thailand, Philippines, Ghana, Kenya, Cameroon etc. have had low levels of import duty incidence ranging between 5 and 20 per cent during the past one and half decades (for details see Table 4.3).

4.8 Considering the tax GDP ratio (Table 4.4), we notice that the level of taxation is not the same in the countries under comparison. In India, Turkey, Pakistan, Thailand, Cameroon, Brazil and Mexico, the tax-GDP ratio varied between 10 and 20 per cent. However, in some other countries namely, Indonesia, Sri Lanka, Liberia, Kenya and Botswana, the tax-GDP ratio was much higher than that in India ranging between 19 and 40 per cent. Table 4.5 provides a comparative picture of indirect tax shares in total tax revenue. For convenience, we have grouped the countries into three categories. The first category of countries witnessed less than 50 per cent share of indirect tax in their respective total tax revenue, the second group of countries between 50 and 70 per cent, and the third group have a share of 70 per cent and above. We notice that the role of indirect taxes is crucial in the last group of countries, as they have heavily relied upon indirect taxes as a major source of revenue. India belongs to this category along with Pakistan, Mynmar, Philippines, Thailand, Ghana and Mexico. Thus, comparison of India's tax structure with these countries is more relevant. In

Indonesia, Turkey, Brazil, Botswana, Papua Guinea etc., however, the share of indirect tax in total tax revenue was less than in India and varied between 30 and 50 per cent during the past decade and half. A general pattern observed is that indirect taxes have played increasingly important role and their share in total tax revenue has been on the increase in the period between 1974-75 and 1987-88, in all these three groups of countries except in Botswana, Cameroon, Brazil and Thailand, where direct taxes have assumed greater role in terms of their revenue shares.

Table-4.1

Composition Of Tax Revenue In India, 1974-75 to 1989-90(Percentage)

Year	Direct Taxes	Indirect Taxes				Indirect Taxes	Total Taxes
		Custom	C.Exice	Sale Tax	Other		
1974-75	19.88	14.45	35.03	17.16	13.48	80.12	100.00
1975-76	22.29	12.69	29.91	17.74	17.37	77.71	100.00
1976-77	20.96	12.60	34.23	18.84	13.37	79.04	100.00
1977-78	20.25	13.78	33.60	18.70	13.67	79.75	100.00
1978-79	18.36	15.61	34.56	18.37	13.10	81.64	100.00
1979-80	17.51	16.54	33.99	18.67	13.29	82.49	100.00
1980-81	16.47	17.18	32.76	20.25	13.34	83.53	100.00
1981-82	17.12	17.81	30.74	20.97	13.36	82.88	100.00
1982-83	16.49	18.79	29.59	20.80	14.33	83.51	100.00
1983-84	15.73	17.68	32.36	20.60	13.63	84.27	100.00
1984-85	14.88	19.66	31.14	20.46	13.86	85.12	100.00
1985-86*	14.45	22.02	29.94	20.21	13.38	85.55	100.00
1986-87*	13.91	23.16	29.21	20.14	13.58	86.09	100.00
1987-88*	13.13	24.05	28.83	20.38	13.61	86.87	100.00
1988-89*(R.E)	13.76	24.32	28.47	20.59	12.86	86.24	100.00
1989-90*(B.E)	13.59	23.51	29.86	19.87	13.17	86.41	100.00

* Total tax revenue comprises, direct taxes & indirect taxes of Center, all States & U.Ts

Source:- Indian Econnomic Statistics, Public Finance,Ministry Of Finance

Table-4.2

REVENUE FROM CUSTOMS DUTIES IN INDIA, 1974-75 TO 1985-86 (Rs.crore)

YEAR	Total Rev.	NR after refund	Value of refund	Value of Addl. Duties	Value of Auxr. Duties	Value of Basic Duties	Share of Addl. Duties	Share of Auxr. Duties	Share of Basic Duties
1974-75	1235.92	1195.72	40.20	264.53	159.59	811.80	21.4	12.9	65.7
1975-76	1315.05	1252.79	62.26	298.09	164.94	852.02	22.7	12.5	64.8
1976-77	1596.50	1489.45	107.50	169.04	113.14	1314.32	10.6	7.1	82.3
1977-78	1645.20	1549.50	95.70	375.01	192.00	1078.19	22.8	11.7	65.5
1978-79	2197.74	2101.01	102.95	527.82	227.71	1442.21	24.0	10.4	65.6
1979-80	2852.00	2749.05	96.73	711.64	286.11	1854.25	25.0	10.0	65.0
1980-81	3299.85	3137.60	162.25	894.02	298.59	2107.24	27.1	9.0	63.9
1981-82	4255.31	4077.03	178.28	974.51	551.54	2729.26	22.9	13.0	64.1
1982-83	5043.43	4856.85	186.49	1058.16	893.12	3092.06	21.0	17.7	61.3
1983-84	5204.76	5049.14	155.62	1359.32	1240.87	2600.19	26.1	23.8	50.0
1984-85	7080.72	6834.46	246.26	1253.53	1845.25	3981.94	17.7	26.1	56.2
1985-86	9152.28	8942.31	209.97	1458.50	2529.25	5164.53	15.9	27.6	56.4
1986-87(B)	9819.70	9729.70	90.00	-	-	-	-	-	-
1987-88	13257.56	13114.76	142.80	-	-	-	-	-	-
1988-89	15546.25	15365.52	180.73	-	-	-	-	-	-
1989-90(B)	17686.76	17541.76	145.00	-	-	-	-	-	-
1990-91(B)	20375.72	20150.72	225.00	-	-	-	-	-	-

Sources:-

1- Statistic Of The Custom & Excise Revenue Collection Of The Indian Union (DGCIS)
2- Receipts budget, Govt. of India

Table-4.3

Import Duty Incidence: A Comparison Of Selected Countries*

country	1974-75	1975-76	1976-77	1977-78	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84	1984-85	1985-86	1986-87	1987-88
GROUP-I														
Srilanka	6.42	9.60	8.44	9.62	10.07	8.61	7.60	6.05	8.88	14.03	14.97	17.25	18.25	14.98
Thiland	12.46	12.47	12.55	13.02	11.29	10.05	10.09	10.08	10.80	12.51	12.18	12.55	10.93	10.60
Philipines	19.09	12.74	13.49	12.37	10.64	11.75	10.82	11.84	13.08	13.14	13.12	11.34	16.29	-
Ghana	11.77	9.18	10.72	13.79	15.14	11.63	13.88	24.44	12.36	11.39	11.62	14.12	8.14	7.71
Liberia	11.74	8.91	9.51	12.48	13.90	11.09	13.81	13.09	10.15	14.32	17.58	19.67	12.41	-
Papua New Guinea	7.00	13.57	10.50	7.64	7.47	6.91	7.42	8.90	9.35	10.28	10.32	11.83	13.04	-
Bostswana	15.45	8.50	16.29	17.03	18.90	19.00	15.67	16.26	19.45	17.17	13.55	14.43	14.90	-
Kenya	-	-	-	15.76	16.35	10.69	15.65	20.40	18.25	15.60	12.66	13.79	15.31	-
Cameroon	12.19	12.83	12.81	21.13	11.74	10.74	11.31	13.54	13.79	18.06	13.34	13.33	13.90	-
Brazil	8.89	10.70	9.55	8.83	7.40	7.24	6.62	6.62	5.49	5.40	6.26	2.81	1.03	-
Mexico	12.83	13.53	8.04	8.60	10.45	10.53	10.18	9.96	7.65	5.98	8.21	8.85	8.33	5.19
Indonesia	8.84	10.87	11.14	9.98	7.06	6.60	6.39	4.68	3.75	3.70	5.33	6.98	-	5.33
Turky	14.44	21.58	19.74	26.03	10.92	5.87	4.98	-	5.02	4.34	3.91	3.60	3.49	2.93
GROUP-II														
Pakistan	17.46	20.50	25.08	24.74	24.51	22.89	24.34	22.68	25.92	25.68	24.39	31.75	-	-
Mynmar(Burma)	26.04	27.76	25.28	19.53	21.62	16.32	18.59	40.81	53.19	53.46	47.05	42.27	39.35	-
GROUP-III														
India	27.26	28.54	24.11	27.28	31.29	10.72	27.06	31.54	35.77	35.48	41.27	47.50	57.26	61.72

* Import duties as percentage of total import value (CIF)

Source:-

1. International Financial Statistics (IMF)
2. Government Finance Year Book (IMF)
3. Recept Budget , Govt. of India
4. Statistical Abstract India, CSO, Govt. of India

Table 4.4

Tax-GDP. Ratio: A Comparision Of Selected Countries*

Country	1974-75	1975-76	1976-77	1977-78	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84	1984-85	1985-86	1986-87	1987-88
GROUP-I														
Ghana	13.80	11.70	9.30	6.00	8.50	6.40	4.10	4.80	4.60	6.60	9.30	12.10	12.60	-
Botswana	23.25	14.41	21.25	24.21	25.01	27.07	26.41	27.48	29.10	32.02	28.98	34.70	36.24	-
Kenya	19.39	19.17	18.21	21.43	20.31	22.73	23.19	22.30	20.74	20.92	20.72	21.64	21.17	-
Liberia	18.70	22.60	22.50	21.50	22.10	20.40	23.80	26.10	26.00	25.80	24.70	-	-	-
GROUP-II														
Srilanka	16.47	16.24	15.73	25.09	22.01	19.47	17.32	14.85	16.38	19.47	18.75	17.42	17.85	16.12
Indonesia	16.57	17.88	17.71	17.89	20.28	21.78	20.40	19.14	18.82	17.48	18.80	15.54	17.51	18.86
Papua New Guinea	7.35	10.19	8.65	9.13	8.92	9.87	8.53	7.52	8.09	9.44	8.79	9.02	-	-
Turkey	-	20.31	20.46	20.52	18.58	17.33	18.81	-	16.81	13.05	14.45	15.30	-	-
Pakistan	10.90	11.00	11.00	11.50	12.30	13.30	13.50	12.80	12.90	13.30	12.20	12.00	-	-
Myanmar(Burma)	7.90	8.80	10.50	10.00	10.20	9.60	9.90	9.80	9.20	8.60	8.20	7.50	6.60	-
India	13.25	15.09	15.41	14.78	15.91	16.52	14.61	15.14	15.34	15.27	15.53	16.48	16.89	17.13
Thailand	11.36	11.07	11.92	12.11	12.43	12.71	12.81	12.36	13.34	13.62	13.89	14.05	14.63	-
Philippines	12.45	11.32	11.09	11.50	11.93	11.54	10.29	9.92	10.31	9.25	9.99	10.38	12.08	-
Cameroon	13.59	15.15	15.33	16.95	13.40	15.53	15.55	16.06	22.45	20.91	-	16.29	13.55	-
Brazil	17.82	18.03	19.00	18.92	18.18	17.86	18.03	19.65	18.67	15.45	15.65	16.76	15.28	-
Mexico	11.34	11.40	12.36	13.16	13.62	14.95	14.27	14.83	16.11	15.09	15.65	14.44	-	-

*Ratio of total tax revenue to GDP at current prices

Sources:-

1. International Financial Statistics (IMF)
2. Government Finance, Year Book (IMF)
3. National Accounts Statistics, CSO, Dept Of Statistics, Ministry Of Planning, Govt. Of India
4. Indian Economic Statistics, Public Finance, Ministry of Finance

Table-4.5

Share Of Indirect Tax Revenue In The Total Tax Revenue: A Comparision Of Selected Countries

country	1974-75	1975-76	1976-77	1977-78	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84	1984-85	1985-86	1986-87	1987-88
GROUP-I														
Brazil	39.44	40.48	40.59	40.00	37.89	44.17	41.14	39.23	40.13	33.03	30.73	29.73	33.01	-
Cameroon	70.98	69.25	66.29	67.82	61.23	61.80	56.39	45.16	30.59	37.41	-	37.74	45.21	-
Indonesia	25.38	26.56	25.15	26.08	20.96	16.69	14.71	16.16	16.32	15.58	22.12	40.05	40.04	33.79
Turkey	-	49.45	43.21	40.58	39.28	18.99	30.22	-	36.25	37.16	42.18	44.05	46.49	47.34
Botswana	53.06	42.99	58.22	64.51	63.27	54.38	51.52	55.29	54.84	39.41	33.18	27.64	25.93	-
Papua New Guinea	39.54	30.03	43.03	43.40	38.57	41.12	31.84	35.12	42.17	42.40	41.71	43.60	45.65	47.37
GROUP-II														
Kenya	59.81	59.47	58.26	63.32	62.70	65.58	66.93	69.69	66.57	67.99	59.14	64.20	66.75	-
Liberia	55.21	52.95	53.93	61.13	63.10	61.27	62.93	62.03	56.63	57.78	57.31	55.88	61.66	-
GROUP-III														
India	80.12	77.71	79.04	79.75	81.64	82.49	83.53	82.88	83.51	84.27	85.12	85.55	86.09	86.81
Mexico	58.62	52.78	52.54	49.44	52.93	59.56	64.89	67.59	81.74	80.22	77.81	73.45	73.84	77.75
Thailand	80.07	79.83	80.51	77.65	77.88	78.64	78.39	76.30	81.57	78.04	74.41	74.90	77.44	75.28
Pakistan	88.31	84.57	83.66	85.75	85.70	82.94	80.90	79.34	80.79	84.12	83.29	85.87	-	-
Myanmar(Burma)	66.77	56.89	92.77	89.54	94.73	95.10	95.42	94.81	94.22	93.20	92.02	89.19	89.02	-
Srilanka	78.18	76.98	79.85	87.30	85.44	80.16	77.33	77.98	81.05	80.06	80.00	82.62	81.56	82.13
Philippines	74.87	72.68	69.76	69.86	73.80	73.96	72.40	72.27	73.81	73.22	67.36	67.86	72.37	-
Ghana	77.17	73.20	77.23	75.62	84.07	77.75	72.96	66.92	79.45	77.30	76.49	77.91	75.80	68.76

Sources:-

1. Government Finance, Year Book (IMF)
2. Indian Economic Statistics,Public Finance,Ministry of Finance

5. Nominal Rates of Tariff

5.1 Before presenting the results of empirical analysis, it would be useful to define certain terms which are used later in the discussion. It has been mentioned above that the scheduled rates of basic duty are specified in the First Schedule of the Customs Tariff Act, 1975. Similarly, there is a general rate of auxiliary duty of customs announced along with the Budget every year. The effective duty rate is governed by the notifications providing tax exemptions of various kind (general, use-specific, import-source-specific). The customs duty exemption notifications are very large in number. Every year, many new notifications are issued and some of the old ones get amended or withdrawn. If all these notifications are taken into account to determine the rate of duty leviable on imports of various items, then one would find that even at the lowest level of disaggregation, multiple duty rates arise for many tariff headings, which makes the customs duty structure not amenable to quantitative analysis. Therefore, for the analysis presented here we consider only those exemptions which apply to all items under a tariff heading at a disaggregated level (6-digit HS code for recent years and the most detailed product groups or subgroups in the classification based on BTN used prior to 1986-87), irrespective of the use to which the commodity is put or the country from which it is imported. Only in a very small number of cases, we have taken into account notifications that provide exemption for specific use of a product (e.g., fertilizer used as manure) or for only some items under a tariff heading (as a disaggregate level). The customs duty rates so obtained will be called nominal rate of customs duty with quantifiable exemptions or nominal duty rate, for short. As against this, the realized rate of customs duty is defined as the ratio of actual customs revenue collection to the c.i.f. value of imports.

Clearly, the realized rate takes into account all the exemptions. The structure of nominal duty rate is analysed in this section and that of realized duty rate in the next section.

5.2 From the viewpoint of protection to domestic industry, only the basic and auxiliary duties of customs are relevant, since the effect of additional or countervailing duty (hereafter CVD) is offset by excise duty on domestic produce. From the view point of user, again, CVD is unimportant if MODVAT offset is available. It is only for a user who does not get MODVAT offset that CVD becomes an additional factor causing the price of the product for the user to rise above the price in international markets. Since the main focus of the study is on the nominal protection accorded to domestic producers by the tariff system, only basic and auxiliary rates of customs duty are included in most of the analysis presented here.

5.3 The period covered for the analysis is 1980-81 to 1989-90. As noted earlier, India's tariff schedule was based on the BTN code prior to 1986-87. From 1986-87 onwards, the HS classification has been brought into use. Thus, our analysis for the period 1980-81 to 1985-86 is based on over 500 tariff headings/sub-headings, specified in the customs tariff schedule, while our analysis for the period 1986-87 to 1989-90 is based on about 5000 6-digit HS codes. In consequence, the results obtained for the two periods are not strictly comparable.

5.4 Tariff rates have been derived from the Customs Tariff, Working Schedule (Directorate of Publications, Customs and Central Excise, New Delhi). This source generally gives the tariff rates as existing in May/June of the financial year. For 1987-88, the Working Schedule not being available other sources have been used. Data on imports have been taken from Monthly Statistics of the Foreign Trade of India (DGCIS, Ministry of

Commerce). Data on industrial production have been drawn from Annual Survey of Industries (CSO) and data on customs revenue collection from Statistics of the Customs And Excise Revenue Collection of the Indian Union (DGCIS).

5.5 Import data in HS code is presently available only for 1987-88. These have been used for computing weighted averages of tariff rates for the years 1986-87 to 1989-90. For the earlier period 1980-81 to 1985-86, import weights have been formed by taking average import values of different items in the years 1982-83, 1983-84 and 1984-85. It has been necessary for this purpose to match product classification used in the official trade data with the classification in the tariff schedule. Also, for various analyses presented in the report, industrial classification of ASI has been matched with trade and customs classification.

5.6 For most items the effective rates of basic and auxiliary duty are ad valorem. For items for which the duty rates are specific, we have computed ad valorem rates using data on unit import values.[6] For a large number of items, the scheduled rate is 100 or 60 per cent. This may be seen from Table 5.1. On an average, the extent of tax exemptions is relatively higher for items for which the scheduled rate is relatively high.

Sector and Industry-wise Tariff Rates, 1980-81 to 1985-86

5.7 Frequency distribution of tariff rates (basic +auxiliary) for the years 1980-81 to 1985-86 is shown in Table 5.2. The duty rates are found to be concentrated in the range 50 to 150 per cent. The average rate of duty is found to 71 per

6. In a few cases, this could not be done. Such items have been excluded from the analysis.

cent for 1980-81, 81 per cent for 1981-82, 87 per cent for 1982-83, 99 per cent for 1983-84, 104 per cent for 1984-85 and 105 per cent for 1985-86. Thus the average tariff rate has increased by over 30 percentage point between 1980-81 and 1985-86.

5.8 Average tariff duty rates according to input-based and use-based classification are shown in Table 5.3 and 5.4. The miscellaneous group in Table 5.3 includes items such as HSD and cement which could not be classified under the groups agriculture based[7], metal based or chemical based classes. Weighted averages shown in the table are based on imports.

5.9 The unweighted averages do not show much variation across input-based classes. However, these are relatively lower for metal-based and miscellaneous groups compared to agriculture-based and chemical-based. Also, within each group, say, chemical-based, there is considerable variation in tariff rates from item to item. The weighted averages, on the other hand, vary significantly across input-based groups. The average duty rate is low for miscellaneous and agriculture-based groups compared to metal-based and chemical-based. Considering both weighted and unweighted averages (since the former may suffer from a downward bias for reasons discussed above), it is found that the average duty rate is relatively high for chemical-based group and relatively low the miscellaneous group.

5.10 Unweighted averages of tariff rates computed for use-based classification exhibit greater variation than the corresponding figures for input-based classification. The average duty rate is found to be relatively low for capital goods and relatively high for consumer goods. Weighted averages,

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7. Agriculture-based includes animal husbandry and such other activities.

however, bring out a different ordering. The highest duty rate is found for consumer durables, and the lowest for intermediate goods. The average duty rate for capital goods is found to be lower than those for basic goods and consumer durables.

5.11 In Table 5.5, simple and weighted average tariff rates are shown for 52 major industries. It is seen from the table that for almost all industries the average duty rate has increased significantly from 1980-81 to 1985-86. The weighted averages are generally lower than unweighted averages. But, there are exceptions. Thus, it is seen that weighted average tariff rates for (a) spinning, weaving and finishing of textiles, and (2) beverages, spirits and wine, are much higher than the corresponding unweighted averages. On the other hand, the weighted average tariff rate for grain mill products is much lower than the unweighted average.

5.12 The average tariff rates vary considerably across industries (and also for different items of the same industry). The industries for which duty rates are relatively high include (1) spinning, weaving and finishing of textiles, (2) beverages, spirits and wine, (3) bakery products, (4) manufacture of cocoa, chocolate and sugar confectionery, (5) soft drinks and carbonated water industries, (6) tobacco manufactures, (7) manufactures of furnitures and fixture, (8) manufacture of leather products except footwear, (9) manufactures of paints, varnishes and lacquer, (10) iron and steel basic industries, and (11) manufacture of metal products, except machinery and transport equipment. Thus, for a number of items, which may be classified under "luxuries", the rate of tariff is relatively high. Also, tariff rates found to be high for iron and steel industry and the metal products industry. On the other hand, the duty rate is found to be low for (1) dairy products, (2) grain mil products (import-weighted), (3) printing, publishing and allied

industries, and (4) petroleum refineries. Other industries for which the duty rate is relatively low include (1) non-electrical machinery and (2) ship building and repairing.

Sector and Industry-wise Tariff Rates, 1986-87 to 1989-90

5.14 Frequency distribution of nominal tariff rates for the manufacturing sector for the years 1986-87 to 1989-90 is shown in Table 5.6. Tariff rates of most items are found to be concentrated in the range 75 to 150 per cent. In 1989-90, tariff rates for about 75 per cent of the items were in the range 100 to 150 per cent and those for nearly 85 per cent of items were in the range 75 to 150 per cent. Average rate of customs duty (basic + auxiliary) for the manufacturing sector was about 118 per cent in 1986-87 and 1987-88 and about 158 per cent in 1988-89 and 1989-90.

5.15 Table 5.7 shows for the years 1986-87 to 1989-90, simple and weighted averages of tariff rates for consumer goods, capital goods and intermediate goods and for nine major industry groups. Weighted averages have been computed using imports as weights. It is seen from the table that the among the three use-based classes the average tariff rate is relatively high for consumer goods and relatively low for capital goods. Weighted averages of tariff rates are lower than simple averages in the case of consumer and intermediate goods, but the difference between weighted and simple average of tariff rates is marginal in the case of capital goods. Turning now to the tariff rates for industry groups, it is seen that the simple average of tariff rates is about 100 per cent or more for all the nine groups. It is relatively low for the group metal products and machinery and relatively high for the groups (1) food beverages and tobacco products, (2) textiles and leather products, (3) basic metal industries, and (4) non-metallic mineral products. In a number

of cases the import-weighted average tariff rate is found to be significantly lower than the unweighted average tariff rate. These are (1) wood, cork and products, (2) paper and printing, (3) chemicals, and petroleum and coal products, (4) non-matalic mineral products and (5) other manufacturing.

5.16 Simple and weighted average of tariff rates for 28 manufacturing industries for 1986-87 and 1989-90 are shown in Table 5.8. The table also shows average tariff rates for agriculture, mining and manufacturing separately. It is seen from the table that compared to the average tariff rates for agriculture and mining, that for manufacturing is higher, especially when the tariff duties are weighted by imports. Evidently, tariff protection is relatively higher for manufacturing activities than for primary activities. Turning now to the simple average tariff rates for the 28 industries, it is seen that for most industries the average rate lies in the range 120 to 200 per cent. In two industries, the average tariff rate is above this range. These are iron and steel basic industries (213 per cent) and beverages, spirits and wine (300 per cent). In three industries, the average duty rate is lower than this range. These are petroleum refineries (107 percent), non-electrical machinery (107 per cent) and transport equipment (133 per cent). The import-weighted average tariff rates exhibit much greater variation across industries than do simple average tariff rates. The weighted average tariff rates range from zero for petroleum refineries[8] to 444 per cent for beverages products. Considering both weighted and unweighted average tariff rates it is found that the tariff rate is relatively high for beverage, tobacco products, footwear, textiles, wearing apparel, iron and steel basic metal, and wooden furnitures and fixtures and

8. To conclude on this basis that petroleum refining industry is unprotected would be wrong, because import of most petroleum products is strictly regulated by the government.

relatively low for printing and publishing, petroleum refineries, petroleum and coal products and Transport equipment non-electrical machinery.[9]

5.17 Weighted average rates of tariff based on production[10] are presented in Table 5.9. Average tariff rates are shown for 1989-90 for nine major industry groups and aggregate manufacturing. It is seen from the table that simple and production-weighted tariff rate are margenally different at the aggregate manufacturing level. For six of the nine industry groups, the weighted average rate of tariff duty is lower than the unweighted average. But, in the case of Taxtile and Leather industries, and metal products machinery the weighted average rate of tariff of 200.5 per cent is significantly higher than the simple average of 162.8 per cent. The pattern of tariff rates across industry groups is by and large the same whether unweighted or production-weighted average are considered.

Import Policy and Tariff

5.18 Since different importable items are subject to different degree of quantitative restrictions, the tariff protection required for domestic producers would differ from item to item depending on the level of non-tariff barriers. It would be interesting therefore to compare tariff rates for similar items subject to different degree of import restriction.

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9. This shows only the relative position of the manufacturing industries in regard to the average rate of duty. Thus, an industry for which the average duty is low may be producing a number of items for which tariff duty is high.

10. Weighted averages are based on production data for 1985-86 for 81 industries.

5.19 To study tariff rates in the context of the import licensing system, manufactured products have been classified into five categories (canalised, restricted, limited permissible, OGL, and OGL stock and sale) according to their import licensing status in 19889-90[11]. The items which could not be classified under any of these five categories have been excluded from the analysis. Items under restricted list are subject to greater quantitative restriction on imports than items under OGL. The category "limited permissible" falls in-between. Again, items whose imports are canalised are subject to greater quantitative restriction than items under OGL. Since both the import licence system and the tariff system are directed to conserve scarce foreign exchange and provide protection to domestic industry, high tariffs are not required for items whose imports are strictly regulated. One would therefore expect tariff rate for items under OGL to be higher in general than tariff rates for items "restricted" and "canalised" categories. Comparison of average tariff rates among the five categories (corresponding to the nature of import licensing) for the manufactured products and separately for consumer goods, intermediate goods and capital goods does not, however, reveal any such pattern, as may be seen from Table 5.10. Rather, the average duty rate is found to be a little lower for OGL items than items in more restricted categories. One may treat this as an evidence of inadequate harmonisation between import policy and tariff policy, the need for which has been widely recognised in the past. But, to leave it at that would miss two essential points. First, it should be realised that the near constancy of average tariff rate across product categories subject to varying degree of qualitative restrictions basically reflects the dominance of the revenue objective of tariffs over other objectives such as foreign exchange conservation and protection. Secondly, most items under

11. For this purpose, we make use of data compiled for a World Bank study.

OGL are essential and not available domestically (in adequate quantity), so that a lower duty on such items compared to the items whose imports are much restricted poses no great threat to the domestic industry. This is possibly the reason why the average tariff duty rate of OGL is not higher than that for the items in the other lists.

Tariff Escalation

5.20. Studies on tariff structure for both developed and developing countries have shown that the level of tariff escalates with the degree of processing. Analysing the tariff structure in developing countries Laird and Yeats (1987) have come to the conclusion that developing countries' tariffs are generally set at higher levels and incorporate a greater degree of escalation than do import duties in developed market economies. Balassa and others have maintained that these escalating tariffs in the developed market economies constitute a structural bias against exports of processed commodities from developing countries. That developing countries' tariff structure is also characterised by significant escalation probably reflects the desire of the governments of these countries to encourage domestic processing activity so as to generate more employment, achieve faster industrialisation and change the structure of exports in favour of processed commodities which can offset the deteriorating terms of trade for primary commodities and instability in the prices of primary commodities in international markets.

5.21 For India, tariff escalation has been studied by Panchamukhi (1986). His analysis of tariff structure in textiles (for 1977 and 1982) brings out that tariff duties on raw materials (e.g. raw cotton, raw wool and raw jute) range from 30 to 60 per cent, those on semi-processed goods range from 60 to

100 per cent (with the exception of yarn and man-made fibres for which the duty rates go upto 200 per cent plus a specific duty), and those on finished good are 100 per cent and above. Thus, the tariff structure for textiles exhibits significant escalation with the degree of processing. Similarly, for metals and products, Panchamukhi finds that tariff duties on raw materials range from 40 to 60 per cent, those on semi-finished products from 40 to 100 per cent and those on finished products from 40 to 100 per cent, with the exception of stainless steel products for which the duty rate is 300 per cent. Thus, for metal and metal products, some tariff escalation is found though not as marked as in the case of textiles. In another exercise carried out to examine tariff escalation, Panchamukhi has divided different sectors the economy into three groups. Taking imports as weights, the average rates of basic customs duty in 1982 have been computed and these are found to be 56.6 per cent for primary products, 58.3 per cent for semi-processed products and 77.7 per cent for processed/finished products. Using supply (output plus imports) weights, the average rates of basic duties for primary, semi-processed and processed/finished products are found to be 41.7 per cent, 65.5 per cent and 86.4 per cent, respectively. These results indicate significant tariff escalation with the degree of processing.

5.22 Our analysis of the Indian tariff structure also reveals that in general tariff rates escalate with the degree of processing. Thus the average tariff rate for manufacturing is higher than that for agriculture and mining. Again, within the manufacturing sector, tariff rates are generally found to escalate across industries and industry groups according to the degree of processing.

5.23 Table 5.12 presents a comparison of tariff rates between industries and industry groups in various processing chains. In most cases, the tariff rate is found to escalate with processing. However, one notable exception is the processing chain between metals, metal products and machinery. It is seen that the tariff rates becomes lower at higher level of processing.

5.24 Table 5.13 presents a comparison of tariff rates similar to that in Table 5.12 except that in this case comparisons are made at disaggregated level. In this case, again, it is found that tariff rates are generally higher at higher level of processing, though there are some exceptions, such as tobacco products and petroleum refinery products.

5.25 Since the average tariff rate for machinery is found to be significantly lower than that for basic metals and metal products, it may be inferred that the incentive structure created by the tariff rates goes against the machinery industry. This has prompted us to carry out a more detailed analysis for the machinery industry. Table 5.13 presents a comparison of tariff rate on intermediate inputs (parts and components) and on final products for 40 items of non-electrical machinery and 21 items of electrical machinery classified separately under producer and consumer goods. From an examination of the table the following conclusions emerge:

(a) On an average, the tariff rate on consumers items of machinery is higher than that on producers' items of machinery.
(b) In a number of cases, the duty rate on parts and components is higher than that for the final products.

(c) Between the manufacture of parts and components of machinery and the manufacture/assembly of the final product there is generally little tariff escalation, except for consumer goods for which the average tariff rate for final products is significantly higher than that for parts and components.

While an escalated tariff structure encourages processing, in the case of machinery there is an argument for not having a lower duty rate for parts and components in relation to the duty rate for the complete machinery. This is so because in this case, processing assembly starts first and the production of parts and components are taken up later in the country. A lower customs duty on parts and components would obviously discourage machinery manufacturers from substituting imported parts and components by the domestically produced ones.

Specific Duty Exemptions

5.26 While working out effective tariff rates for different items (tariff headings) for the analysis of tariff structure presented above, we did not take into account all exemption notifications. We excluded the notifications that give customs duty exemption to some but not all items under a tariff heading (at a disaggregated level), to specific use of commodities but not for other uses and to specific import-source (preferential area). It would be useful therefore to provide here some indication of the effect of such duty exemptions (hereafter referred to as specific exemptions) on the incidence of customs duties. It should be noted first that exporters can import a large number of items against advance licence duty free. This duty exemption is, however, very different qualitatively from the duty exemptions available to domestic consumers and domestic producers. Indeed, it may not be wrong to argue that from the

view-point of protection to domestic industries duty exemptions to exporters are of little significance. Therefore, in working out the incidence of customs duty we ignore the duty exemptions available to exporters.

5.27 When the specific duty exemptions are brought into the analysis, we get for many tariff headings more than one effective duty rate. The multiplicity of duty rates arise because of concessional duty rates for particular item(s) under a tariff heading, or a specific use of the items (or some of the items under that tariff heading), or specific country of supply. As a result, it becomes difficult to present some summary statistics that would adequately describe the structure of tariff rates. Nevertheless, an attempt is made in Table 5.14 to give some indication of the effect of such exemptions on the incidence of customs duty (basic + auxiliary). Nine important chapters are covered for this analysis, and duty rates are shown for 1984-85. Considering the effective duty rates for all the items belonging to a chapter (including multiple rates for some items), the ranges of customs duty have been obtained. The minimum rate is zero in four chapters out of nine. The maximum rate is 340 percent for iron and steel and 190 percent for organic chemicals and plastic and articles of plastics. The average rate of duty shown under (A) is based on the minimum rates applicable to each item (tariff heading) of the respective chapter. Similarly, the average rate of duty shown under (B) is based on the maximum rates applicable. It is seen that in a number of cases the average duty rate under (A) is significantly lower than that under (B). What is perhaps more interesting to note is that even taking the minimum rates applicable to different items, the average tariff rates are fairly high.

Table 5.1

Standard (Scheduled) Rates and Effective Rates of Basic Customs Duty, 1984-85

Standard	% of items	Average of effective rates
40	20.2	32.57
60	23.6	49.02
100	39.7	78.75
150	3.4	95.53
200	1.6	126.67
Others	11.5	Not computed
Total	100	

Note: The effective rates take into account only quantifiable exemptions.

Table 5.2

Frequency Table for Import Duties
(Basic + Auxiliary)

Class distribution	1980-81	1981-82	1982-83	1983-84	1984-85	1985-86
0-25	44	40	35	33	33	33
25-50	162	71	19	11	10	9
50-75	20	90	139	131	120	120
75-100	169	178	172	149	26	31
100-150	121	133	140	179	311	301
150-200	6	4	9	7	12	14
200-250	0	2	3	4	4	6
Above 250	7	11	12	15	13	15
Total	529	529	529	529	529	529
Mean	71	81	87	99	104	105
Standard deviation	45	49	52	56	55	57

TABLE 5.3: AVERAGE RATES OF IMPORT DUTY (BASIC + AUXILIARY) (INPUT BASED)

	1980-81		1981-82		1982-83		1983-84		1984-85		1985-86	
	WEIGHTED AVERAGE	UNWEIGHTED AVERAGE	WEIGHTED AVERAGE	UNWEIGHTED AVERAGE	WEIGHTED AVERAGE	UNWEIGHTED AVERAGE	WEIGHTED AVERAGE	UNWEIGHTED AVERAGE	WEIGHTED AVERAGE	UNWEIGHTED AVERAGE	WEIGHTED AVERAGE	UNWEIGHTED AVERAGE
(1) AGRICULTURE BASED	36.66	80.43	40.36	87.22	71.63	96.36	78.10	104.15	81.75	108.65	80.95	107.86
(2) CHEMICAL BASED	79.54	83.17	83.53	87.89	92.38	96.62	111.42	111.74	115.41	116.45	115.41	116.45
(3) METAL BASED	61.22	65.63	75.94	78.90	89.88	85.34	101.04	99.20	98.20	103.70	108.67	106.38
(4) MISCELLANEOUS	13.77	63.43	15.12	69.46	16.15	74.22	18.59	83.68	19.59	87.50	19.71	88.68
(5) ALL MANUFACTURES	37.86	71.74	43.49	80.92	52.96	87.92	60.33	100.00	60.98	104.42	63.91	105.78
(6) ALL COMMODITIES	38.05	71.40	43.68	80.50	53.11	87.45	60.50	99.48	61.19	103.90	63.99	105.16

TABLE 5.4: AVERAGE RATES OF IMPORT DUTY (BASIC + AUXILIARY) (USE BASED)

	1980-81		1981-82		1982-83		1983-84		1984-85		1985-86	
	WEIGHTED AVERAGE	UNWEIGHTED AVERAGE	WEIGHTED AVERAGE	UNWEIGHTED AVERAGE	WEIGHTED AVERAGE	UNWEIGHTED AVERAGE	WEIGHTED AVERAGE	UNWEIGHTED AVERAGE	WEIGHTED AVERAGE	UNWEIGHTED AVERAGE	WEIGHTED AVERAGE	UNWEIGHTED AVERAGE
(1) BASIC GOODS	60.32	68.30	71.05	77.48	90.23	85.34	103.92	98.19	96.85	99.80	109.76	104.50
(2) INTERMEDIATE GOODS	22.53	70.90	25.43	84.82	27.05	91.83	31.16	108.55	32.72	114.03	32.76	114.33
(3) CAPITAL GOODS	58.27	59.57	67.86	66.82	73.02	72.54	83.96	83.32	88.92	88.07	90.81	89.39
(4) CONSUMER NON-DURABLE	31.17	86.54	34.72	93.92	69.58	102.33	75.42	110.65	78.77	115.18	79.21	115.62
(5) CONSUMER DURABLE GOODS	88.78	88.75	93.58	93.39	99.16	99.29	106.74	107.50	112.09	114.82	110.96	113.04
(6) ALL MANUFACTURES	37.86	71.74	43.49	80.92	52.96	87.92	60.33	100.00	60.98	104.42	63.91	105.78

Table 5.5

AVERAGE RATES OF IMPORT DUTY (BASIC + AUXILIARY), BY INDUSTRY GROUPS

YEARS------->		1980-81		1981-82		1982-83		1983-84		1984-85		1985-86	
	DESCRIPTION	Weighted Average	Unweighted Average	Weighted Average	Unweighted Average	Weighted Average	Unweighted Average	Weighted Average	Unweighted Average	Weighted Average	Unweighted Average	Weighted Average	Unweighted Average
1	2	3	4	5	6	7	8	9	10	11	12	13	14
(1)	Slaughtering, preparation and preserving of meat	120	115	125	120	130	125	135	135	140	140	140	140
(2)	Manufacturing of dairy products	38	19	40	20	43	21	48	24	50	25	50	25
(3)	Canning & preservation of fruits & vegitable	120	115	125	120	130	125	135	135	140	140	140	140
(4)	Caaning & preservation of fish & other sea foods	75	75	80	80	85	85	95	95	100	100	100	100
(5)	Manufacture of grain mill products	2	35	2	57	2	62	2	72	3	77	3	77
(6)	Manufacture of bakery products	120	115	125	120	130	125	135	135	140	140	140	140
(7)	Sugar	97	99	102	104	107	109	117	119	122	124	122	117
(8)	Manufacture of cocoa, chocolate & sugar confactionary	120	115	125	120	130	125	135	135	140	140	140	140
(9)	Manufacture of Miscellaneous food preparations	22	52	27	66	101	103	109	101	114	105	114	105
(10)	Distilling rectifying & Blending of spirits, Wine industries, Beverages & manufacturing of malt	206	144	211	149	216	154	222	164	227	169	227	169
(11)	Soft drinks & carbonated water industries	120	115	125	120	130	125	135	135	140	140	140	140
(12)	Tobacco manufactures	120	115	125	120	130	125	135	135	140	140	140	140
(13)	Spinning, weaving & finishing of textiles	259	105	264	110	269	115	275	125	280	130	280	130
(14)	Knitting mills	120	115	125	120	130	125	135	135	140	140	140	140
(15)	Cordage, rope & twine industries	45	45	50	50	55	55	65	65	70	70	70	70
(16)	Manufacture of textiles n.e.s	149	118	154	123	159	128	217	145	222	150	222	150

1	2	3	4	5	6	7	8	9	10	11	12	13	14
(17)	Manufacture of wearing apparel except footwear	120	115	125	120	130	125	135	135	140	140	140	140
(18)	Saw mills, planing & other wood mills, Wooden & cane containers & cane small ware, manufacture of cork & wood products n.e.s	86	78	91	83	101	95	111	105	116	110	116	110
(19)	Manufacture of furniture & fixtures	120	115	125	120	130	125	135	135	140	140	140	140
(20)	Manufacture of paper & paper products (board) and pulp	79	79	84	84	93	93	102	103	107	108	107	108
(21)	Printing, publishing & allied industries	0	0	0	0	0	0	0	0	0	0	0	0
(22)	Tanneries & leather finishing plant	75	75	80	80	85	85	95	95	100	100	100	100
(23)	Manufacture of leather products except footwear & other wearing apparel	120	115	125	120	130	125	135	135	140	140	140	140
(24)	Manufacture of rubber products	98	98	103	103	108	108	117	118	122	123	122	123
(25)	Petroleum refineries	0	12	0	13	0	14	0	16	0	17	0	20
(26)	Manufacture of miscellaneous products of petroleum & coal	48	49	53	53	58	56	68	64	73	68	73	68
(27)	Basic industrial chemicals including fertilizers	60	73	63	78	73	83	88	98	92	102	92	102
(28)	Vegetable & animal oil & fats (except ediblo oils)	75	75	80	80	85	85	95	95	100	100	100	100
(29)	Manufacture of paints, varnishes and lacquer	79	80	84	85	119	120	131	134	136	139	136	139
(30)	Manufacture of miscellaneous chemical products	77	79	82	84	87	89	102	105	107	110	107	110
(31)	Manufacture of structural clay products	75	75	80	80	85	85	95	95	100	100	100	100
(32)	Manufacture of glss & glss products	114	104	119	109	124	114	130	124	135	129	135	129
(33)	Manufacture of pottery, chine & earthen ware	78	95	83	100	88	105	98	115	103	120	103	120
(34)	Manufacture of cement (hydraulic)	49	49	60	60	64	64	78	78	82	82	81	81

1	2	3	4	5	6	7	8	9	10	11	12	13	14
(35)	Manufacture of non-metallic mineral products n.e.s	80	80	85	85	90	90	100	100	105	105	105	105
(36)	Iron & steel basic industries	71	77	85	95	121	112	134	125	112	120	145	138
(37)	Non-ferous metal industries	60	64	86	81	91	85	93	99	96	103	97	103
(38)	Manufacture of metal products except machinery & transport equipments	56	72	122	104	128	109	136	137	144	144	144	145
(39)	Manufacture of machinery except electrical machinery	56	55	67	63	73	68	83	79	88	84	91	87
(40)	Manufacture of electrical machinery apparatus, appliances and supplies	86	84	92	93	97	102	110	114	114	118	115	119
(41)	Ship building and repairing	40	43	50	50	55	55	60	63	70	70	65	65
(42)	Manufacture of railroad equipment	45	51	49	55	54	60	64	70	70	76	69	75
(43)	Manufacture of motor/vehicle	81	69	86	76	91	80	101	83	106	94	106	92
(44)	Manufacture of motor cycle and bicycle	98	98	92	92	108	108	122	122	127	127	123	123
(45)	Manufacture of air-craft	45	55	50	60	55	65	65	75	70	80	70	80
(46)	Manufacture of transport equipment n.e.s.	113	95	118	100	123	105	129	115	134	120	134	120
(47)	Manufacture of professional and scientific measuring and controlling instruments	70	58	75	64	78	68	88	77	91	81	91	80
(48)	Manufacture of photographic and optical goods	71	74	79	84	84	89	94	105	99	110	99	110
(49)	Manufacture of watches and clocks	120	115	125	120	130	125	115	115	122	122	115	115
(50)	Manufacture of jwellery and related articles	42	64	46	69	50	73	58	81	62	86	62	86
(51)	Manufacture of musical instruments	120	115	125	120	130	125	135	135	140	140	140	140
(52)	Manufactured products	111	98	116	103	121	108	127	118	132	123	179	129
(53)	All groups	38	72	43	81	53	88	60	100	60	104	63	106

TABLE 5.6:
REPORT ON NOMINAL TARIFF RATE (BASIC + AUXILIARY)
MANUFACTURING SECTOR

NOMINAL PROTECTION RANGE	FREQUENCY DISTRIBUTION (%)			
Y E A R S------->	1986-87	1987-88	1988-89	1989-90
.0 -25	1.41	1.43	1.46	1.69
25.1 -50	2.97	2.94	2.43	2.86
50.1 -75	9.14	9.47	2.67	3.14
75.1 -100	23.00	22.67	12.94	12.82
100.1 -125	15.40	15.27	30.66	30.40
125.1 -150	44.59	44.71	44.39	43.50
150.1 -175	0.64	0.64	1.50	2.18
175.1 -200	2.57	2.57	2.76	2.40
200.1 -225	0.07	0.04	0.49	0.42
225.1 -250	0.24	0.26	0.71	0.59
>> -250	0.00	0.00	0.00	0.00
.0-250.0	100.00	100.00	100.00	100.00

TABLE 5.7:
REPORT ON NOMINAL PROTECTION - INDIA
NRP BASED ON BASIC + AUXILIARY IMPORT DUTIES
WEIGHTED BY IMPORTS

(RATES ARE BASED ON)

YEARS ——→	1986-87		1987-88		1988-89		1989-90	
DESCRIPTION	WEIGHTED AVERAGE	UNWEIGHTED AVERAGE	WEIGHTED AVERAGE	UNWEIGHTED AVERAGE	WEIGHTED AVERAGE	UNWEIGHTED AVERAGE	WEIGHTED AVERAGE	UNWEIGHTED AVERAGE
SECTORS IN PARTITION 2								
CONSUMER GOODS (MFG)	115.0	134.1	115.4	134.0	120.5	139.3	111.4	179.9
INTERMED GOODS (MFG)	94.5	117.8	94.6	118.0	107.3	129.5	130.3	161.1
CAPITAL GOODS (MFG)	87.2	89.1	85.3	88.6	95.8	97.9	111.1	114.8
OVERALL AVERAGE :	94.1	117.6	93.6	117.6	104.9	126.4	122.7	158.2
SECTORS IN PARTITION 3								
FOOD, BEVERAGES, TOBACCO	119.2	128.8	119.2	128.9	123.8	136.0	125.0	176.9
TEXTILES & LEATHER	134.6	135.7	136.8	135.8	142.2	140.4	182.9	182.8
WOOD, CORK, & PRODUCTS	63.1	107.5	63.1	107.5	68.1	112.5	88.1	144.3
PAPER & PRINTING	73.4	112.3	73.4	112.3	77.8	117.2	83.7	148.2
CHEMICALS, PETR, COAL	87.3	120.4	87.5	120.4	88.4	124.9	114.4	158.2
NONMETALLIC MINERALS	119.5	129.7	119.5	129.7	127.5	137.5	164.1	178.8
BASIC METAL INDUSTRIES	118.2	124.7	118.4	124.9	167.2	162.4	186.8	181.5
METAL PRODS, MACHINERY	87.7	97.0	86.0	96.6	96.1	105.3	112.6	127.6
OTHER MANUFACTURING	79.3	130.3	79.3	130.4	84.2	135.3	102.3	176.4
OVERALL AVERAGE:	94.1	117.6	93.6	117.6	104.9	126.4	122.7	158.2

TABLE 5.8:
REPORT ON NOMINAL TARIFF RATE (BASIC + AUXILIARY)
RATES ARE BASED ON 1989-90 & 1986-87 WEIGHTED BY IMPORTS

Y E A R S------>	1989-90		1986-87	
DESCRIPTION & SECTORS IN PARTITION NO.	WEIGHTED AVERAGE	UNWEIGHTED AVERAGE	WEIGHTED AVERAGE	UNWEIGHTE AVERAGE
(1) AGRICULTURE	53.4	125.7	60.5	100.5
MINING	17.1	121.1	20.5	93.6
MANUFACTURING	122.7	158.2	94.1	117.6
OVERALL AVERAGE:	101.0	155.5	79.4	116.1
(4) FOOD MANUFACTURING	124.2	169.5	118.9	126.4
BEVERAGES	444.3	300.7	249.4	167.5
TOBACCO	190.0	190.0	140.0	140.0
OVERALL AVERAGE:	125.0	176.9	119.2	128.8
(5) TEXTILES	188.4	182.9	138.5	136.0
WEARING APPAREL	190.0	190.0	140.0	140.0
LEATHER PRODUCTS	109.3	156.5	82.1	116.5
FOOT WEAR	190.0	190.0	140.0	140.0
OVERALL AVERAGE:	182.9	182.8	134.6	135.7
(6) WOOD, CORK, & PRODUCTS	80.9	132.3	57.7	98.9
WOODEN FURN & FIXTRS	190.0	190.0	140.0	140.0
PAPER PRODUCTS	95.5	156.4	83.8	118.8
PRINTING & PUBLISHING	14.3	115.9	12.6	86.9
OVERALL AVERAGE:	83.8	146.9	73.0	110.7
(7) INDUSTRIAL CHEMICALS	155.1	152.8	117.2	115.0
OTHER CHEMICAL PRODS	154.7	164.0	124.6	129.7
PETROLEUM REFINERIES	0.0	107.2	0.0	83.0
PETROLEUM & COAL PRODS	49.2	125.3	28.8	91.5
RUBBER PRODUCTS	183.9	182.0	135.8	134.5
PLASTIC PRODUCTS NEC	184.6	185.3	143.5	138.7
OVERALL AVERAGE:	114.4	158.2	87.3	120.4

Y E A R S------>	1989-90		1986-87	
DESCRIPTION & SECTORS IN PARTITION NO.	WEIGHTED AVERAGE	UNWEIGHTED AVERAGE	WEIGHTED AVERAGE	UNWEIGHTE AVERAGE
(8) CERAMIC PRODUCTS	133.3	182.3	108.5	135.7
GLASS & GLASS PRODUCTS	178.5	182.3	132.0	134.7
OTHER NONMET MIN PRODS	148.3	176.0	104.2	125.5
OVERALL AVERAGE:	164.1	178.8	119.5	129.7
(9) IRON & STEEL B-MET IND	217.7	212.9	124.7	139.0
NONFERROUS B-MET IND	137.5	143.2	107.7	107.2
METAL PRODUCTS NEC	119.9	150.7	97.2	114.9
NONELECTRIC MACHINERY	105.8	107.4	84.1	82.8
ELECTRICAL MACHINERY	145.6	142.3	103.1	102.8
TRANSPORT EQUIPMENT	79.8	113.7	67.5	89.3
SCIENTIFIC EQUIPMENT	114.1	138.9	91.3	106.7
OTHER MANUFACTURING	102.3	176.4	79.3	130.3
OVERALL AVERAGE:	125.7	142.3	92.2	105.3

TABLE 5.9
REPORT ON NOMINAL PROTECTION - INDIA
RATES ARE BASED ON 1989-90
NRP BASED ON CUSTOMS TARIFFS + OTHER IMPORT DUTIES
WEIGHTED BY PRODUCTION IN DOMESTIC PRICES

Y E A R------>	1989-90	
D E S C R I P T I O N	WEIGHTED AVERAGE	UNWEIGHTED AVERAGE
FOOD,BEVERAGES,TOBACCO	131.2	138.5
TEXTILE & LEATHER	142.5	137.1
WOOD,CORK,& PRODUCTS	112.8	110.5
PAPER & PRINTING	124.7	116.7
CHEMICAL PETROLEUM COAL	98.2	124.1
NONMETALLIC MINERAL	117.2	126.5
BASIC MET L INDUSTRIES	134.9	139.8
MATAL PRC JCTS MACHINERY	110.9	99.7
OTHER MANUFACTURING	118.8	132.4
OVERALL AVERAGE:	117	126

Table 5.10
REPORT ON NOMINAL PROTECTION -
RATES BASED ON 1989 DATA-INCLUDES CVD
NRP BASED ON CUSTOMS TARIFFS

PRODUCT CATEGORIES	B A S I C S T A T I S T I C S ⟶ MANUFACTURING SECTORS	MINIMUM	MAXIMUM	MEAN	STND DEVN	COEFF OF VARN	NO. OF OBSRVNS	VALUE OF IMPORTS:
CANALISED	CONSUMER GOODS (MFG) SECTOR (2011)	0	145	88.7	37.9	42.7	16	277425
	INTERMEDIATE GOODS (MFG) SECTOR (2012)	0	345	104.7	56.5	53.9	279	38106962
	CAPITAL GOODS (MFG) SECTOR (2013)	85	85	85.0	0.0	0.0	1	575242
	MANUFACTURING GOODS (MFG) SECTOR (1003)	0	345	103.8	56.0	53.9	296	38959629
RESTRICTED	CONSUMER GOODS (MFG) SECTOR (2011)	0	400	139.8	29.7	21.2	1193	6559188
	INTERMEDIATE GOODS (MFG) SECTOR (2012)	0	220	124.8	37.4	30.0	111	20716571
	CAPITAL GOODS (MFG) SECTOR (2013)	35	155	83.5	30.3	36.4	151	4614742
	MANUFACTURING GOODS (MFG) SECTOR (1003)	0	400	132.8	34.9	26.3	1455	31890501
LIMITED PERMISSIBLE	CONSUMER GOODS (MFG) SECTOR (2011)	0	195	119.6	31.6	26.5	126	1639743
	INTERMEDIATE GOODS (MFG) SECTOR (2012)	0	205	116.9	28.2	24.1	575	15454950
	CAPITAL GOODS (MFG) SECTOR (2013)	40	195	100.3	33.9	33.8	204	15946136
	MANUFACTURING GOODS (MFG) SECTOR (1003)	0	205	113.5	30.9	27.2	905	33040829
OGL	CONSUMER GOODS (MFG) SECTOR (2011)	40	345	120.1	38.7	32.2	71	1748388
	INTERMEDIATE GOODS (MFG) SECTOR (2012)	0	195	119.2	32.3	27.1	290	12649575
	CAPITAL GOODS (MFG) SECTOR (2013)	35	195	84.4	27.7	32.9	251	17127002
	MANUFACTURING GOODS (MFG) SECTOR (1003)	0	345	105.0	35.8	34.1	612	31524965
OGL STOCK & SALE	CONSUMER GOODS (MFG) SECTOR (2011)	70	145	123.5	28.6	23.1	13	132567
	INTERMEDIATE GOODS (MFG) SECTOR (2012)	30	155	110.5	35.8	32.4	10	779460
	CAPITAL GOODS (MFG) SECTOR (2013)	40	105	72.5	32.5	44.8	4	24904
	MANUFACTURING GOODS (MFG) SECTOR (1003)	30	155	111.1	36.3	32.7	27	936931

TABLE 5.11
Comparison of Tariff Rates : Tariff Escalation

1985-86	Tariff Rates	
1. A. Sugar	117%	
B. Cocoa, Chocolate and Sugar Confectionery	140%	
2. A. Spinning, weaving and finishing of textiles		130%
B. Wearing apparel	140%	
3. A. Wood manufacturing	100%	
B. Furnitures and Fixtures		140%
4. A. Leather	100%	
B. Leather products	140%	
5. A. Petroleum refining	20%	
B. Products of petroleum and coal	68%	
6. A. Iron and Steel basic metal	138%	
B. Metal products	145%	
C. Non-electrical machinery		87%
1989-90		
1. A. Textiles	141%	
B. Wearing apparel	145%	
2. A. Leather and products	121%	
B. Footwear	145%	
3. A. Wood, Cork and products		104%
B. Wooden furnitures and fixtures	145%	
4. A. Industrial Chemicals	121%	
B. Chemical products	135%	
5. A. Iron and Steel basic Metal	204%	
B. Metal products	120%	
C. Non-electrical machinery		89%
6. A. Basic metals	163%	
B. Metal products, machinery and transport equipment	103%	

Table 5.12

Commodities	Raw material/ Intermediate	Final
1. Edible oils	105	45
2. Tobacco products	508.95	145
3. Leather products	105	145
4. Wood products	85	145
5. Cyclic hydrocarbons	90	88
6. Dyestuff	115	115
7. Antibiotics	115	115
8. Nitrogenous fertilizers	0	0
9. Silk products	80	145
10. Wool products	100.8	145
11. Cotton textiles	85	145
12. Flax	85	145
13. Jute products	85	145
14. Vegetable fibres	85	145
15. Fabrics of Synthetic Filament Yarn	173.92	145
16. Fabrics of Synthetic stable fibre	158.5	156.6
17. Tyres and tubes	100	145
18. Paper	83	109.4
19. Iron & non-alloy steel	101.8	115.9
20. Stainless steel	345	265
21. Copper and articles thereof	123.7	140.7
22. Aluminium and articles there of	83.3	105
23. Lead products	130	130
24. Cement	117	105
25. Synthetic Resins	117	195
26. Photo chemical materials	115	145
27. Sulphuric acid	0	115

Table 5.13

Tariff Rates For Intermediate and Final goods(1989-90)

Non-Electrical Machinery

Producer Goods

	Intermediate	Final
1. Nuclear Reactors	85	90
2. Boilers	80	80
3. Reciprocating piston engines	145	80
4. Turbines	80	80
5. Turbojets	85	80
6. Other engines and motors	80	82
7. Pumps fitted with a measuring devi	155	80
8. Air and vacuum pumps	80	80
9. Furnace Burners	35	53
10. Industrial or laboratory Furnaces	35	40
11. Medical Surgical or lab.furnaces	80	95
12. Calendering or other rolling mill	80	80
13. Centrifuges	89	108
14. Mechanical appliances for projecting, dispensing or spraying liquids	80	90
15. Weighing machinery	80	113
16. Pulley tackle and hoists	80	80
17. Fork-lift Trucks	145	80
18. Other lifting,handling,loading or unloading machinery	80	80
19. Self-propelled bulldozers, angledozers	80	80
20. Agricultural, Forestry machinery	80	82
21. Presses,crushes and similar machinery for mmanufacture of bearings	80	115
22. Other agricultural machinery	85	80
23. Machinery for cleaning,sorting and grading	40	80
24. Machinery for Pulp-making or fibrous cellulosic material	80	80
25. Book-binding machinery	80	40
26. Machinery for making up paperpulp paper or paperboard	80	83
27. Extruding,drawing,texturing or cutting man-made textiles	30	80
28. Card-clothing machinery		
29. Convertters,ladles and ingot moulds and casting machinery	35	45
30. Metal-rolling mills	80	77

Consumer goods		
1. Fans	80	135
2. Bakery ovens	35	40
3. Refrigerators household type	80	80
4. Clothes-dryers	80	80
5. Dish-washing machines	80	155
6. Personal weighing machines	80	105
7. Sewing-machines household type	80	155
8. Electronic calculators	105	105
9. Dry-cleaning machines	80	80
10. Drying machines	80	110

Electrical Machinery		
Producer goods		
	Intermediate	Final
1. Electrical,Static Converters And Inductors	80	92.5
2. Electro magnets	80	96.3
3. Primary cells and batteries	145	145
4. Electric accumulators	145	145
5. Electro-mechanical tools	80	115
6. Electrical ignition,starting equpt	95	95
7. Electrical lighting or signalling	145	145
8. Indl,lab.electric furnace and oven	80	70
9. Electl app.for telephony or telegr	145	155
10. Electrical capacitors	145	145
11. Diodes	90	70
12. Electrical resistors	90	70
13. Electronic integrated circuits	105	145
14. Electrical machines and app.n.e.c	105	115
Consumer goods		
1. Electro mechl domestic appliances	105	115
2. Portable electric lamps	145	145
3. Electro-Thermic domestic appliance	80	115
4. Micro-phones and stands therefor	145	145
5. Sound recording and reproducg appt	85	145
6. Cathode ray TV tubes	105	145
7. Eltric filament or discharge lamps	105	145

Table 5.14

Incidence of Customs Duties for Selected Chapters, 1984-85

Chapter No.	Description	Range of Duty		Average Duty Rate	
		Minimum	Maximum	(A)	(B)
28.	Inorganic Chemicals	35	100	95	103
29	Organic Chemicals	50	190	102	114
39.	Plastics and articles thereof	40	190	87	137
40.	Rubber and articles thereof	0	140	68	115
73.	Articles of Iron and Steel	0	340	126	141
76.	Aluminum and articles made of aluminum	0	140	70	100
82	Tools, implements, cutlery (etc.)	20	140	62	96
84.	Non Electrical Machinery	0	140	61	85
85.	Electrical Machinery	45	140	107	116

Note: Averages (a) and (b) correspond to the minimum (effective) rates of duty and the maximum (effective) rates of duty for different items belonging to the respective Chapters.

Realized Rates of Tariff

6.1 In the analysis presented in the previous section, we considered nominal tariff rates with quantifiable exemptions. Since there are many exemption notifications which provide custom duty exemptions in respect of particular item(s) under a tariff heading, specific use of commodities or specific source (country) of supply, the actual incidence of customs duty would be lower than those reported in the previous section. It is important therefore to study also the collection rates or realized rates of tariff duty defined as the ratio of actual customs duty collection to the value of imports, which would incorporate all the exemptions.

6.2 One serious difficulty in the analysis of realized tariff rate arises from the fact that prior to 1987-88, the classifications used for import trade data and customs revenue data in the official data sources did not match. This introduces some error in the computation of the realized tariff rates, except when these are computed at a highly aggregated level. For 1987-88, data on imports and customs revenue are available according to the classification in the Harmonized System (HS). Such data for more recent years are not available at the disaggregate level. We could obtain some provisional data on customs revenue and imports for 1989-90. These have been utilized for the analysis.

6.3 Table 6.1 shows the composition of tax revenue obtained from custom duties (including CVD) according to broad commodity groups. It is seen from the table that customs duties on machinery and transport equipment constitute a little less than one-third of the total customs revenue. Nearly 75 per cent of the total customs revenue is obtained from duties imposed on

imports of (1) machinery and transport equipment (including project goods), (2) metals products, (3) petroleum, petroleum products and related materials, (4) chemical products, and (5) artificial resins, plastic materials and articles thereof. From the table, no major structural change is observed in the commodity-wise composition of customs duties over the period 1975-76 to 1988-89. However, it is interesting to note that the relative share of petroleum and petroleum products in total customs revenue has significantly increased over time, while the share of fertilizers has declined.

6.4 Table 6.2 shows realized rates of customs duty (including CVD) for some major product groups and at the aggregate level for the period 1975-76 to 1988-89. It is seen from the table that the realized rate of import duty at the aggregate, all-commodities level was 28.54 per cent in 1975-76. In the period 1975-76 to 1980-81, it remained by and large at this level. But, during the 1980s, there was a significant increase in the realized rate of customs duty at the aggregate level. It increased from 27.06 per cent in 1980-81 to 56.82 per cent in 1988-89. A rising trend in the realized rate of duty in the period since 1980-81 is observed also for most product groups, for which realized duty rates are presented in the table. The increase is especially marked for petroleum, petroleum products and related materials, for which the realized duty rate rose from 6.74 per cent in 1980-81 to 65.54 per cent in 1988-89. It may be mentioned here that most of the customs revenue obtained from this category arise from imports of crude oil.

6.5 A comparison of nominal and realized customs duty rate at the aggregate level is presented in Table 6.3 for the period 1980-81 to 1989-90. The nominal duty rate does not include CVD. The realized duty rate has been shown both with and without CVD. Clearly, the latter is more relevant for comparison. It is

interesting to note that import-weighted nominal duty are was only 10 percentage points higher than the realized duty rate (with CVD) in 1980-81. But this gap was about 50 percentage points in 1988-89. Similarly, it is seen that the difference between the import-weighted nominal duty rate and the realized duty rate (without CVD) has increased between 1980-81 and 1985-86. It appears therefore that specific customs duty exemptions have become more and more important during the 1980s.

6.6 It would be useful to examine next how the realized duty rate varies across industries. Table 6.4 shows realized duty rates with and without CVD, for 32 product groups (chapters) for the year 1985-86. The duty rate is found to be relatively high for (1) organic chemicals, (2) tanning and dying extracts, (3) essential oils and resinoids, (4) soap, washing preparations, etc., (5) artificial resins, plastic materials and products (6) albuminoidal substances (7) photographic and cinematographic goods, (8) textile and textile articles, (9) articles of stone, plaster, cement, etc., (10) glass and glassware, and (11) copper, nickel, zinc and articles thereof. On the other hand, the duty rate is relatively low for (1) pharmaceutical products, (2) fertilizers and allied chemicals and products, and (5) magnesium, beryllium and products. In 27 out of the 32 product group the realized duty rate is higher than the duty rate at the aggregate, all-commodities level.

6.7 Realized rates of customs duty (including CVD) for 48 major groups of products for two recent years, 1987-88 and 1989-90 are presented in Table 6.5. It is seen from the table that for a large number of product groups the rate of duty is about or more than 100 per cent. These include (1) articles of stone, plaster, cement, mica, etc., (2) manmade staple fibres, (3) manmade filaments, (4) photographic and cinematogrpahic goods, (5) plastics and products, (6) beverages, spirit and

vinegar, and (7) ball and roller bearings. On the other hand, the duty rates are relatively low for (1) pharmaceutical products, (2) air-craft and vessels, (3) pulp, paper, paperboard and articles thereof, (4) silk, (5) wool and other animal hair, (6) primary materials of iron and steel and (7) aluminium. Another product group, for which the realized rate of customs duty is very low is fertilizer and related materials.

6.8 It is interesting to note that the realized duty rate on project imports was about 99 per cent in 1987-88, while that on non-electrical machinery, excluding machine tools and ball and roller bearings, was only about 40 per cent, which was low also in relation to the duty rates on basic metals and metal products (especially iron and steel). However, in 1989-90, the realized duty rate for non-electrical machinery (excluding machine tools and ball and roller bearing) was nearly the same as for project imports and it was not much lower than the average duty rate for iron and steel products.

6.9 Another interesting point to be noted is that while the nominal rates have gone up between 1987-88 and 1989-90 for all major product groups, the realized duty rates have generally declined. At the aggregate level, the realized duty rate has declined by about 10 percentage points, from about 62 per cent to about 52 per cent. For many groups, the decline in the realized duty rate has been by about 20 percentage points or more. This indicates that, in 1989-90 compared to 1987-88, specific customs duty exemptions were more important, which might have been caused partly by a change in the import structure in favour of items for which such exemptions are available and/or in favour of those category of importers (e.g., exporting units) who can import at concessional or nil duty. Interestingly, the

realized duty rate for non-electrical machinery (excluding machine tools, and ball and roller bearings) and electrical machinery have both increased between 1987-88 and 1989-90.

6.10 Realized duty rates presented in Tables 6.4 and 6.5 exhibit considerable variation across industries. Thus, in Table 6.4 the realized duty rate without CVD ranges from 0.38 per cent to 188.59 per cent cent and the duty rate with CVD ranges from 0.38 per cent to 233.84 per cent. Similarly, in Table 6.5 the realized duty rate (including CVD) ranges from 8.15 per cent to 221.83 per cent for 1987-88 and from 5.41 per cent to 246.27 per cent in 1989-90.

6.11 Table 6.6 presents a comparison between the frequency distributions (%) of nominal and realized tariff rates. The data relate to the year 1985-86. While the frequency distribution of nominal duty is based on all items (tariff headings), that for realized duty has been derived using data for 253 major items (tariff headings) chosen on the basis of their importance in the total value of imports.[12] The Table brings out that for most items the nominal duty rate lies in the range 50 percent to 150 percent. On the other hand, for nearly half of the items, the realized duty rate is less than 50 percent. The average nominal duty rate is 105.9 percent, while the average realized duty rate is 63 percent. The standard deviations of nominal and realized duty rates are 57 percent and 55 percent, respectively. Evidently, the inter-industry variation is relatively more marked in the realized duty rate than in the nominal duty rate(as brought out by the coefficient of variation).

12. Clearly, the realised duty rate is not available if the item is not imported. There are many such items.

Table 6.1

Commodity Wise Composition of Custom Duties

DESCRIPTION	1975-76	1976-77	1977-78	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89
Fruit	0.78	0.99	1.00	1.02	1.05	0.94	0.77	0.96	0.90	0.64	0.51	0.58	0.45	0.48
Petroleum, Petroleum Products & Related Materials	8.51	7.74	7.75	8.66	7.66	10.44	6.70	5.00	3.89	7.19	11.12	9.82	16.05	15.43
Textiles Fibers	3.64	3.72	7.85	8.41	7.54	8.19	7.93	8.01	4.60	3.28	3.75	3.07	1.82	1.72
Machinery & Transport Equipment	32.02	30.61	27.08	24.26	27.00	26.32	28.50	30.56	35.82	34.05	27.90	35.53	30.77	27.91
Metals	18.02	20.76	18.90	22.34	20.98	20.50	22.53	19.11	17.23	18.03	18.16	15.34	15.52	15.58
Animals & Vegtable Oils Fats & Waxes	0.64	0.33	0.81	0.53	1.29	1.34	1.36	0.63	0.88	1.04	0.99	2.35	4.48	3.90
Chemical Product & Fertiliser	22.45	13.77	14.53	14.99	15.98	10.27	10.43	9.58	10.87	12.34	12.86	9.48	9.97	11.30
(i) Chemical Product	8.75	10.65	11.47	10.75	13.26	9.68	10.16	9.40	10.85	12.33	12.82	-	-	-
(ii) Fetiliser	13.70	3.12	3.06	4.24	2.72	0.59	0.27	0.09	0.02	0.01	0.04	-	-	-
Glass & Glassware	0.28	0.27	0.48	0.49	0.55	0.47	0.45	0.52	0.40	0.40	0.47	0.28	0.32	0.41
Artificial Resins, Plastic Materials & Articles Thereof	2.64	3.42	5.47	4.11	3.88	4.18	4.15	4.42	4.12	4.33	5.09	5.19	5.08	5.42
Rubber & Articles Thereof	0.51	0.76	0.89	0.74	1.20	1.00	1.36	1.45	1.41	1.47	1.28	1.43	1.08	1.09
Pulp, Paper, Paper Board & Articles Thereof	2.43	2.65	2.21	1.63	1.65	1.32	1.70	1.48	1.38	1.46	1.54	1.19	0.77	0.76
Mineral Substances, Metallic Ores, Slag & Ash	NA	0.92	1.09	0.92	0.87	0.96	0.72	1.33	1.66	1.35	1.01	1.27	1.22	1.21
Others	*8.08	11.96	11.64	11.90	10.53	14.06	13.39	14.90	16.84	14.37	15.32	14.37	12.46	14.89
TOTAL	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

*Included Mineral Substances, Metallic Ores, Slag & Ash

Source:-

1- Receipts Budget, Govt. of India

Table 6.2

Realised Rates of Import Duties

DESCRIPTION	1975-76	1976-77	1977-78	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89
Friut	25.08	50.29	35.10	44.36	69.56	94.76	85.08	171.85	70.67	61.85	76.94	n.a	n.a	n.a
Petrolem, Petrolem Products & Related Materials	9.40	7.96	8.21	11.36	6.50	6.74	5.54	4.55	4.51	9.39	20.83	40.21	54.37	56.54
Textiles Fibers	67.58	26.52	24.47	69.29	134.98	169.41	133.85	167.52	103.14	99.05	134.89	n.a	n.a	n.a
Machinery & Transport Equipment	46.48	48.35	40.05	48.35	54.72	49.09	61.74	64.80	63.41	79.54	63.78	65.11	69.65	66.29
Metals	59.29	79.39	66.25	69.40	49.70	52.34	60.41	64.47	67.19	94.52	87.58	85.13	116.07	93.76
Animals & Vegtable Oils Fats & Waxes	51.41	4.03	1.79	2.13	7.85	6.43	8.46	7.74	6.61	7.33	11.95	n.a	n.a	n.a
Chemical Product & Fertiliser	62.10	50.61	44.80	41.15	68.49	30.97	39.92	64.75	57.46	42.11	49.89	n.a	n.a	n.a
(i) Chemical Product	51.44	78.43	66.42	54.98	85.45	69.43	71.30	87.91	71.00	81.79	88.43	n.a	n.a	n.a
(ii) Fetiliser	39.60	22.88	19.56	25.15	20.28	3.06	2.29	2.21	0.58	0.01	0.03	n.a	n.a	n.a
Glass & Glass-ware	90.23	146.15	117.60	118.83	141.32	87.64	103.18	136.21	84.23	104.62	129.96	n.a	n.a	n.a
Artificial Resins, Plastic Materials & Articles Thereof	183.36	181.57	135.62	129.07	113.19	117.09	142.26	164.06	116.34	137.29	147.51	137.50	128.21	107.27
Pulp, Paper, Paper Board & Articles Thereof	44.81	31.20	35.29	24.41	24.71	22.09	25.45	38.43	30.84	27.79	30.54	32.09	24.95	22.04
All Commodities	28.54	24.11	27.28	32.29	30.72	27.06	31.54	35.77	35.48	41.27	47.50	57.26	61.72	56.82

Source:-

1- Recepits Budget, Govt. of India
2- Statistical Abstract India
3- Economic Survey, Govt. of India

Table 6.3

Comparison between Nominal Rate of Customs Duty (with Quantifiable Exemptions) and Realized Rate of Customs Duty at the Aggregate Level : 1980-81 to 1989-90

(Per cent)

Year	Nominal Rate (Basic + Auxiliary)		Realized Rate	
	Unweighted	Weighted by imports	With CVD	Without CVD
1980-81	71.4	38.1	27.1	19.7
1981-82	80.1	43.7	31.5	24.3
1982-83	87.5	53.1	35.8	28.3
1983-84	99.5	60.5	35.5	26.2
1984-85	103.9	61.2	41.5	26.2
1985-86	105.2	64.0	47.5	34.2
1986-87	116.1	79.4	57.3	39.9
1987-88	116.1	79.1	61.7	
1988-89	124.6	88.2	56.8	
1989-90	123.7	86.0	51.8(P)	

P = Provisional.

Table 6.4

Realized Rates of Customs Duty ; Rate of Duty

(Per cent)

	Description	Without CVD	With CVD
1.	Inorganic chemicals	22.67	26.57
2.	Organic chemicals	111.88	126.41
3.	Pharmaceutical products	4.42	4.74
4.	Fertilizers & allied chemicals	0.38	0.38
5.	Tanning & dying extracts	104.40	127.18
6.	Essential oils & resinoids	77.68	94.14
7.	Soap, washing preparations, artificial waxes, etc	86.51	111.61
8.	Albuminoidal substance, glues, enzymes	188.59	233.84
9.	Explosives, pyrotechnic products	41.98	51.80
10.	Photographic & cinematographic goods	108.45	140.82
11.	Artificial resins & plastic materials, articles thereof	80.49	137.12
12.	Rubber, synthetic rubber, factice & articles thereof	65.18	81.66
13.	Articles of leather	54.38	69.78
14.	Wood & articles of wood	53.14	56.49
15.	Paper & paper board & articles thereof	49.96	60.20
16.	Textiles & textile articles	75.42	116.66
17.	Footwear, gaiters & the like, part of such articles	69.58	71.72
18.	Article of stone, plaster, cement etc.	122.59	157.57
19.	Ceramic products	46.25	59.58
20.	Glass and Glassware	85.71	106.05
21.	Iron and steel and article thereof	48.93	54.99
22.	Copper & article thereof	102.10	119.74
23.	Nickel & article thereof	72.75	93.00
24.	Aluminium & article thereof	21.31	35.33
25.	Magnesium & beryllium & article thereof	19.03	26.13
26.	Lead & articles thereof	87.40	102.98
27.	Zinc & articles thereof	84.94	117.21
28.	Tin & articles thereof	67.32	67.32
29.	Tools, implements, cutlery, spoon & part thereof	57.32	76.81
30.	Boilers machinery & mechanical appliances & parts thereof	63.47	71.99
31.	Electrical machinery & equipment : parts thereof	62.82	72.52
32.	Transport equipment	44.26	53.13

Table 6.5

Realised Rates of Import duty of India
(1987-88 & 1989-90)

Sl.No.	Discription	1987-88	1989-90
1	Fruits,dried & fresh	48.96	46.34
2	Coffee,tea,mate & spices	104.95	83.09
3	Animal or vegatble fats & oils & their creavage product prepared edible fats,animal or veg. waxes	60.89	98.94
4	Beverages,spirits & vinegar	203.72	99.29
5	Mineral substances	49.13	51.71
6	Ores, slag & ash	80.24	50.21
7	Potroleum & petrolem products	51.87	41.93
8	Inorganic chemicals	39.72	30.52
9	Organic chemicals	114.03	94.00
10	Fertilizer	1.99	n.a
11	Pharmaceutical products	8.15	5.41
12	Dyes,colours,prints & varnishes	102.30	89.95
13	Essentiol oils,resinoids & toilet preparations	75.83	64.30
14	Soap,ogranic surface active agents artifical waxes	142.37	125.56
15	Photographic & cinmatographic goods	152.63	113.56
16	Misc. chemical products	129.56	103.63
17	Plastic & articles thereof	123.81	98.41
18	Rubber & articles thereof	87.93	80.80
19	Pulp,paper,paperboard & articles thereof	21.13	26.04
20	Silk	28.21	9.33
21	Wool & other animal hair	21.58	16.09
22	Manmade filaments	175.59	157.35
23	Manmade staple fibres	113.99	86.99
24	Articles of stone,plaster cement,asbestos, mica or similar materials	221.83	246.27
25	Ceramic products	91.95	96.25
26	Glass & glassware	70.40	62.88
27	Primary materials of iron & steel	31.21	44.71
28	Iron & non-alloy steel	104.58	78.78
29	Stainless steel	106.31	77.80
30	Other alloy steel,hollow drill bars & rods	110.74	81.92
31	Articles of iron & steel	61.44	49.12
32	Copper	124.56	78.44
33	Nickel	93.23	58.53
34	Aluminium	31.38	32.36
35	Lead	84 85	69.50
36	Zinc	155.18	53.66
37	Tin	100.32	104.66
38	Other base metals	107.57	82.86
39	Tools,implement & other misc. articles of base metals	80.56	99.09
	Machinery excluding machine tools & ball		

40	or roller bearings	40.33	56.43
41	Machine tool,parts & accessories	51.13	53.85
42	Ball or roller bearings	123.00	110.90
43	Electrical machinery	65.13	83.44
44	Railway locomotive & materials	39.51	79.00
45	Moter vehicles & parts thereof	90.02	78.53
46	Air-caraft & vessels	14.89	7.56
47	Optical,photographic,cinematographic measuring, medical surgical instrument	37.90	66.59
48	Clocks & watches & parts thereof	79.72	87.67
49	Project import	99.10	60.74
50	Total	62.15	51.75

Sources:- (i) Monthly Statistics of the Foreign Trade of India, Vol II Import,DGCIS,Ministry of Commerce,Govt. of India
(ii) Receipts Budget,Govt. of India

Table 6.6

Frequency Distribution (%) of Nominal and Realised Duty (Basic + Auxiliary), 1985-86

Range	Nominal Duty	Realised Duty
0-25	6.2	26.9
25-50	1.7	21.3
50-75	22.1	18.2
75-100	5.9	13.4
100-125	32.5	7.0
125-150	24.4	4.1
150-200	2.7	2.8
Above 200	3.9	6.3
Total	100.0	100.0
Mean	105.0	63.0
S.D.	57.0	55.0
Coefficient of variation	0.5	0.9

7. Political Economy of Tariff Protection

7.1 In the neoclassical trade theory, protection of domestic industries from import competition generally lowers income of that country, unless its trade volume is large enough to affect international price. Yet, we find that almost all countries protect their industries from import competition. To explain the protection of industries in developed countries, many empirical studies have been undertaken based on the theory of Pubic choice. In these studies, the authors take the view that protection is demanded by the import-competing industries and the government is viewed as the supplier. These import-competing industries demand protection so as to increase the producers' surplus and they exert the pressure through the power to vote. The people who tend to oppose import restrictions are the consumers of the industry's product, who suffer a loss in consumer surplus, or industries who use it as an intermediate input in their production process, and exporters who suffer a price disadvantage due to an increase in costs because of tariffs. The government with the desire to be in power balances the political pressures for and against protection.

7.2 Among the demand-side factors, the ability of an industry to organize its members and obtain funds for effective lobbying is an important determinant of tariff rate. However, despite the fact that there would be additional benefits derived which would exceed costs if tariff rate was imposed on the import competing goods, these firms may not be able to raise sufficient funds due to the problem of free-rider. Olson (1965) pointed that because of the free-rider problem, the incentive for a firm to contribute for effective lobbying would be considerably less.

This is so, because some of the firms would benefit whether they contributed or not. So, one would expect the industry's rate of protection to be greater, the smaller the number of firms.

7.3 Geographic concentration is another variable which may bear some relationship with the levels of protection. Pincus (1975) has shown that geographic concentration would be positively related to protection levels, since greater concentration improves the ability of an industry to co-ordinate and monitor lobbying efforts. Brock and Magee (1974) have on the other hand shown that geographic dispersion would be more effective politically because they can influence a large number of elected representatives.

7.4 Anderson (1980) has shown that the more labour-intensive the industry and less important the industry's output in consumption basket of workers, the more benefits they would derive by lobbying for protection. Furthermore, he has shown that if the value-added share of output is low, the factory owners benefit would be greater (proportionately) from an increase in price. Because of these reasons, the workers would willingly contribute to lobbying in their industry.

7.5 Anderson and Baldwin (1981) argue that the absolute magnitude of benefits from protection to an industry which shows declining profitability are greater than that for a profit making industry. The reason is that because of declining profits they might not attract more firms to the industry. The workers too, would benefit by lobbying for protection since otherwise they would loose their jobs. According to them, the expected negative relationship between change in employment in an industry and its rate of protection may not be true if the industry is able to obtain protection to maintain its status quo.

7.6 Bar-Nathan and Baruh (1980) argue that import-substituting industries in order to offset the inefficiency in their production process seek protection. They show a negative relationship between total factor productivity and protection.

7.7 The supply side is influenced by factors affecting the costs to the government of providing protection to an industry. As protection increases costs go up. This could result in a loss of support from consumers and from members of other industries who are adversely affected by the policy. The government would weigh the costs against the political benefits obtainable from supplying protection. If the industry is allowed to decline, this could result in a loss of campaign contributions and voting support to the government. So, the government would assist those industries that are supporters of the party in power; portraying it as a social welfare measure. So one could expect more assistance to a declining industry, the larger the number of employees in the industry and the lower their average wage.

7.8 The differential effects of protecting products on the consumer is another set of factors affecting the nature of costs of protection. If the demand for a good is a 'necessity', the political costs are likely to rise more rapidly than if the consumers can easily shift to substitute products, or if the burden of the price rise does not fall disproportionately on the low income earners.

7.9 The preceeding discussion suggests the following hypothesis for structure of protection. An industry is likely to receive higher rate of protection

a. the more concentrated the share of output among the largest three/four enterprises,

b. the more labour intensive the industry,

c. the less important the products of the industries are in the consumption basket of low income earners,

d. the more it shows declining profitability,

e. the more inefficient the firms of the industry are,

f. the less the ratio of value-added to output, and

g. the more rapid the in the import penetration level.

Empirical analysis using the hypotheses have been carried out for developed economies and empirical support has been found for them.

7.10 An attempt is made here to examine some of the factors that influence the nominal rates of protection. The two variables chosen for the analysis are industrial concentration and labour intensity.

7.11 To compute concentration ratio, data on the market share of top 3 firms for 130 selected industrial products for 1983-84 were drawn from a study on "Market and Market Shares" by the Centre for Monitoring the Indian Economy. The tariff data for these products were obtained from Customs Tariff, Working Schedule (DGCI & S, GOI). Production data were obtained from DGTD, annual reports. Since production data for some of the products were not available, we have used data on sales as a proxy for production. Data on imports were drawn from monthly statistics of Foreign Trade of India (DGCI & S), Ministry of Commerce.

7.12 Regressing nominal tariff rate on concentration ratio, we obtained the following equation (t - value in parentheses)

$$NTR = 91.89 + 1.32 \underset{(2.46)}{C_3}$$

$$n = 130 \qquad r^2 = 0.05$$

where NTR is the nominal tariff rate and C_3 is the concentration ratio of top 3 firms. The co-efficients of the concentration ratio variable is correctly signed and statistically significant at the 5 per cent level. The value of r^2 is low, which indicates that the estimated model leaves a large part of the variation in tariff rates unexplained. However, the estimated equation does indicate that industrial concentration influences the nominal tariff rates.

7.13 To examine the hypothesis that more labour intensive industries are able to get higher rate of protection, data on labour and capital data were collected from Annual Survey of Industries for the year 1985-86. The 3 digit ASI industries were classified into 52 groups, for which average tariff rates were presented in Section 5 above. We regressed weighted average tariff rates on the capital/labour (K/L) ratio. The results were as follows.

$$NTR = 122.61 - \underset{(2.66)}{11.94)\ K/L}$$

$$n = 52 \qquad r^2 = .12$$

The negative relationship between capital-labour ratio and the tariff rates implies that the higher the capital labour ratio the lesser is the tariff rate for the industry. The 't' value of 2.66 shows that this is statistically significant at one per cent level. When two outliers namely the grain-mill products industry and printing industry were removed, the relationship between capital/labour ratio and tariff rates improved further. The results for the 50 industries were as follows.

$$NTR = 128.34 - 13.20\ K/L$$
$$(-3.35)$$

$$n = 52 \quad r^2 = .19$$

The value of r^2 improves, which indicates that estimated model does give a better fit to the data.

7.14 Thus the evidence presented above lends some support to the hypothesis that tariff rates tend to be higher in more concentrated and more labour intensive industries. These results are in line with findings reported in many earlier studies on political economy of tariff protection for other countries.

7.15 Political economy of protection is a very interesting and important area for research. While much more rigourous analysis is required than done here for an understanding of the political economy of protection in India, we have carried out such analysis for India perhaps for the first time.

8. Inter-Country Comparison of Tariff Rates

8.1 Table 8.1 presents a comparison of tariff rates in India with those in several other developing countries. It is seen from the table that tariff rates in China and Bangladesh are higher than those in Argentina, Hungary, Mexico, Morocco, Thailand, Turkey and Yugoslavia. Tariff rates in India are comparable to those in China and Bangladesh and even higher for certain product categories. A comparison of collection or realised rates of duty also shows that the tariff rate is higher in India.

8.2 In Table 8.2, a comparison of tariff rates is made between Mexico, China, Brazil, Turkey and India in respect of 12 groups of manufactured products. It is seen that the tariff duty rates are low for Mexico, compared to which the tariff rates are higher in China, Brazil and Turkey. But, the tariff rates for India exceed those for all the four countries in all the 12 product groups. The difference is more marked in the case of plastics and articles thereof, while it is less marked in case of leather products.

8.3 We have carried out a comparative analysis of the average tariff rates for 94 2-digit HS codes (Chapters) for Brazil, China, Turkey, Mexico and India. We find that the structure of tariff rates are quite similar among Brazil, China, Mexico and Turkey; the correlation coefficients between the chapter-wise tariff rates of any pair of countries is about 0.7 or higher (with the exception of the pair Mexico and Brazil for which the correlation coefficient is 0.5). The pattern of Indian tariff rates is similar to that of the other four countries (though to a lesser degree); the correlation coefficients between Indian tariff rates and that of the other countries range

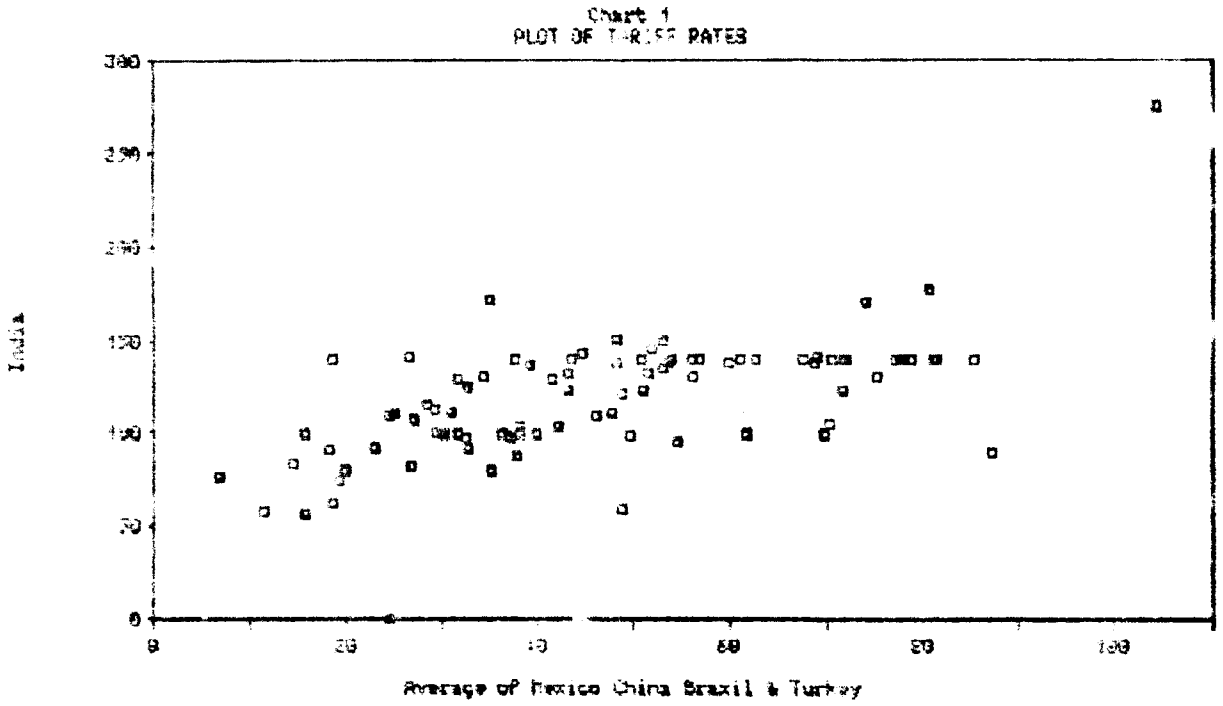
Chart 1
PLOT OF TARIFF RATES
India
Average of Mexico China Brazil & Turkey

from 0.4 to 0.6. a graphic presentation of the chapter-wise average tariff rates of India vis-a-vis the average rates computed taking the rates for Brazil, China and Turkey is made in Chart 1.

8.4 Comparison of nominal tariff rates between India and other developing countries presented in Tables 8.1 and 8.2 suffers from the limitation that the tariff rates for India has been derived taking into account only the quantifiable exemptions. If all customs duty exemptions were included then the tariff rates for India would have been lower than those reported in the table. Even then, tariff rates in India would have been one of the highest among the developing countries.

8.5 In this context, it should be realised that the level of tariff prevailing in a country would depend among other factors, on the development strategy being pursued, inward-looking or outward-looking, the level of development of its industries, and the availability of alternative sources of revenue. Thus, one may find some justification for India having relatively higher tariff rates compared to the general level of tariff rates among other developing countries on the grounds that (1) India is basically following an inward-looking development strategy, (2) India has a well-diversified industrial structure, and (3) the scope for raising revenue from direct taxes is limited. Yet, it is important to ask how some countries very similar to India are able to maintain their industries with significantly lower customs duties.

Table-8.1

INDIA: Cross Country Comparision of Tariffs on Manufactured Goods
Unweighted Mean and Standard Deviation of Tariffs and Duty Collection Rates
(% advalorem)

Country	Intermediate Goods		Capital Goods		Consumers Goods		Manufacturing Sector		Import Duty Collection Rate
	Mean	Std.Dev	Mean	Std.Dev	Mean	Std.Dev	Mean	Std.Dev	
Argentina	21.20	15.30	25.00	12.60	21.90	8.00	22.90	14.30	13.80
Bangladesh	97.90	60.00	80.50	18.10	116.10	82.00	100.80	67.30	15.00
China (PRC)	78.90	55.79	62.00	47.80	130.70	66.90	91.29	63.40	n.a
Hungary	14.20	27.30	14.00	51.40	22.60	17.50	20.90	15.00	7.00
Mexico	23.50	16.30	23.00	17.30	32.20	26.40	24.70	19.00	6.80
Morocco	21.60	16.90	18.10	12.00	43.00	20.50	27.80	20.40	16.60
Thailand	27.80	20.40	24.80	16.20	48.50	38.70	33.50	28.60	12.50
Turkey	29.40	25.00	34.90	18.30	55.30	40.60	37.10	30.90	7.00
Yugolavia	18.00	4.90	20.70	4.20	20.00	6.40	19.00	5.50	10.90
India									
1986-87	117.80	45.00	89.10	32.20	134.10	27.90	117.60	40.40	57.30
1989-90	129.70	62.90	94.10	31.80	138.80	29.00	125.50	49.80	51.80

Sources and Notes:- India, An Industrialising Economy in Transition, The world Bank,(1989),p137.
Tariff Rates for India
The import duty collection rates include all import duties, including countervailing duties in the case of India.

Table 8.2

India : Comparison of Tariff Rates for Some Selected Product Groups

	Mexico	China	Brazil	Turkey	India
Inorganic chemicals	7	33	32	27	103
Organic chemicals	10	29	32	26	113
Plastics and articles thereof	10	43	68	58	190
Rubber and articles thereof	11	46	75	42	105
Articles of Iron and steel	11	30	43	29	162
Aluminium & articles of aluminium	11	35	68	39	100
Tools, implements, cutlery, etc.	15	58	60	52	102
Non-electrical machinery	11	41	52	35	86
Electrical machinery	10	40	62	40	119
Man-made fibres	8	58	57	46	251
Paper & paper board	5	50	63	53	109
Leather products	17	88	91	90	140

9. Concluding Remarks

9.1 The main findings of the study are as follows:

(a) Nominal tariff rate (with quantifiable exemptions) are mostly concentrated in the range 75 to 150 per cent. The average duty rate is a little over 100 per cent.

(b) The tariff rate for manufacturing sector is higher than those for agriculture and mining. Within the manufacturing sector, again, the tariff rate escalates with the degree of processing. Thus, the duty rate for consumer goods exceeds those for intermediate and capital good. The tariff rates generally escalates among industries with the level of processing. However, one notable exception is the non-electrical machinery industry the duty rate for which is lower than that for metals (especially iron and steel) and metal products. Also, for a number of non-electrical and electrical machinery, the duty rates for components and parts are found to be higher than those for the complete machines.

(c) The tariff rte does not vary much across broad industrial goods. But, when individual industries are considered, large variations are found. Such high variation is tariff rates can seriously distort the incentive structure of the economy and lead a pattern of resource allocation not in the best interest of the country.

(d) The average tariff rates are found to be almost the same when items are classified according to importing licensing status. This is indicative of the dominance of the revenue objective of customs tariff over other objectives such as conservation of scarce foreign exchange or protecting domestic industry.

(e) Both nominal rates and realised rates of tariff have been raised substantially during the 1980s. Here again, the need for raising more and more revenue for the government might have been the main consideration. It should be noted further that during the 1980s the exchange rates has depreciated substantially. Between 1980-81 and 1989-90, the Rupee-Dollar exchange rate has depreciated from Rs.7.98 per dollar to over Rs.16 per dollar. As a result of the hike in tariff rate compounded with exchange rate depreciation, costs of imported items have gone up enormously, adding to the protection of domestic industries producing import substitutes.

(f) The structure of nominal tariff rates shows a significant positive relationship with labour intensity of industries. Also, a significant positive relationship is found between tariff rate and concentration ratio. These findings are in agreement with the findings of earlier studies on political economy of protection for other countries. These results seem to suggest that political factors and lobbying exert an important influence in the fixation of tariff duties.

(g) Compared to the level of tariff rates generally prevailing among developing countries, including those who follow a development strategy very similar to that of India, Indian tariff rates are high, if not very high.

9.2 There is an impression that in the process of trade policy liberalisation since the late 1970s many items have been shifted from quantitative control to tariff-based import regulation (manifested in the expansion of the OGL list for capital goods and intermediate inputs), and one may be tempted to conclude on that basis that the hike in average tariff rate in the 1980s is attributable to and a reflection of the liberalisation process. Our finding that the average tariff rate of OGL category is not higher than "restricted", "limited permissible" and "canalised items" categories lends little support to this. It may be added that most item added to the OGL list are essential and not available domestically. Thus, it did not result in any immediate, direct competition with domestic producers, making a hike in tariff rates for such items, after their placement in the OGL list, unnecessary.

9.3 The need for tariff reforms has been recognised in the reports of several official committees. The committees have noted the complexity of the Indian tariff systems. The general recommendations of these committees have been (1) to have fewer rates, (2) to have greater uniformity in tariff rates, (3) to reduce the general level of tariff rates prevailing in India, and (4) to shift over time from a system of import control based on quantitative restriction to a system based on tariff. Alexander Committee, for example, recommended that tariff rates for capital goods should not exceed 40 per cent and that for other goods should not exceed 100 per cent. In the Long Term Fiscal Policy (LTFP) document a five-tier duty structure is proposed in which

essential consumer goods would attract zero or negligible duty, universal intermediates would be subject to a duty rate less than that for raw materials, which in turn would have a duty rate lower than that for capital goods, and the highest duty rate would apply to non-essential consumer goods, the imports of which is recommended to remain banned. LTFP also recommends that intermediate goods and capital goods for which quantitative control on imports have to be maintained should be subjected to lower duty than the general rates applicable to these two categories. the analysis of tariff presented here brings out that these recommendations remain largely unimplemented. This, we feel, basically reflects the compulsion under which the government has to function in this matter, including its ever-increasing need for revenue.

9.4 A major consequence of the prevailing tariff structure is that high duties lead to higher cost of production of manufactured products in India. This does not pose much problem for the domestic producers from the viewpoint of international competition, since they find adequate protection in the quantitative restrictions on Imports and high tariff duties. But high cost and high prices of domestic manufactured products tend to limit the size of the domestic market and thereby constrain growth.

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