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THE MANUFACTURING SECTOR AND THE STRUCTURE OF INDUSTRIAL PROTECTION IN NIGERIA

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Western Africa Department
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THE MANUFACTURING SECTOR AND THE STRUCTURE OF INDUSTRIAL PROTECTION IN NIGERIA

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This report is part of the work of the April/May 1970 economic mission to Nigeria headed by Mr. Jochen Schmedtje. It was prepared by Mr. Trent J. Bertrand, industrial consultant on that mission, with the assistance of Mr. Peter G. Kelk.

SUMMARY AND CONCLUSIONS

i. This report analyzes recent developments in the manufacturing sector and the most important government policies affecting industrialization in Nigeria. Moreover, it represents the first attempt at defining the structure of industrial protection in Nigeria in terms of effective rates of protection, based on data for 42 industries in 1968. The findings have important implications for industrial policies in general. Considerable study remains to be done before detailed policy recommendations for specific industries can be developed.

Recent Developments in the Manufacturing Sector

ii. The manufacturing sector's contribution to GDP is still small - about 10 percent in 1969/70; but rapid rates of growth - estimated at close to 10 percent per annum - have been achieved over the 1965/66 to 1969/70 period despite disruptions by the civil disturbances. Nigerian manufacturing is characterized by low value added industries, this being the case both for the export industries engaged in semi-processing primary products and import substituting industries putting final touches to imported inputs.

iii. There has been a pronounced shift from manufacturing in the early 1960's based largely on processing traditional primary products for export towards processing imported materials for the domestic market. As a consequence, industrial activity has become geographically more concentrated in areas with easy access to imported raw materials and large urban consumer markets.

iv. The limits of import substitution have been reached for a number of consumer goods including beer, soft drinks, cigarettes, matches, bakery products, confectionery, soap and cosmetics and footwear. There remains extensive scope for further import substitution in textiles, especially in intermediate products (grey baft). Of intermediate goods, only cement, paints and tires and tubes have reached advanced degrees of import substitution.

v. Foreign capital and expatriate management play a predominant role in the Nigerian manufacturing sector. Over two-thirds of paid up capital in manufacturing firms with ten or more employees is held by private non-Nigerians. There has been no decline in the importance of foreign capital or expatriate management in the three-year period from 1965 to 1968.

vi. The reliability of statistics on manufacturing in Nigeria is open to question on several accounts. In particular, the concept of value added used is not appropriate for showing the value of output at factor cost; and adjustments made to account for small scale production, non-reporting firms and price increases tend to overstate manufacturing production in real terms.

Government Policies

vii. Since Independence, Nigeria has moved from a relatively open economy towards a highly protected domestic market. This trend has been reinforced by tariff increases and quantitative restrictions imposed during the war for balance of payments reasons.

viii. In order to raise additional government revenues export taxation on processed raw materials was substantially increased during the war, from a basic rate of 10 percent to 15 percent for most commodities.

ix. Special fiscal incentives to industry were widely used in the 1960's. These incentives have been used more stringently in the last three years and will be employed in the future only in support of high priority industries or to allow less than (economically) optional location of industries where differences in profitability are marginal. Tariff rebates on imported inputs into manufactured exports have been used as an export incentive but long delays in obtaining these rebates are common.

x. A wartime super-tax on profits in excess of 15 percent of paid-up capital and capitalized earnings has been retained up to the present (fall 1970). Its effect is to increase the rate of taxation on profits from 45 percent to a rate approaching 65 percent.

xi. Excise taxes are an important feature of the Nigerian tariff-tax system, accounting for an expected 20 percent of Federally collected revenue in 1970/71. Since 1964, the policy has been to increase excise taxes on domestically produced commodities in line with tariff increases, thus reducing protection afforded import substituting industries.

xii. A quota system for expatriate technicians and skilled workers is used to encourage the employment of Nigerians in the foreign controlled industrial sector.

xiii. An enlarged role for the public sector is envisaged in the 1970-74 Development Plan. This will take the form of significant government participation (either at least 55 or at least 35 percent of equity investment) in a wide range of large scale industries.

xiv. Priorities in the industrial sector have been redefined with greatest emphasis given to agro-based, producer goods and export-oriented industries and with reduced emphasis on further import substitution in the consumer goods industries.

Structure of Industrial Protection

xv. The present study of industrial protection is based on data for 42 industries in 1968. It involved large scale data collection and processing in which the Federal Statistical Office actively cooperated by making available the raw data of the 1968 industrial census and other pertinent information. The data underlying the calculations of the effective rates of protection are presented in the Industry Notes appended to this report. They represent an important first step in deriving a detailed input-output table for Nigeria.

xvi. On the whole, the structure of industrial protection in 1968 favored low value added industries thus encouraging the growth in low priority final touch assembly plants as opposed to industries better integrated with the local economy.

xvii. There is a considerable difference in the degree of protection afforded different processing activities in Nigeria as defined by the effective rate of protection calculated for a 42-sector breakdown of industry. The structure of industrial protection discriminates heavily against export processing activities and in favor of import substituting industries. In 1968, the average effective rate of protection was minus 24 percent on the former and plus 85 percent on the latter. Import substituting industries processing domestically produced inputs enjoyed greater protection than those processing imported inputs.

xviii. The structure of industrial protection also discriminates against intermediate and capital goods industries relative to consumer goods industries, the effective tariff rate on the latter industries being 55 percent higher than on the former. This is also the case for the more recently established industries in Nigeria.

xix. Excise taxation has had a pronounced effect in reducing the protection afforded import-substituting industries, the degree of protection that would otherwise exist being reduced by over 45 percent for the potable spirits, matches and candles, tobacco, travel goods, beer and stout, cement, soft drinks, drugs and medicines, and textiles industries.

xx. Among the major industries, protection is highest for textiles and metal products. If adjustment is made for excessive profits in the textiles industry the level of its processing cost relative to world prices is not excessive. The benefit of further growth of the textiles industry would appear to compare favorably with most other import substituting industries. The metal products industry would require even higher protection if a high cost domestic steel producing complex were established.

xxi. Profits on capital of 18 percent or higher could be maintained under world market conditions in the beer and stout, tires and tubes and textiles industry. The metal products industry would barely make profits without protection.

Policy Implications

xxii. The policy implications of this report are centered on the strategy for import substitution followed in Nigeria; the tax system with specific reference to export taxation, excise taxation, and the super tax; and the need for further research and data improvement.

xxiii. Import substitution. A large part of import substitution has developed behind tariffs and quotas imposed for revenue and balance of payments purposes. For these commodities, there is a rough tendency for nominal rates of protection to be similar. This leads to a higher degree of effective protection to industries with low ratios of value added to gross output and thus encourages the bias towards final touch assembly industries.

xxiv. Protection is designed to permit the domestic producer to earn a 15 percent net rate of return on investment. Tariff policies designed to equalize the rates of return on capital among industries will prevent the market from allocating factors of production between industries. Along with this restriction of market forces, industries facing international competition will tend to seek increased protection from the government rather than to increase the efficiency of their own operations. Moreover, the potential export market will be neglected since it is more profitable to produce for the highly protected domestic market.

xxv. A more rational approach is to give the same degree of protection to different processing activities, thus permitting market forces to influence the allocation of resources between industries. While exceptions to this principle might be advisable due to special aspects of certain industries, the adoption of such a general guideline would stop the discrimination in favor of low value added industries which now benefits the assembly type consumer goods industries relative to the intermediate and producer goods industries, accorded high priority in the 1970-74 Development Plan.

xxvi. Under a policy of equal protection tariffs on competing imports, raw material inputs, and excise taxes would be set so as to equalize the effective rate of protection among industries. The level of effective protection would be decided on the basis of a decision on the extent to which industry is to be favored relative to other activities because of the beneficial results of industrial activity in developing entrepreneurship, improving the quality of labor, and absorbing excess labor.

xxvii. To be consistent with the priorities established in the 1970-74 Development Plan, the degree of protection accorded intermediate goods industries should be increased relative to that afforded consumer goods industries. However, raising tariffs on intermediate goods and/or lowering tariffs on consumer goods would tend to reduce the profitability of the consumer goods industries, many of which are high cost and inefficient. Preference should be given to industries processing domestic inputs as opposed to imported inputs.

xxviii. Quantitative restrictions entail administrative costs and monopoly profits for those fortunate in obtaining import licenses. In the interest of administrative efficiency and increased government revenues quantitative restrictions should be replaced by tariffs designed to have an equivalent protective effect, except where they are felt to be temporary emergency measures.

xxix. Taxes. The heavy penalization of export industries processing primary products in conjunction with protection of high cost import substituting industries is unfortunate. The benefit is additional government revenue, the more important loss is an inefficient allocation of resources and an income transfer from domestic consumers not only to the government but also to predominantly expatriate producer groups. More moderate export taxation and heavier excise taxation of import substituting industries obtaining very high levels of protection would lead to a more efficient allocation of resources between industries and would be consistent with the priorities established in the 1970-74 Development Plan.

xxx. There appears to be some potential for exporting manufactures to other African countries even without preferential treatment. Two obstacles to this are the high profitability of the domestic market and delays in receiving tariff rebates on imported inputs used in producing export manufactures. The tariff rebate scheme should be modified so that rebates are either received in a reasonable time or are waived subject to verification that the final products have been exported. Excise taxation should also be eliminated on manufactured commodities for export.

xxxi. Given the revenue constraints facing the government, the system of high tariffs with corresponding high excise taxation is an efficient way of generating revenue. Consumers lose through higher prices of imported goods but most of this loss is in the form of transfers to the government via import and excise duties collected. The high level of excise taxation greatly offsets the distortion in production that would otherwise result from high tariff protection. The loss in consumers' surplus due to the consumption distortion may well be an acceptable cost for generating, in recent years, almost 50 percent of Federally collected revenue.

xxxii. The super-tax encourages the capitalization of earnings but discourages new investment by raising the rate of profits tax on new firms which typically have attempted to maintain low ratios of equity to debt capital in the early years of operation to minimize risk.

xxxiii. Further research and data improvement. The present study of effective rates of protection could be refined by further efforts to (a) derive satisfactory data on comparisons of ex-factory and c.i.f. prices, (b) indicate more reliably the extent to which an industry's effective rate of protection reflects the level of factor costs or the existence of excessive profits, (c) calculate a 'net' effective rate of protection which adjusts the rates calculated here for possible exchange rate over-valuation as compared to the free trade equilibrium and (d) carry out industry studies designed to isolate special aspects of particular industries that would justify special treatment.

xxxiv. In addition to the effective rate of protection, it would be useful to calculate an alternative criterion to evaluate domestic industries. This is the domestic resource cost measure which indicates the cost of a unit of foreign exchange earned in an export industry, or saved in an import industry in terms of the domestic resources used in producing this earning or saving.

xxxv. The industrial statistics should be adjusted so as to show value added at factor cost as usually defined. Surveys should be undertaken to improve the adjustments made for small scale industries and non-reporting firms. Appropriate price indexes for manufacturing inputs and outputs should be constructed in order that manufacturing production and value added can be accurately measured in real terms.

I. THE MANUFACTURING SECTOR: PAST PERFORMANCE

1. This chapter presents a brief survey of the nature and development of the manufacturing sector of the Nigerian economy over the past decade. Data on manufacturing are presented in order to define the size of the manufacturing sector in relation to the total economy, its rate of growth, the nature of the structural change that has occurred, the pattern of location of industry, and the importance of foreign private investment in Nigerian manufacturing.

Growth and Structural Change in Nigerian Manufacturing

2. A sectoral breakdown of gross domestic product in current and constant prices is presented in tables 1 and 2 of the Statistical Appendix, while the real rates of growth of manufacturing, crafts, and gross domestic product are given in text table 1. These tables pertain to the total economy but the data for 1967-1969 are only approximate since they include rough estimates of production in the war affected East-Central, South-Eastern, and Rivers States. The contribution of the manufacturing and crafts sector is small; in 1969/70 it is estimated at 9.5 percent. However, this represents a substantial increase from the early 1960's, its contribution being only 5.6 percent in 1963/64. According to the figures in constant 1962 prices, the average annual rate of growth of the manufacturing sector was 21.0 percent for the period 1958/59 to 1962/63, 6.7 percent per annum for the period 1962/63 to 1966/67 and, for manufacturing and crafts together, 15.3 percent per annum in the period 1966/67 to 1969/70. Because of the disruptions caused by the war and more importantly, biases that occur in growth rate estimates due to assumptions made in constructing industrial statistics, these growth rates are upward biased. The problems involved and the likely magnitudes of the biases are discussed in Annex 1, Manufacturing Statistics in Nigeria. However, correction for these biases would not alter the general picture of a small but rapidly growing manufacturing sector.

3. An indication of the structure of manufacturing and its change over the past decade is difficult to obtain because of the lack of reliable industrial surveys prior to 1962 and the lack of data on manufacturing in the Eastern states during the war. A breakdown of value added by industry in 1958, 1963, and 1967 is presented in table 3 of the Statistical Appendix. From 1963 to 1967, industries experiencing the most rapid growth were textiles, miscellaneous petroleum products such as lubricants and bitumens, garments, footwear, metal products, and vegetable oil milling. In 1963, textiles accounted for 7.2 percent of aggregate value added in manufacturing. By 1967, they accounted for 15.1 percent. The share of metal products increased from 5.2 percent in 1963 to 6.7 percent in 1967. The share of basic industrial chemicals rose from 5.2 to 7.8 percent. Vegetable oil milling increased in share from 6.2 to 8.0 percent. No meaningful comparison is possible between 1963 and 1958 since the structure of value added for 1958 is exactly identical to 1963. Obviously, the structure derived from the 1963 survey has been used to generate the breakdown for 1958 for which year there was no industrial survey.

Table 1: VALUE ADDED IN MANUFACTURING AND CRAFTS, GROSS DOMESTIC PRODUCT, AND ANNUAL AVERAGE RATE OF GROWTH, 1958-1970 AT 1962 FACTOR COST

	1958/59 (£N million)	1958/59 to 1962/63 Average Annual Growth Rate	1962/63 (£N million)	1962/63 to 1966/67 Average Annual Growth Rate	1966/67 (£N million)		1966/67 to 1969/70 Average Annual Growth Rate	1969/70 (£N million)
Manufacturing	26.2	21.0%	56.1	6.7%	72.7	93.1	15.3	142.4
Crafts	19.1	0.9%	19.8	0.7%	20.4			
Gross Domestic Product	1023.9	6.5%	1315.4	4.7	1583.1		-1.5%	1513.8

Source: Federal Office of Statistics and Ministry of Economic Development and Reconstruction.

4. Because the 1967 survey excluded the East while the 1963 survey covered the whole country, even data presented for 1963 and 1967 are not strictly comparable. Furthermore, the inclusion of excise taxes in value added greatly distorts the true structure of industry since the growth of firms producing commodities subject to excise taxation tends to be exaggerated because these taxes have risen substantially over the past decade. 1/ In order to take these factors into account, the structure of value added, excluding excise taxes, has been calculated from the 1965 industrial survey with the Eastern region excluded and from the 1968 survey which was not conducted in the Eastern states. The coverage of the two surveys would appear to be quite comparable and responses were used from 534 firms and 601 firms, respectively. Seventy-two of the firms reporting in 1968 went into production in the years 1966, 1967 and 1968. The results of the exercise are presented in text table 2. The most rapid growth occurred in the import substitute textile, footwear, and apparel industries whose combined share rose from 14.7 percent in 1965 to 23.2 percent in 1968. The growth in the vegetable oil milling industries - from 3.2 percent to 8.4 percent over the same period - reflects the rapid expansion of output in enterprises covered by the 1968 census, as access to the Eastern processing plants, where the industry is concentrated, was cut off. Relative declines occurred in the food and beverages sector and in sawmilling and wood products.

Table 2: STRUCTURE OF INDUSTRY /1: VALUE ADDED IN PERCENT BY SECTOR, 1965 and 1968

Sector	1965 (%)	1968 (%)
Food and beverages	27.6	17.6
Vegetable oil milling	3.2	8.4
Textiles, footwear, and apparel	14.7	23.2
Saw milling and wood products	8.1	5.0
Printing and paper products	5.1	4.7
Chemicals, paint and plastics	8.4	11.1
Rubber products, tires and tubes	5.4	5.5
Cement, pottery and glass products	6.2	4.9
Metal products and miscellaneous	22.4	19.5

/1 Eastern States excluded.

Source: Federal Office of Statistics, Industrial Surveys, 1965 and 1968.

1/ Cf. Annex 1, pp. 1-2.

5. The rapid growth of the textile and footwear industries was in large part in response to greater protection afforded the domestic market by both higher tariffs and quantitative restrictions, the development of which is outlined in Chapter II of this report. The increase in protection led not only to capacity operation in the import substituting industries but also to rapid expansion in existing capacity and entry of new firms. This can be seen by an analysis of new firms entering production in the period 1966 to 1968. The number of firms, value added, and employment in these new firms in 1968 is presented in table 4 of the Statistical Appendix. Over 96 percent of value added and over 83 percent of employment in these firms was concentrated in the predominantly import substitute textiles, footwear, apparel, chemicals, paints, plastics, tires, tubes, cement, pottery, glass products, electrical supplies, radio and television assembly, hardware and cutlery, and metal products industries.

Import Substitution: Past Performance and Prospects

6. With a gross domestic product in 1969/70 estimated at ₦N1.5 billion or US$ 4.2 billion and a population officially estimated at 66 million 1/ in mid-1970, import substitution could be expected to become a prominent feature of the industrialization process. It was given a sharp stimulus by the disruptions of trade resulting from the war as, in response to a sharp fall in foreign exchange earnings and holdings, trade restrictions were introduced and tightened. However, there has been recognition of the need to rationalize the process of import substitution. In Chapter III of this report, the distortions caused by the structure of industrial protection are quantified. Here we merely seek to give a rough indication of the extent of import substitution that has occurred in different industries and the potentials for further import substitution. The measure of import substitution is the ratio of imports to total supply. The analysis necessarily gives only a rough indication because both domestic production and imports of various commodities have been differently affected by the war and war related changes in commercial policies.

7. The ratios of the value of imports to total supply for selected products are given in table 5 of the Statistical Appendix. Where possible, these ratios have been derived from data on quantity units of production and imports. However, where figures on quantities produced are not available, the ratios are in value units of production, measured at CIF prices plus tariffs.

8. The limits of import substitution have been reached in a few commodities, and for these growth of domestic production will largely be determined by growth of the domestic market. These commodities include beer and stout, cigarettes, matches and candles, flour, products of the bakery industry, and soft drinks, all of which have a limited potential for exports.

1/ Other estimates are as much as 10 million lower.

9. For a second group of commodities, substantial strides have been made in import substitution during the past five or six years, but the process has not yet been completed. Of these, the most important has been the textile industry. In 1963, imports of textile yarn and thread, fabrics, and made up textile goods other than clothing were valued at ₦N 34.5 million accounting for over 16% of total imports. In the same year, domestic production of these goods was valued at ₦N 7.9 million. By 1968, domestic output had increased to ₦N 40.4 million and imports had declined to ₦N 19.4 million, 10% of total imports. Despite the decline in the ratio of imports to total supply from 81% in 1963 to 32% in 1968, the potential for further import substitution in textiles is extensive. Proposals for new investments in the manufacturing sector that have been submitted to the government are heavily concentrated in the textile industry and efforts have recently been made to encourage the backward linkage of the textile industry towards more extensive production of grey baft by a one-third increase in the import tariff.

10. Imported cement accounted for 36% of total supply in 1963. By 1968 this had been reduced to 12%, and would have been even lower had cement production in the East not been disrupted. Cement imports will be eliminated in the near future. Imports of tires and tubes accounted for 82% of total supply in 1963 and only 36% in 1968. Imports of soap, perfumes, cosmetics, and toilet preparations represented 30% of total supply in 1963; by 1968 this was reduced to about 5%. A sugar refinery began operation in 1964; by 1968 it accounted for 43 percent of the total supply of refined sugar. Other industries where the general trend towards import substitution has been pronounced are wooden furniture (the 35 percent of domestic supply from imports in 1963 being reduced to 20 percent in 1968), footwear (the corresponding figures being 55 percent and 6 percent), and paints (26 percent and 19 percent, respectively).

11. Finally, for a third group of commodities, extensive possibilities remain for import substitution. While truck assembly is carried out in Nigeria, car assembly has not yet been introduced. There are firm plans to introduce car assembly during the next two years. There are also prospects for expanding production of paper containers, boxes, and paper boards regarding which, in 1968, 76 percent of total supply was imported. Considerable scope remains for substituting imports of glass products, even after production in the glass bottles plant in Port Harcourt has resumed.

Export Producing Industries

12. In 1958, roughly half of value added in manufacturing was contributed by firms processing or semi-processing primary products for export. The major structural change that has occurred in Nigerian manufacturing is indicated by the fall in the share of value added of these industries to less than a quarter of the total by 1967. Even taking into account the greater disruptive effect of the civil disturbances on the primary product processing industries, the shift in the orientation of the manufacturing sector from the external to the domestic market has been pronounced. This

development was to be expected as the structure of the tariffs and trade restrictions gives substantial preferences to import substituting industries relative to export industries. The extent of these preferences is quantified in Chapter III.

13. Almost all of the exports produced by the manufacturing sector are processed primary products. Of the export producing industries the most important are the oil milling industry processing groundnuts for groundnut oil and cake and palm kernels for palm oil, the rubber industry processing raw rubber for rubber crepe and sheets, the non-ferrous metal industry processing ore for tin metal, the saw mill industry processing logs for lumber and plywood, and the tanneries and leather industries processing hides and skins. The development of exports of these products from 1965 to 1969 is outlined in table 6 of the Statistical Appendix.

14. Because the Eastern Region is an important producer of palm oil, rubber, and lumber, the civil disturbances had a very disruptive effect on production and export of these products. In value terms, export of the major processed exports fell by 40% from 1965 to 1967. The most drastic export drop occurred in palm oil exports, which fell from ₦N 13.6 million during the same time period. Of the 131 oil milling firms employing ten or more employees listed in the 1970 industrial directory, 107 are in Rivers, East, Central and South Eastern States. As these areas recover from the war, substantial increases in palm oil exports can be expected.

15. The Nigerian manufacturing sector has not succeeded in developing non-traditional exports. However, small amounts of new manufactures are exported to neighboring African countries. For instance, in 1968, ₦N 363 thousand worth of textiles products were exported, mostly to Niger and Sierra Leone. In the 1970-74 Development Plan, 1/ greater priority has been given to stimulating exports. There is recognition in Nigeria that incentive schemes designed to encourage non-traditional exports, such as rebates of all import duties paid on intermediate goods used in the production of exports, have not been successful. Because of this and given the increasing level of protection of the Nigerian domestic market potential exports of manufactures may be foregone unless legislature designed to improve the export promotion schemes becomes effective.

Value Added in Nigerian Manufacturing

16. An important feature of Nigerian manufacturing is the low ratio of value added to gross output. As stated in the 1970-74 Development Plan: "Most industrial activities in the country are still not manufacturing in the true sense of the term, but mere assemblages. Very often, all the components used are imported and are merely put together behind the tariff wall" 2/. While this is most obviously the case for some import substituting

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1/ Second National Development Plan 1970-74, Federal Ministry of Information, Lagos 1970.

2/ Op. Cit., p. 285.

industries carrying out finishing touches on imported inputs, low value added is also characteristic of many of the export industries which only semi-process the raw material. The backward integration of the import substituting industries and forward integration of industries processing for exports have been given higher priority in the 1970-74 Development Plan.

17. An indication of the low level of processing carried out in Nigerian manufacturing is given in table 7 in the Statistical Appendix which shows the ratio of value added to gross output for a 34 sector breakdown of industry in 1967. The table shows value added both including and excluding "other cost", i.e. mainly excise taxes, but also payments for hired transport, advertising, office expenses, professional fees, rental payments, insurance, and miscellaneous expenses. Including "other costs", i.e. on the definition used by the Federal Office of Statistics, 1/ the ratio of value added to gross output for the manufacturing sector as a whole was 40 percent. Excluding "other cost" this ratio reduces to 26 percent.

18. On the basis of value added excluding "other cost" the industries may be grouped with respect to the ratio of value added to gross output into those having a ratio of value added to gross output above 40 percent (group I), between 40 and 20 percent (group II) and below 20 percent (group III). Since these ratios are direct value added to gross output, they cannot be used by themselves to indicate the linkage of manufacturing processing to the rest of the economy because indirect value added in processing domestic inputs may be high. But they do indicate that value added in most processing industries is low.

Group I
Industries with High Value Added of Above 40 Percent of Gross Output

Basic industrial chemicals and petroleum products, cement and concrete products, wearing apparel, sugar and spirit distillery, sawmilling, bricks and tiles, printing.

Group II
Industries with Value Added of 20 to 40 Percent of Gross Output

Dairy products, beer, soft drinks, rubber products, footwear, furniture, made-up textiles, paints, fruit canning, bakery products, textiles, confectionery, food and tobacco, and paper products.

Group III
Industries with Value Added of Below 20 Percent of Gross Output

Meat products, grain products, tanning, vegetable oil, milling, basic metals (tin) and metal products, electrical equipment, motor vehicle repairs, machinery other than electrical, glass products and pottery, travel goods, motor vehicle assembly.

1/ Cf. Annex 1, p. 1.

19. The ranking of some industries changes substantially if the Federal Office of Statistics definition of value added (i.e. including excise taxes) is used. Industries producing heavily excised commodities all appear to have high value added relative to gross output. Examples are beer (73%), miscellaneous foods and tobacco (78%), soft drinks (66%).

Profit Rates in the Manufacturing Sector

20. It has not been possible to derive profit rates on capital invested in Nigerian manufacturing because of the lack of reliable data on capital employed. However, the data is used to show the rate of profit on sales by sector and over time so as to provide an indication of intertemporal changes and inter-industry differences in profitability. Rates of profits on sales can only be used to indicate profitability proper if capital output ratios are similar between industries; hence the results must be interpreted with caution.

21. In table 8 in the Statistical Appendix, profits are defined as gross output minus total costs (including excise taxes) and are shown as a percentage of the value of gross output by industrial sector for 1963 and 1967. The most prominent changes to have occurred over the four year period are: (a) the very high profit rates in the long existing tobacco, beverages, and to a lesser degree textile industries have been substantially reduced; (b) the profit rates on the more recent tires and tubes industry (included under rubber products), chemicals, footwear, wearing apparel, and made-up textiles industries have increased substantially; (c) the rate of profit in the electrical equipment industry is still low but has gone up considerably, in contrast to the unprofitable truck assembly industry; and (d) the rate of profit has fallen in the export oriented tanning industry and remains still relatively low in oil milling and the indigenous dominated printing industry. The fall in profit rates in tobacco, beverages, and textile industries is mainly the result of a rise in excise taxation. The rise in returns in the new import substitute industries reflects the higher protection given the domestic market.

The Location of Industrial Activity

22. The locational pattern of industrial activity is an important question in Nigeria because of the political desirability of economic progress in all States of the country. Nevertheless, at an early stage of development, economic profitability must be the predominant determinant of location of enterprises. This principle has been accepted in the 1970-74 Development Plan and exceptions from it in favor of industrially less developed regions will only be made in marginal cases. Positive steps have been taken to assure that less developed regions are, however, not penalized by high costs for public utilities. Thus, uniform rates for electricity are being established throughout the country. The Federal Government can also play a role in coordinating planning activities carried out by the individual States to minimize any tendency towards uneconomic duplication of production facilities.

23. Because of widely diversified natural resources, manufacturing based on processing raw materials and agricultural products has been better distributed in Nigeria than in most developing countries. Groundnuts, cattle and cotton are spread throughout the northern region of the country. The western region has important base materials in its cocoa, palm trees, and timber resources. The Mid-West and East are benefited by major petroleum deposits, some coal, and extensive palm tree forests. Iron and tin ore reserves are located in the Benue-Plateau and Kwara States. The latter State also has important sugar producing areas. Thus, the contribution to manufacturing value added in 1965 was 26 percent in Lagos, 28 percent in the Western Region and 6 percent in the Mid-West, 21 percent in the North, and 20 percent in the East.

24. The growing importance of import-substitution since 1965 has, however, made a significant difference in the distribution of industrial activity. This conclusion is based on an analysis of the locational pattern for new firms entering into production in the 1966-68 period. In table 9 of the Statistical Appendix, data on the number of new firms, value added, gross output, and employment is given for all new firms with ten or more employees which responded to the 1968 industrial survey. There has been a clear tendency for domestic market oriented firms to locate close to the source of imported raw materials and urban domestic markets. Thus, sixty percent of new firms, accounting for 40 percent of value added and 70 percent of employment, have located in the Lagos area.

25. In the 1970-74 Development Plan, top priority has been given to the agro-allied industries, while reduced priority has been accorded further import substitution. As these new priorities are put into effect, a better distribution of industrial activity will be an indirect but important benefit.

Foreign Participation in the Industrial Sector

26. Manufacturing in large scale plants in Nigeria is dominated by expatriate business. For the total manufacturing sector in 1967, 67 percent of paid up capital was private non-Nigerian, 18 percent was held by the Federal and Regional Governments, and only 12 percent was private Nigerian. The remaining 3 percent was held by international organizations.

27. There are two exceptions to the general rule of above 80 percent private foreign ownership of share capital in Nigerian industry. The first concerns those sectors where Federal, Regional, and State government development organizations have participated in industrial projects. Thus, approximately 28 percent of paid up capital in the textile industry, 57 percent in the printing industry, 37 percent in the vegetable oil milling industry, and 31 percent in the cement and concrete products industry are held by government development corporations. The second is where private Nigerian capital has participated, often in moderately sized establishments. Thus, the private Nigerian share in equity capital in 1967 was 35 percent in the bakery products industry (30 reporting firms with an average

employment of 52), 41 percent in the sawmilling industry (52 reporting firms with average employment of 122), 23 percent in the furniture industry (41 reporting firms with average employment of 87), 39 percent in the tanning industry (7 reporting firms with an average employment of 80), and 34 percent in the motor vehicles repair industry (80 reporting firms with an average employment of 78).

28. In order to learn if any trend towards reduced foreign ownership of Nigerian industry could be identified in recent years, the structure of paid up capital in firms commencing operation in the years 1966, 1967, and 1968 was analyzed. There were 70 such firms reporting in the 1968 industrial surveys. In table 10 of the Statistical Appendix, the rate of foreign participation by sector is compared to the corresponding rate in 1965. The rate of foreign participation is substantially lower in new firms in the textiles, saw milling and wood products industries, but is higher in all other sectors. For the manufacturing sector as a whole, little change has occurred with foreign participation still 67 percent in new firms. The indigenisation of the Nigerian industrial sector has become a high priority objective of planning authorities in Nigeria. The relative importance of foreign capital in the manufacturing sector can be expected to decline in future years as the public sector plays the leading role in most projected heavy industries.

II. GOVERNMENT POLICIES TOWARDS THE INDUSTRIAL SECTOR

29. The purpose in this chapter is to briefly outline the various government policies having an important effect on the industrial sector in Nigeria. Since protection afforded the domestic market through tariffs and quantitative restrictions is of predominant importance, we first outline the development of trade restrictions in the late 1960's. The effect of these policies on industry will be considered in detail in Chapter III, where the degree of effective protection of individual industries is studied. Secondly, other industrial incentives and tax policies are discussed. Thirdly, the priorities established in the 1970-74 Development Plan and the role of the public sector are considered.

Trade Restrictions

30. In 1960, Nigeria was a relatively open economy with industrial activity concentrated in firms processing traditional primary products. The non-export sector was dominated to a great extent by the long established tobacco, beer, and cement industries along with the more recent textile industry. Most other commodities entered Nigeria either free of tariffs (milk, fruit juices, bakery products, sugar, miscellaneous foodstuffs, travel goods, glassware, and electrical appliances) or with low or moderate tariffs (footwear - 33-1/3 percent, paper board-10 percent, radios and communications equipment-10 percent, and meat products - 15 percent). Tariffs were somewhat higher on imports competing with domestic products (beer - 30 percent, cement - 20 percent, cigarettes - 112 percent and textiles - 37 percent). By the mid-1960's however, there was a shift to much higher protection of the domestic market as the data of text table 3 show. For example, whereas in the early 1960's most foodstuffs were imported free of tariffs, by 1965 the weighted average tariff on these products was 55%. The tariff on beer had risen to 60%, on tobacco it had doubled from its 1960 level to 225%, and on textiles it had risen from 35 to 54%. All in all, the weighted average of tariffs on all domestically produced goods (the weights being the industry's contribution to gross output) reached 67 percent in 1965. The weighted average for consumer goods alone was 73 percent and for raw materials 44 percent. Since the tariff on cigarettes was virtually prohibitive, it was not relevant for protective purposes. Therefore the tariff levels for (i) consumer goods and (ii) all commodities were calculated excluding tobacco in either case; the resulting averages were 49 and 48 percent, respectively.

31. The trend towards higher nominal protection of consumer goods industries in the first half of the decade was continued in the late 1960's. Significant increases in the tariff for foodstuffs occurred as a tariff was imposed on milk, and raised on butter and biscuits. The tariff on cigarettes increased by 7% but since the previous tariff was already virtually prohibitive, this had little effect on the domestic industry. Of more relevance

to the rising level of protection were the substantial increases in the tariffs applied to footwear, textiles, and electrical equipment. All these increases contributed to a rise in the weighted average of nominal tariffs on consumer goods to 83% in 1968 (an increase of 14%) or, excluding tobacco, to 58 percent (an increase of 18%).

32. The nominal protection afforded to raw materials increased from earlier years when the basic rate was raised from 20 percent to 33-1/3% in 1964. However, from 1965 to 1968, there was a slight decline in the weighted average of tariffs on raw materials. This resulted from a fall in nominal rates on cement and flour not being quite offset by a substantial rise in the tariff on grey baft - the primary input into later stage bleaching, dyeing and printing process in the textile industry. The tariff changes on flour and cement were of lesser significance since these tariffs were becoming prohibitive. The increased protection of early stage textile processing will have a major effect, however, because substantial amounts of imported grey baft are used in preference to baft woven from locally grown cotton.

33. Besides the increase in the nominal tariffs outlined in text table 3, a reconstruction surcharge has been imposed since 1967. This increases the duty by 7-1/2 percent on all imported goods except (a) for raw tobacco imported by manufacturers on which a 5 percent surcharge is applied and (b) for goods imported at reduced rates by approved manufacturers on certain specific goods (milk, beet and cane sugar, and salt) for which no surcharge is levied. The effect of the surcharge in 1968 was to increase the average nominal tariff from 74 to 78 percent.

34. The level of tariffs in Nigeria is not exceptionally high in relation to many less developed countries where average nominal tariffs are often in the 80-100 percent range. But Nigeria is no longer a low tariff economy and the trend to higher protection is continuing. Since 1968, tariffs have been increased on travel goods (from 40 to 100 percent), footwear (from 40 to 100 percent), and cocoa based confectionery (from 12-1/2 to 33-1/3 percent). The most significant shift in tariff policies, however, has been the rise in tariffs on many raw materials and capital goods, a move designed to redress the imbalance in protection accorded consumer goods and intermediate capital goods industries. This is quantified in Chapter III of this report. Thus, the tariff has been increased in 1970 on imported yarns from 6d per lb. to 10d per lb, the tariff on grey baft from 6.8 per sq. yd. to 9d per sq. yd., the tariff on most intermediate metal products from 33-1/3 to 50 percent, and from 5 to 10 percent on machineries and parts.

35. Besides tariffs, quantitative restrictions on the import of specific commodities have been extensively relied on as a measure to conserve foreign exchange during the recent civil war. Between July and December 1967, twenty-three items were under direct control, the most important of these being petroleum products, cement, various meat products, tires, and certain types of textile products. By June 1969, the list of commodities under specific license arrangements had been expanded to three hundred

Table 3: NOMINAL TARIFFS ON DOMESTICALLY PRODUCED COMMODITIES
1965 and 1968

	Tariff Rate %	
	1965	1968
Consumer goods		
Foodstuffs	55	63
Beer and stout	64	68
Tobacco products	225	240
Textiles (prints and piece goods)	54	74
Tires and tubes	45	45
Footwear	25	50
Furniture	75	75
Paints	40	40
Motor vehicle assembly	33 1/3	33 1/3
Metal products	33 1/3	33 1/3
Electrical equipment	66 2/3	100
Weighted average consumer goods	73	83
Ditto - excluding tobacco products	49	58
Raw materials		
Flour	62	31
Cement	75	40
Concrete products	66 2/3	66 2/3
Miscellaneous products of petroleum industry	33 1/3	33 1/3
Textiles (grey baft)	34	48
Paper containers and paper board	25	25
Metal products	33 1/3	33 1/3
Weighted average raw materials	44	41
All commodities (weighted average)	67	74
Ditto - excluding tobacco products	48	55

Source: Federal Ministry of Trade and Industry.

categories. Many of the additional commodities placed on restriction were either already produced, or could potentially be produced in Nigeria, so that the quantitative restrictions gave added stimulus to domestic industries. The most important of these commodities include wood and plywood, footwear, paper and cardboard packing materials, radios, television sets, record players, textile piece goods, furniture, beer and spirits, travel bags, roofing sheets and other building materials, sugar, confectionery, food pastes, rubber latex, and electrical products and appliances.

36. The importance of the quantitative restrictions in relationship to the tariff system in providing protection to the manufacturing sector could be quantified by a comparison of the percentage difference of ex factory to CIF import prices plus the legal tariff rates. Ex factory prices substantially above the CIF plus tariff price would indicate that quantitative restrictions were the effective measure providing protection. Such price comparisons could not be made for most commodities, however, because of a lack of data on ex factory and CIF prices for items of similar quality. While a price survey that should yield additional information on this question has been undertaken by the Ministry of Trade, the results are not yet available. It has not, therefore, been possible to adequately estimate the protective effect of the quantitative restrictions. These were undoubtedly of considerable importance during the war years, but are likely to be much less significant as the recovery of foreign exchange earnings improves the balance of payments situation and permits the quantitative restrictions to be relaxed. In April 1970, for instance, import quotas were removed from a wide list of commodities. Except where they are felt to be temporary emergency measures, quantitative restrictions should be replaced by tariffs designed to have an equivalent protective effect. The advantage of this change is that the monopoly profits of those fortunate in obtaining import licenses under a system of quantitative restrictions would accrue to the government as tariff revenue under the system of equivalent tariffs.

37. Finally, mention should be made of the negative protection implied in export taxation. Export taxation on most products was at a 10 percent rate until 1969 when the basic rate was increased to 15 percent. The new rate applies to exports of groundnut products, palm kernel products, cotton lint and seed, rubber, and logs. The previously lower rates have been increased for lumber export from 2.5 to 3 percent. The export tax rate on plywood has remained unchanged at about 10 percent. While the change in tariffs on raw materials tended to redress distortions caused by the structure of industrial protection, this export tax change has added to the already heavy penalization of export activities that is defined in Chapter III.

Incentives and Tax Policies

38. Industrial incentives other than tariffs and quantitative restrictions have been extensively used in Nigeria although in more recent years,

they have been of reduced importance. Special industrial incentives 1/ are based on four main legislative acts: (a) the Industrial Development (Income Tax Relief) Act of 1958, (b) the Industrial Development (Import Duties Relief) Act of 1957, (c) the Customs Duties (Dumped and Subsidized Goods) Act of 1958, and (d) the Customs (Draw Back) Regulation of 1958.

39. The Industrial Development (Income Tax Relief) Act grants income tax relief to 'pioneer' companies, the relief extending from 2 to 5 years depending on the size of their capital expenditure on fixed assets. If profits are not earned in these years, the period of pioneer status can be extended by the number of years of unprofitable operation. This incentive has been granted to 156 firms (out of approximately 1000 medium or large scale firms) between 1960 and 1969. While of considerable importance from 1960 to 1966, pioneer status has been granted far less frequently during 1967 to 1969:

Year	No. of firms declared pioneer
1960	10
1961	22
1962	16
1963	15
1964	22
1965	25
1966	19
1967	7
1968	4
1969	1

40. The main beneficiaries of the pioneer industry incentive were the metal and textile industries. However, this incentive has also been used extensively in the food processing, chemicals and paint, rubber and rubber products, pharmaceutical, tin alloys and aluminum, cement and hotel industries. The distribution of pioneer industries among major industrial sectors between 1956 and 1968 and the estimated total investment in these firms is shown in table 11 in the Statistical Appendix. One third of the pioneer firms, accounting for over half of total estimated investment, were in the metals and textile products industries.

41. There is considerable evidence based on surveys of businessmen in Nigeria that the pioneer industries incentive has not been an important factor in the decision to invest by foreign private investors to establish operations in Nigeria. 2/ Since tax sharing agreements do not exist between

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1/ Accelerated depreciation allowances were previously a very important incentive in Nigeria, permitting the investor to write off 50 percent of his investment in the first year, but since 1966 this incentive has been virtually eliminated.

2/ See F. Kilby, Industrialization in an Open Economy: Nigeria 1945-1966, Cambridge 1969, and S. Aluko, Incentive Policies in Nigeria, Ife, 1968.

Nigeria and foreign countries, the benefits of the tax holiday accrue to the foreign government if profits are repatriated. While this reduces the attractiveness of the incentive it does have the beneficial effect of encouraging the re-investment of profits by expatriate firms to avoid home country taxation. However, since the tax holiday can be extended, the pioneer program also reduces the incentive to realize profits in the initial years of operation. The revenue lost through the granting of the pioneer industry incentive could have been more efficiently used in supporting industrialization by improving basic public utility services, such as electricity and water supply that are at present costly and unreliable. The decrease in the use of this incentive is desirable and certainly the possibility of extending the holiday beyond five years should be eliminated.

42. The Industrial Development (Import Duties Relief) Act provides tariff rebates to industries not viable without them if it can be shown that the tariff rate paid on imported inputs is higher than on the firm's final product. The Customs Duties (Dumped and Subsidized Goods) Act permits special tariffs to be applied to goods being dumped in Nigerian markets or subsidized by foreign governments. The Customs (Draw Back) Regulation provides for repayment of all duty on goods imported and exported in the same state or on inputs used in the production of exports. All these incentives are justifiable but there is room for improvement in administering the tariff rebate schemes. This is especially true for the tariff relief on inputs processed and then exported. In interviews with industrialists, many felt that it would be feasible to begin exports of modern manufactures to neighboring African markets even without trade preferences, if the full rebate could be obtained. Actually, however, administrative delays in granting drawbacks greatly reduced the incentive to export, especially given the profitability of the domestic market.

43. In contrast to the positive incentives noted above, a quota system on expatriate technicians and skilled workers acts as a disincentive to foreign investors in Nigeria. Since it is much more costly to employ expatriates than Nigerians in Nigeria, there is already a strong incentive to substitute Nigerians for foreign employees. It is questionable whether the quota system is beneficial. In any case it is very arbitrary in its administration, being an effective constraint on certain firms but having no effect on the operations of others. A better approach would be to concentrate on improving the quality of Nigerian labor.

44. The basic tax rate applied to industrial profits in Nigeria is 40 percent. However, as a temporary measure a 'super' tax was introduced during the war years by which profits above 15 percent of share capital would be subject to additional taxation at a rate of 10 percent for the first ₦N 5 thousand above the fifteen percent of share capital limit, 15 percent for the next ₦N 5 thousand, and 25 percent for any profits above that amount. Because share capital is interpreted as including earnings capitalized by issuing stock dividends, the tax encourages a retention of profits in Nigeria. It does, however, act as a disincentive to new in-

vestment in Nigeria as the ratio of share to debt capital is normally kept low in the first years of a firm's operation in order to lower the risk. It has often been possible for new firms to keep this ratio low enough that government provided debt capital was in effect risk capital. The advantage to the entering firm from this type of financial arrangements is reduced by the nature of the super tax.

45. Besides taxation on profits, excise taxation is heavily relied on in Nigeria to capture part of the income resulting from excess protection. In contrast to most other less developed countries, excise taxation is not applied to imported commodities, so that it has the effect of reducing the degree of protection to the domestic industry. The extent of which such reduction has occurred and how it has affected individual industries is analysed in Chapter III. At this point, it is intended merely to define the importance of excise taxation in terms of the range of commodities involved, to outline the rapid increase that has occurred in excise tax rates, and to indicate the extent to which the importance of excise taxation relative to tariffs has changed.

46. An indication of the extent to which excise taxation has expanded in importance is given in tables 12, 13 and 14 in the Statistical Appendix. Table 12 lists the commodities subject to excise taxation in 1960, 1965 and 1970, table 13 shows the changes in the excise tax rates applied on these commodities, and table 14 indicates the importance of excise taxation relative to import and export taxation as sources of government revenue in the years 1965/66 to 1970/71. The salient points are the following. The commodity base of excise taxation has expanded rapidly. In 1960, only cigarettes, beer, lemonade, confectionery, and soap were subject to excise. By 1970, this list had expanded to 46 commodities including virtually all the major products of Nigerian industry. Furthermore, the rates of taxation imposed on these commodities have increased substantially over the decade. As a result of both the expansion in the commodity base and rise in the tax rates, revenue from excise taxation is estimated to have grown by 152 percent from 1965/66 to 1970/71. Whereas excise taxes accounted for only 13.5 percent of total revenue in 1965/66 (as compared to 47.1 and 10.0 percent for import and export taxes, respectively), they are estimated to account for nearly 20 percent of revenue in 1970/71 (as compared to 25.5 percent for import taxes and 8.1 percent for export taxes).

47. The policy in Nigeria has been to use high tariffs to protect newly introduced industries and then, with increased efficiency in these industries, to reduce protection not by lowering tariffs but by imposing heavy excise taxation. Furthermore, since 1964, it has been the policy to offset the protective effect of increases in tariffs designed for revenue or balance of payments purposes with corresponding increases in the excise tax rates on the domestic industries concerned.

Manufacturing Priorities and the Role of the Public Sector

48. Concern has been expressed in the 1970-74 Development Plan about the extent to which the manufacturing sector has become characterized by industries processing imported inputs with low value added for a protected domestic market. 1/ In an attempt to increase the linkage effects both within industry and between industry and other sectors of the economy, the Plan proposes a realignment of priorities in the industrial sector. Priority areas of investment during the Plan period are therefore set as:

(a) Establishment and expansion of agro-allied industries.

(b) Establishment of liquified petroleum gas and petrochemical industries.

(c) Promotion of integration, forward or backward linkage and diversification of the textile industry.

(d) Establishment of a basic iron and steel industry to provide the input for the manufacture of intermediate and capital goods as base for a future metallurgical complex.

(e) Establishment of a passenger motor vehicle assembly plant.

(f) Expansion of export-oriented industries.

(g) Further import-substitution in areas of current deficiency.

The attempt will be made, therefore, to give greater priority to raw material producing industries, industries processing domestically produced raw materials, and export-oriented industries, while reduced priority will be attached to import substituting industries based on imported raw materials. In Chapter III of this report, the structure of industrial protection is evaluated on the basis of these new priorities.

49. An indication of prospective development in the private sector of manufacturing may be obtained from investment proposals submitted to the government by potential investors. At the time of the Plan's preparation, 177 proposals of new firms were received. Table 15 of the Statistical Appendix ranks these proposals by industry group. While this gives only a rough indication of private sector priorities, the textile and metal products industries rank highest. A better indication of the high priority attached to these industries by the private sector is that textiles account for 46 percent and metal products for 12 percent of total proposed private sector manufacturing investment.

1/ Op. Cit., Chapter 29.

50. The private sector investment plans are considered by government authorities as "in sharp contrast to the national priorities" and it is proposed to influence these plans with the selective use of the industrial incentives discussed above to benefit high priority raw material and domestically-produced-inputs processing firms. However, it is doubtful whether these incentives can have a significantly pronounced effect to redress the bias against raw material producing industries implicit in the structure of industrial protection. Thus changes in the tariff system may be required to increase the degree of protection accorded intermediate goods industries. To some extent, a change in tariff policy along these lines is being presently instituted in Nigeria as was noted in the discussion of trade restrictions. The selective use of incentives, however, should be very useful in encouraging industries processing domestic inputs as opposed to imported inputs, where the structure of protection has been found to be in accordance with Plan priorities (see Chapter III).

51. As well as attempting to influence private sector plans with trade, tax and incentive policies, the Nigerian Government also intends to play a more positive role through public sector control or participation in certain manufacturing activities. This is the most prominent feature of the 1970-74 Development Plan as it concerns the industrial sector. It represents an attempt both to alter the structure of manufacturing giving higher priority to the agro-allied, intermediate, and capital goods industries and to promote Nigerianization of the manufacturing sector. To these ends it has been decided that the government will hold at least 55 percent of the equity investment in the following industries: 1/

(a) Iron and steel basic complex

(b) Petro-chemical industries

(c) Fertilizer production

(d) Petroleum products (especially for local distribution).

Substantial participation, to the extent of at least 35 percent of equity investment, will be required for a second set of industries:

(a) Plantation production of traditional cash crops and of basic raw materials for processing industries, such as wheat and sugar

(b) Food industries

(c) Forest product industries

(d) Building materials and construction industries.

1/ Op. Cit., Chapter 16.

52. The total projected cost of the Federal industrial program is about ₦N 235 million. Since much of this program is to be carried out on the basis of participation with foreign investors, and as only part of the program will be executed in the 1970-74 period, the actual government disbursement during this period is expected to be only about ₦N 41 million.

53. The government is expected to play a supplementary role in aiding the reconstruction of industries in the war affected regions. With about 60 enterprises involved, the total rehabilitation cost is estimated at ₦N 30 million by the Nigerian Government, a figure that should be interpreted as conservative. The predominant share of the reconstruction cost will be borne by the private sector but government loans can be expected to aid a number of industries controlled by public agencies such as the Nigerian Cement Company at Nkalagu and the Glass Factory at Port Harcourt.

54. Specific projects in which heavy government participation will occur, the projected total investment involved, and the Federal Government share of the investment over the 1970-74 Plan period are as follows:

		Projected total investment	Projected Federal Government investment 1970-74
		(₦N million)	
(a)	Sugar estates	19.5	4.1
(b)	Palm kernel crushing	2.8	0.6
(c)	Wooden furniture for export	0.6	0.6
(d)	Pulp and paper mill	9.9	2.5
(e)	Fish trawling and distribution	3.9	0.7
(f)	Fish and shrimp trawling	1.0	0.2
(g)	Chemical complex	14.1	2.7
(h)	Nitrogenous fertilizer	25.8	5.0
(i)	Liquified petroleum gas	6.9	1.3
(j)	Single superphosphate	1.2	0.2
(k)	Second petroleum refinery	9.0	2.5
(l)	Salt refinery	2.4	0.5
(m)	Iron and steel complex	120.0	7.0
(n)	Passenger car assembly	4.5	0.4
		221.6	28.3

The balance of the ₦N 41 million projected Federal capital expenditures on industries during the 1970-74 period includes investment in other industries (₦N 7.5 million), the previously noted loans to war affected areas (₦N 3 million), aid to small scale industry (₦N 1 million), and expenditures on training (₦N .5 million), research (₦N .3 million) and an industrial development consultancy service (₦N .3 million).

55. State capital expenditures on industries over the 1970-74 period are projected at £N 45 million. A large number of State projects are in the range of agro-allied industries such as groundnut, palm kernel, and cotton seed crushing, textiles, leather tanning, integrated wood industry and starch manufacture. A considerable part of the planned expenditure is earmarked for rehabilitation of war damaged industries, industrial estates and aid to small industries generally. About one-quarter of the program remains to be identified.

III. THE STRUCTURE OF INDUSTRIAL PROTECTION IN NIGERIA

56. In recent years, there has been a marked change in the environment affecting the industrialization process in Nigeria. The low tariff open economy of the 1950's and early 1960's has been altered by a general rise in tariff and quantitative restrictions. As a result, Nigeria now has a manufacturing sector of which a significant part is not viable without continued protection from foreign competition. The system of industrial protection that has emerged is an outcome of several different policy objectives. Trade restrictions have been introduced in order to (a) increase government revenue, (b) provide protection to enterprises establishing in Nigeria, and (c) to curtail import demand in the face of balance of payments pressures resulting from the civil war. The effect has been different degrees of protection to different industries. In this chapter, the system of industrial protection is studied in order to quantify the degree of protection afforded different industries. Such a study allows the comparative advantage of Nigeria in manufacturing activities to be identified, indicates the directions in which the allocation of resources has been distorted, and represents a first step in rationalizing industrial tariff - tax policies.

57. While the general rise in tariff rates on final products and the introduction of quantitative restrictions outlined in Chapter II reflect the increase in the 'tariff barrier', nominal tariff rates do not indicate the degree of protection given to manufacturing processing activities. This is so because for the domestic producer not only tariffs on the product matter but also tariffs levied on material inputs, such as industrial materials, fuels, parts, and components used in the production process. These tariffs reduce the extent of protection accorded to a particular firm or industry by raising the cost of raw material inputs, and can be regarded as a tax on the processing of such inputs.

The Effective Rate of Protection

58. The relevant concept for measuring the degree of protection is the effective rate of protection. 1/ This is defined in terms of value added (factor cost) rather than product price. It thus takes into account the imposition of tariffs and protective measures on inputs as well as outputs. Accordingly, the effective rate of protection represents the percentage margin by which the factor cost (value added) of a particular production process can exceed the factor cost of the same process if performed at world market prices at the existing rate of exchange. This measure has been calculated for a forty-two sector break-down of the Nigerian manufacturing sector.

1/ This concept is considered at greater length in Annex 2, Conceptual and Methodological Issues in the Calculation of Effective Rates of Protection. A still more comprehensive treatment is in Bela Ballasa's "Industrial Protection in Developing Countries", IBRD Report No. EC - 175, June 1970.

59. Apart from tariffs on inputs and outputs, the effective rate of protection also depends on the share of value added in the product price. Effective rates can be very high if value added is a small proportion of the price even if nominal rates are low, or vice versa if value added is a large proportion of the total price. Thus effective protection may be high in a country with low or moderate nominal tariff rates if its manufacturing sector is mostly comprised of low value added industries. This is the case in Nigeria where low value added as a ratio to gross output in most industries leads to fairly high levels of effective protection.1/

60. The significance of the effective rate of protection can be illustrated with an example. Assume that it requires x units of raw materials to make y units of final products. At the existing rate of exchange, let it be further assumed that valued at CIF prices, the x units of raw materials cost ₦N800 and the y units of final products cost ₦N1000. Thus, if no tariffs are applied to either the raw materials or final goods, a domestic industry processing the raw materials would have a value added or factor cost of ₦N200. Let us now take the case where a 20 percent tariff is applied to imports of the final products and a tariff of 12-1/2 percent is applied to imports of the raw material, the domestic value of final output will be ₦N1200 and the domestic cost of the raw materials will be ₦N900. A firm that can process the raw materials at a factor cost of no more than ₦N300 will be able to compete with the imported commodity. The effective rate of protection implied by the 20 percent nominal tariff on the final product and 12-1/2 percent nominal tariff on the intermediate goods is 50 percent - the percentage difference between free trade value added (₦N200) and tariff distorted value added (₦N300). This indicates that a firm with fifty percent higher factor costs than the corresponding value added at world prices is viable, given the structure of tariffs. If the excess of value added that protection provides is fully absorbed by the higher processing cost of domestic industry, the effective rate of protection serves to rank the efficiency of domestic industries relative to world prices. 2/ The excess of value added above world price levels permitted by the structure of tariffs and other trade restrictions, however, may also reflect

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1/ Value added as a ratio of gross output for the total manufacturing sector in 1967 was 26 percent (cf. para. 18). If evaluated at world prices it would be much lower because tariffs on the final product are higher than on the inputs, thus raising the value of gross output in relation to the value of the intermediate product.

2/ This assumes that the removal of trade restrictions would not leave the domestic currency overvalued. If it did, the correction for overvaluation associated with free trade would affect the calculated protection afforded domestic industries. The 'net' effective rate of protection, a measure of protection adjusted for differences between the actual and free trade shadow exchange rate, is discussed in Annex 2.

above average profits as well as high manufacturing costs. To the extent that excessive profits are made, an income transfer from consumer to producer groups results and the calculated effective rate of protection will no longer adequately reflect the relative efficiency of different industries. In the long run, however, resources will tend to move into activities with above normal profits until any excess profits are eliminated. The structure of industrial protection as defined by the effective rates of protection will with time, therefore, influence the allocation of resources and determine the relative efficiency of different industries.

Effective Rates of Protection: The Results

61. The effective rates of protection calculated in this study relate to 1968. They have been derived for both a narrow industry classification and for industry groups that are useful in summarizing the structure of industrial protection and in analyzing the degree of protection afforded different types of industry in relation to the priorities established in the 1970-74 Development Plan. In the most detailed breakdown, the effective rates of protection have first been calculated for a forty-two sector (4-digit ISIC) classification of industry. These rates have then been aggregated for two broader industrial classifications: the first differentiating industries as (a) primarily processing domestic materials for the domestic market, and (b) primarily processing imported materials for the domestic market; the second classifying industries as (a) producers of consumer goods and (b) producers of intermediate and capital goods.

62. The coverage of each industry is summarized in text table 4 by indicating value added and employment in the firms on which the calculations are based relative to the corresponding totals for all reporting firms in each industry. Value added in non-reporting firms in recent industrial surveys has been rather small, about 10% of value added in reporting firms, so that table 4 gives a fairly good indication of the total coverage. This can be considered good in relation to often used practices of basing calculations of effective rates of protection on one or two firms. For twenty-three sectors, all firms reporting in the 1968 industrial survey have been used in the study. For only five sectors (cutlery, handtools and hardware, textile spinning and weaving, wearing apparel except footwear, furniture except of metal, and glass products), has the coverage been less than 40 percent by either the value added or employment criterion.

63. The results for the forty-two sector classification of industry are presented in text table 5. As would be expected, effective rates of protection tend to be higher than nominal rates of protection, reflecting the fact that materials imported for use in Nigerian industry typically have much lower tariff rates than the tariff (or tariff equivalents when quantitative restrictions are important) applicable to the final products produced by these industries. The exceptions to this are export industries and industries producing products on which heavy excise taxes are levied. Where industry processes raw materials produced in Nigeria behind tariff barriers, the tariffs on their final products tend to be even higher.

Table 4: ESTIMATED COVERAGE OF THE STUDY OF EFFECTIVE PROTECTION IN 1968

Industry	Firms covered in % of reporting firms' Value added	Employment
Tanneries and leather finishing	100	100
Tin	100	100
Oil milling	100	100
Lumber and plywood	59	42
Rubber	100	100
Distilling and blending spirits	100	100
Soft drinks	100	100
Drugs and medicines	96	n.a.
Dairy products	100	100
Beer and stout	100	100
Paper containers, boxes, and paper boards	100	100
Paints, varnishes, and lacquers	100	100
Concrete products	100	100
Tires and tubes	100	100
Cement	100	100
Structural metal products	70	92
Structural clay products	100	100
Soaps, perfumes and cosmetics	89	49
Miscellaneous products of petroleum and coal	100	100
Bakery products	n.a.	51
Electrical apparatus and supplies	100	100

Industry	Firms covered in % of reporting firms' Value added	Employment
Cutlery, handtools and hardware	n.a.	19
Made up textiles except wearing apparel	100	100
Sugar factories and refineries	85	69
Fruit canning	100	100
Plastic products	58	n.a.
Fabricated metal products	71	60
Slaughtering, preparing and preserving meat	100	100
Grain mill products	91	97
Miscellaneous food products	120[1/]	80
Motor vehicle assembly	n.a.	88
Textile spinning, weaving and printing	34	20
Metal furniture	300	42
Pottery, china and earthenware	100	100
Tobacco	n.a.	57
Wearing apparel except footwear	13[2/]	n.a.
Furniture except of metal	34	37
Glass and glass products	13[2/]	15
Footwear except of rubber or plastic	100	100
Miscellaneous chemical products	100	100
Radio, television and communications	78	90
Cocoa, chocolate, and sugar confectionery	100	100

1/ Excluded firms with negative value added.

2/ Gross output of firms covered as percent of that for all reporting firms.

Table 5: NOMINAL AND EFFECTIVE RATES OF PROTECTION FOR NIGERIAN INDUSTRY, 1968

Industry	Nominal Protection %	Effective Protection %
Tanneries and leather finishing	-9	-28
Non-ferrous metals (tin)	0	-27
Oil milling	-9	-26
Lumber and plywood	-2	-20
Rubber	-2	-19
Distilling and blending spirits	108	- 6
Matches and candles	305	2
Drugs and medicines	20	17
Dairy products	22	22
Beer and stout	75	27
Paper containers, boxes, paper board	17	31
Tobacco	153	31
Paints, varnishes and lacquers	40	40
Travel goods	40	40
Concrete products	35	50
Tires and tubes	45	50
Cement	40	57
Structural metal products	35	67
Structural clay products	50	67
Soft drinks	82	69
Soaps, perfumes, cosmetics	61	71
Footwear exceptof rubber or plastic	40	77
Miscellaneous products of petroleum and coal	35	77
Bakery products	50	93
Electrical apparatus and supplies	47	96
Cutlery, handtools and hardware	47	101
Made up textiles except wearing apparel	57	110
Textile spinning, weaving and printing	74	120
Sugar factories and refineries	83	134
Fruit and vegetable canning	83	140
Plastic products	79	141
Fabricated metal products	39	143
Slaughtering, preparing and preserving meat	50	160
Grain mill products	51	180
Miscellaneous food products	71	183
Motor vehicle assembly	35	206
Metal furniture	67	285
Furniture except of metal	75	290
Pottery, china and earthenware	38	318
Glass and glass products	50	1063
Radio, television and communications	91	-200

Export Industries

64. Effective protection is found to be negative in the export processing industries because the products of these industries are typically subject to export taxation, for most products at 10 percent ad valorem until 1969 and since then 15 percent. The effective rates are substantially more negative than the nominal tax rates because either the industries use inputs that are imported or produced domestically in protected industries, or because the raw material inputs are marketed by marketing boards that either sell to domestic producers at the export price or (in the case of cotton) slightly above the export price. Thus the effective rate of protection given to the five export oriented industries included in the study ranges from minus 19 to minus 28 percent although the nominal export taxation applied to these industries during the period studied ranged from zero to ten percent. The degree of negative protection applied to the hides processing, tin, and oil milling industries is virtually uniform (minus 26 to 28 percent). The rate of negative protection is significantly lower for both lumber and plywood industry (minus 20 percent) and the rubber industry (minus 19 percent). For the lumber and plywood industry, this partially results from a lower export tax (4 percent) than applied to the other major export products, and reduced raw material costs because lumber products are not handled by marketing boards and the export tax on logs reduces the domestic price of logs. The negative protection for the rubber industry is also lower, but this is because the industry is engaged in both producing crepe and sheet rubber for the export market and producing miscellaneous rubber and foam products for the domestic market. In the latter activities, the industry is in competition with imported commodities and receives positive protection from the tariffs on these imports. The recorded minus 19 percent protection can therefore be regarded as average of the higher protection applied to export activities and the positive protection afforded to import competing activities. In export activities, therefore, only the saw milling industry fares somewhat better than the negative 25 to 30 percent protection common to most export industries. 1/

Effective Protection and Excise Taxation

65. As noted in Chapter II, excise taxation has become an increasingly important source of government revenue; especially so since tariff revenue has grown relatively slowly so the process of import substitution has led to a shift from highly taxed final products towards intermediate goods entering at low tariff rates. The greater reliance on excise taxation in Nigeria has substantially altered the structure of industrial protection, 2/ in some cases to the extent that the effective rate of protection is found to be lower than the nominal tariff rate.

1/ Recent changes in export taxes are discussed below in paragraph 77.

2/ The effect of excise taxation on the effective rate of protection is considered in detail in Annex 2.

66. The industries in which excise taxation is so high as to reduce the effective rate of protection below the nominal rate of protection are the beer and stout, tobacco, matches and candles, soft drinks, wine and spirits distilling, and drugs and medicines industries. However, excise taxation has substantially reduced the protection afforded a much wider group of industries. The extent by which protection has been reduced can be determined by calculating the hypothetical effective rate of protection that would occur if no excise taxes had been imposed and comparing this with the actual effective rate of protection. The results are presented in text table 6 for those industries subject to substantial excise taxation. The most striking case of protection being offset by excise taxes is for the distilling and blending spirits industry where the degree of protection is reduced by 105 percent from the 'no-excise tax' rate of protection of 393 percent to an actual effective rate of protection of minus 6. This is the only import substituting industry in Nigeria that has a negative effective rate of protection. Protection is reduced by between 96 and 50 percent for the matches and candles, tobacco, travel goods, beer and stout, cement, soft drinks, and the drugs and medicines industries and by between 50 and 27 percent for the textiles, fabricated metals, tires and tubes, made up textiles, bakery products, paints, soap, perfume, cosmetics and metal furniture industries. The reduction in protection to the plastics industry is 14 percent.

67. The estimated reduction in protection due to excise taxation is based on the implicit assumption that domestic prices are set at the CIF price plus tariff level. If tariffs are prohibitive, however, the domestic price may be below this level so that when excise taxes are imposed there may be some potential for passing the burden of the tax on to the consumer. This is especially true for the tobacco, beer and stout, and soft drinks industries. The estimates of reduced protection by excise taxation should be interpreted as an upper limit for these industries.

Effective Protection to Major Import Substituting Industries

68. The import substituting sector of manufacturing is dominated by six major industries: textiles, beer and stout, tobacco, tires and tubes, cement, and the fabricated metal products industry. In 1967, these industries accounted for approximately 70 percent of value added in the import substituting sector of manufacturing.

69. The most important industry in Nigeria is the textile industry. In 1967, it accounted for 17 percent of aggregate value added (see table 7 in the Statistical Appendix) and 22 percent of aggregate employment in large scale manufacturing. The industry both processes local cotton and imported grey baft, the former operations being concentrated in the north and the latter in the south. Since 1963, when the government decided to allow the use of imported grey baft, printing has expanded most rapidly. At present, the later stage bleaching, dyeing, and printing processes dominate the activity of the industry.

Table 6 : THE EFFECTS OF EXCISE TAXATION ON THE DEGREE OF PROTECTION AFFORDED SELECTED NIGERIAN INDUSTRIES

	Hypothetical effective rate of protection with no excise taxation % (1)	Actual effective rate of protection % (2)	Percentage difference between (1) and (2) %
Distilling and blending spirits	393	-6	105
Matches and candles	76	2	96
Tobacco	368	31	91
Travel goods	244	40	84
Beer and stout	133	27	80
Cement	95	57	66
Soft drinks	166	69	58
Drugs and medicines	38	17	55
Textiles	229	120	47
Fabricated metal products	241	143	40
Tires and tubes	95	57	40
Made up textiles except wearing apparel	180	110	39
Bakery products	137	93	32
Paints	59	40	32
Soaps, perfumes, and cosmetics	100	71	29
Metal furniture and fixtures	393	285	27
Plastic products	161	141	14

70. The calculation of the effective rate of protection for textiles in this study was based on responses from 4 of the 41 firms reporting in the 1968 survey. 1/ These firms accounted for 34 percent of value added and 20 percent of employment in the textile industry during that year. The operations of these firms include weaving of grey baft, bleaching, printing, and the production of cotton piece goods. The calculated rate of 120 percent effective protection should be interpreted as a weighted average of the effective rates on the separate processing activities. However, the effective rate has been calculated on one firm engaged solely in the production of grey baft from raw cotton. This rate was 124 percent so that there does not appear to have been much difference in the protection accorded processing at different stages.

71. The degree of protection accorded the textile industry is high in relation to that of other large scale long established industries - beer, tobacco, and cement. However, the pattern of protection may turn out to be similar - initially very high protection being reduced through time by increases in excise taxation as the efficiency of the industry improves. Even in 1967, the rate of profit on sales in textiles was among the highest (22 percent) and in the last two years profit rates have increased with the high level of domestic demand and rising trade restrictions. In 1968, for the four firms included in the calculation of effective protection, the rate of profit calculated on sales was almost 20 percent and and calculated on the book value of fixed assets it was 69 percent. The evidence suggests, therefore, that the degree of protection given the textile industry partially reflects excess profits in that industry rather than excessively high factor costs. Indeed the textile industry was one of the few where a respectable rate of return on book value of fixed assets (17 percent) could be earned under world market conditions. 2/

72. The implication might be that further increases in excise taxes or reduction in tariffs on textile products should be considered. The policy approach that has been adopted by the Nigerian authorities appears to be based on giving added protection to the earlier stage processing which has lagged in growth relative to the final processing activities since the early 1960's. The effective rate of protection in 1968 on weaving was not out of line with protection afforded the later stage activities - the tariff on imported baft was 48 percent lower than for final products of later stage processing but this was compensated for by a lower tariff equivalent on the principal input, raw cotton, of about 6 percent. The policy decision of giving added protection to the earlier stage processing is in line with the desirable high priority given to the agro-based industries in the 1970-74 Development Plan. The benefits of expansion in the earlier stage textile

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1/ Many of the reporting firms were small scale firms ginning and baling cotton. These firms are not engaged in normal textile operations and were not considered in this study.

2/ Original book value of fixed assets is however only a rough approximation to the true value of capital stock.

industry for the domestic cotton industry justify preferential treatment of weaving as opposed to printing. The tariff on grey baft has accordingly been raised by about 30 percent and consideration is being given to reducing the approximately six percent differential between the export price of cotton and the higher price by which it is sold by the marketing boards to domestic textile manufacturers. Also, a tariff of one shilling per square yard rather than 9d per square yard has been introduced for manufacturers that produce less than 50 percent of their grey baft requirements.

73. The textile industry, as noted in Chapter II, ranks highest among industries in terms of prospective new enterprises and size of investment. The degree of protection afforded textiles is high, but if adjustment is made for excessive profits, the level of processing costs relative to world prices is not excessive in relationship to more recent import substituting industries. The benefits of further growth of the textile industry would appear to compare favorably with most other import substituting industries.

74. Among the other major import substitute industries, the tobacco and beer industries are the largest and have been in Nigeria the longest, the first large scale cigarette and beer plants having been established in 1937 and 1949 respectively. With effective rates of protection of 31 and 27 percent respectively, they rank among the lowest cost producers in import substituting industries. Despite high domestic prices, the excise taxation that has been applied for revenue purposes has had the effect, noted above, of reducing protection to these moderate levels. The cement industry, first established in 1934, would normally also fall into the small group of industries where effective protection is very moderate (natural protection due to transport costs being high) and import substitution is almost complete. However, in 1968, circumstances were not normal since the plant in the East was out of operation due to war damage and demand for cement was and remains very high. Imports have increased and the tariff rate, previously almost prohibitive, has once again become relevant to the protection afforded the domestic industry. Thus, for 1968, much of the effective protection of 57 percent represents excess profits rather than low efficiency. Accordingly, in 1970, it was possible to reduce the rate of duty on imports of cement from 40 to 25 percent. The tire and tube industry is a post-Independence industry, the first plants commencing operation in 1963. Its moderate effective protection of 50 percent does not appear to hide excessive profits. The most recent of the large import substituting industries is the fabricated metal products industry producing tins and drums, steel rods, fencing, nails, wire, enamelware and galvanized sheets. The effective protection afforded this industry was high in 1968, 143 percent. It is a highly profitable industry and the high effective protection may explain part of the excessive profits. Nevertheless, the degree of protection is so much greater than in the other major import substituting industries that adjustment for excessive profits would still leave it ranked below those industries. Its achieved 45 percent return on capital would for instance, with free trade, be reduced to a mere 2 percent. Using steel inputs imported at low tariff rates, it would require even higher protection if a high cost domestic steel producing complex were established.

High Cost Industries

75. The industries that have received the greatest degree of protection (over 200 percent) are the motor vehicle assembly, furniture, pottery china and earthenware, 1/ glass products, radio, television and communications industries. The motor vehicle assembly industry assembles trucks, buses, and trailers. The high effective protection does not result from a large difference in tariffs on the final product and the unassembled vehicles - the former was 35 percent plus surcharge and the latter was 38 percent in 1968 - but reflects the extremely low value added to output ratio: 5 percent in 1968. The cost of protecting the industry is not substantial in terms of loss to the consumer, at least in relation to that for other import substitution industries, but the benefits are still smaller because of the small domestic value added. More important losses may result from expansion of this industry to include car assembly. The effective rates of protection on metal and non-metal manufacturing are very similar - 280 percent and 290 percent respectively. The metal furniture industry has few firms (10 reporting) and absorbed losses of ₦N 73 thousand in 1968. The wooden furniture industry comprises a large number of small firms (31 reporting in 1968) and is predominantly an indigenous industry. The analysis of the glass products industry is based on two firms producing mirrors, lanterns, globes and jars. It is not representative of the total industry since the large and previously profitable glass bottle factory in Port Harcount is closed down due to war damage and could not be included in this study.

76. Since this study is based on the input-output coefficients for free trade derived from the actual domestic input output coefficients observed in Nigeria by adjusting for the effect of trade restrictions, it may be found that free trade value added is negative, 2/ reflecting the fact that for those industries production could not be efficiently carried out even if factors of production had zero opportunity cost. The radio, television and communications equipment assembly provides an example of such industries. This industry is recently established, and although undoubtedly of low efficiency relative to foreign competition, the calculated effective rate of protection hides excess profits. Recently, the tariff rate on imported inputs has been raised (from 33-1/3 percent to 40 percent) to adjust for this.

The Structure of Protection and Plan Priorities

77. The 1970-74 Development Plan attached top priority to agro-based and export oriented industries, second priority to import substituting industries with high direct or indirect value added, and low priority to assembly industries processing mainly imported commodities. 3/ In order to

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1/ This is a very small industry and not considered in detail here.

2/ This results in a calculated effective rate of protection of below minus 100%.

3/ Cf. paragraph 48.

evaluate the effectiveness of the tariff-tax system in light of these priorities the effective rates of protection have been calculated for industries within these three groups. The results are presented (and the industries falling within each classification identified) in text table 7. The rates of effective protection for the industry groups were derived by using aggregate distorted and free trade value added in the industry group. This is equivalent to taking a weighted average of the individual tariff rates, the weights being the industry's contribution to the group's total value added. Note that the cement and textile industries appear in both sub-groups of import substituting industries since textile manufacturers use both local and imported grey baft and cement manufacturers use both local limestone and imported clinkers. 1/

Table 7: EFFECTIVE RATES OF PROTECTION ON EXPORT INDUSTRIES, INDUSTRIES PROCESSING DOMESTIC INPUTS FOR THE DOMESTIC MARKET, AND INDUSTRIES PROCESSING IMPORTED INPUTS FOR THE DOMESTIC MARKET, NIGERIA 1968

	Effective rate of Protection %
Export industries /1	-24
Import substituting industries	85
- Industries processing Domestic Inputs /2	98
- Industries processing imported inputs /3	78

/1 Includes tanneries and leather finishing, tin, oil milling, lumber and plywood, and rubber.

/2 Includes textiles, tobacco, travel goods, cement, tires and tubes, concrete products, clay products, miscellaneous, petroleum products, bakery products, made up textiles, sugar canned fruit, meat products, grain products, miscellaneous food products, wooden furniture, pottery, and wearing apparel.

/3 Includes beer, soft drinks, spirits, radio and television assembly, motor vehicle assembly, textiles, paper products, paints, cement, structural metal products, soup, cosmetics, drugs, electrical appliances, footwear, cutlery, handtools, hardware, plastic products, fabricated metal products, metal furniture, glass products.

78. The results in table 7 show that in 1968 the tariff - export tax - excise tax system discriminated strongly against export oriented industries processing the traditional primary products of the Nigerian economy. The discrimination against exports is mainly a result of export taxation. More

1/ The cement industry was divided half and half, the textile industry was put one-third in the domestic input group and two-thirds in the imported input group.

moderate export taxation and heavier excise taxation on import substituting industries obtaining very high levels of protection would lead to a more efficient allocation of resources and would be consistent with the priorities established in the 1970-74 Development Plan. Such a policy is not being followed by the Nigerian authorities. In 1969, the general level of export taxation on the products of the rubber industry and the oil milling industry, was raised from 10 percent to 15 percent. The import tax on lumber was raised from 2.5 to 3 percent and on lumber from 4 to 15 percent. 1/ If these new rates are applied to the 1968 data, the effective protection on oil milling works out at minus 38 percent, on rubber minus 34 percent, and on lumber and plywood minus 19 percent, the small change in this last case being due to the offsetting effect of cheaper inputs resulting from higher export taxation on logs. The average effective rate of protection for the three industries would have been minus 35 percent. The heavy penalization of export processing in conjunction with protection of high cost import substituting industries is unfortunate. The benefit is additional government revenue; the more important loss is an inefficient allocation of resources and an income transfer from domestic consumers not only to the government but also to predominantly expatriate producer groups.

79. The second result evident from table 7 is the rather low level of effective protection to the import substituting industries even though nominal protection to the products of many of these industries is quite substantial. This is basically because of the high levels of excise taxation imposed on the long established beer, tobacco, and cement industries and the heavy weight of these industries in the group averages. This tends, however, to underestimate the degree of protection being afforded to the new import substituting industries. If the three long established industries are neglected, the average level of effective protection accorded all remaining import substitute industries is 105 percent. It is for these new industries that serious questions arise concerning the benefits in employment, training effects, and possibly higher government revenue relative to the loss to consumers implicit in high tariff barriers.

80. Table 7 also indicates that greater protection has been given to industries processing domestic inputs than those processing foreign inputs. This preference for the former type of industry is in accordance with Plan priorities and can be justified on the basis of the importance of high linkage effects in the less developed economy. Despite the preference given by the tariff-tax system to industries processing domestic inputs, growth has been relatively more pronounced in industries processing imported inputs. This seems to be explained by the importance of market protection for foreign investment in Nigeria. Much of this investment is motivated by the desire of foreign firms previously exporting to Nigeria to protect their market by transferring final stage processing to Nigeria.

1/ These are percentage equivalents of specific duties.

81. A further objective emphasized in the 1970-74 Development Plan is to encourage the rapid growth of intermediate and capital goods industries in line with the attempt to extend the industrialization process backwards from the final processing consumer goods industries. In order to evaluate the effectiveness of the tariff-tax system in Nigeria in light of this objective and to indicate the magnitude of required changes in the structure of protection if it is to become appropriate, the effective rates of protection have been calculated for the consumer goods and intermediate capital goods manufacturers among the import substituting industries. Since the cement industry is accorded considerable natural protection because of transport costs and because this is a long established industry in Nigeria, the effective rate of protection has also been calculated for the more recent intermediate capital goods industries. Similarly, to indicate the relative protection accorded the new industries, the effective rate of protection to consumer goods industries has also been calculated without the beer and cigarette industries. The results and a list of industries included in the different groups are presented in text table 8.

82. Because of the importance of the beer, tobacco, and cement industries, the results differ substantially, depending on whether these industries are included or not. The effective rate of protection to all consumer goods industries is 91 percent, while for newer consumer goods industries it is 114 percent. The effective rate of protection to intermediate and capital goods industries is 59 percent if cement is included and 73 percent if cement is excluded.

Table 8: EFFECTIVE RATE OF PROTECTION ON IMPORT SUBSTITUTING CONSUMER GOODS AND INTERMEDIATE-CAPITAL GOODS INDUSTRIES IN NIGERIA, 1968

	Effective rate of protection %
Consumer goods industries /1	
(a) including beer and tobacco	91
(b) excluding beer and tobacco	114
Intermediate-capital goods industries /2	
(a) including cement	59
(b) excluding cement	73

/1 Includes spirits, matches, drugs, dairy products, beer and stout, tobacco, textiles, paints, soft drinks, soap, cosmetics, shoes, electrical appliances, cutlery, plastic products, fabricated metal products, motor vehicles, furniture, glass products, radios, television sets, record players, travel goods, tires and tubes, bakery products, made up textiles, sugar, canned fruit, meat, grain products, miscellaneous food preparations, pottery, and wearing apparel.

/2 Includes cement, structural clay products, concrete products, paper containers, boxes, paper board, structural metal products, and miscellaneous products of petroleum.

83. Whether based on all industries or with the long established beer, tobacco, and cement industries excluded, these findings indicate the extent to which the system of industrial protection discriminates against raw material and capital goods industries in favor of consumer goods industries. The structure of protection is inappropriate to the priorities established in the 1970-74 Development Plan and partially explains why the misallocation of resources in the Nigerian manufacturing sector emphasized in the Plan, 1/ has become so pronounced.

84. The difficulty in rationalizing the protection afforded the consumer goods industries relative to the intermediate capital goods industries results from the fact that raising tariffs on the products of the latter will undermine the viability of the former, a good part of which is high cost and inefficient rather than excessively profitable. It is for this reason that the rapid rate of growth for industry projected over the coming plan period will be much more difficult to achieve than the past rapid growth in final processing import substituting industries. These latter industries could easily be stimulated especially in an economy with a large domestic market such as in Nigeria. The cost in terms of further misallocation of resources and higher cost of products to the Nigerian consumer would, however, be considerable. The loss would be compounded by the fact that a significant part of the income transfer from consuming groups to producing groups implied in tariff protected industrialization accrues to the expatriate and foreign business community.

Protection and Industrial Profits

85. The effective rate of protection calculation is based on the assumption that the value added is the return to scarce factors of production and that changes in value added determine the movement of factors of production between industries. In less developed countries, it might be argued that labor is not a scarce factor of production and that it is solely the difference in the rate of profit on capital invested that determines the allocation of resources between different activities. The relevant concept then is the effective rate of protection to profits; that is, the percentage increase or decrease in profits from world market conditions caused by the imposition of tariffs and excise taxes.

86. While adjusting the effective rate of protection for the unrealistic assumption that unskilled labor is a scarce factor of production, the effective rate of protection to profits is subject to the theoretical criticism that it ignores a scarce factor, skilled labor, and to the practical objection that since profits vary considerably from year to year, and from firm to firm, the calculated effective rate of protection to profits will tend to be even more unstable than the effective rate of protection based on value added.

1/ Op. Cit., Chapter 29.

87. In order to derive the effective rate of protection on profits, data have been collected on profits. Using the admittedly unreliable original book value of fixed assets as an indication of capital stock, estimates of the rate of return on capital were also derived. These data are useful in themselves as they indicate the absolute level of profitability in a particular industry and, when calculated at world prices, allow the absolute difference in profitability between the protected and world market conditions to be compared. Accordingly, the actual rate of profits, the rate of profits with world prices prevailing, and the effective rate of profits are presented in table 9 for the 42-sector breakdown of Nigerian industry. While, as noted before, the capital stock data are suspect, this does not affect the effective rate of protection on profits measure. However, it does mean that inter-industry differences in profit rates (as opposed to differences in profit rates within particular industries under protected and world market conditions) have little meaning.

88. Since, with the assumptions made, all the benefits of protection or losses due to taxation are absorbed in profits, the effective rate of protection to profits indicates that the protective and export taxation policies are even more important in determining the viability of different industries. Thus, at the existing rate of exchange 12 industries would not have made positive profits if tariffs and excise taxes on their outputs and inputs had been removed. These include drugs and medicines, travel goods, cutlery, fruit and vegetable canning, slaughtering and preparing meat, miscellaneous food products, motor vehicle assembly, metal furniture, pottery, china and earthenware, wearing apparel, glass products, and the radio, television and communications assembly industries. Although the qualification must be kept in mind that the effective rate of protection to profit measure discriminates against labor intensive industries and is very sensitive to changing market conditions, it does give an indication of the extent to which many of the recently established industries are completely dependent on protection for survival.

89. Concentrating on the most important import substituting industries in Nigeria, the effective rate of protection to profits significantly affects the ranking of only one of these: the tobacco products industry. Because of the importance of wage costs in aggregate gross value added (a relatively high 60 percent), the removal of protection would greatly reduce the profitability in this industry, from 77 percent to only 7 percent return on capital. On the other hand respectable rates of profits of 18 percent or higher could be maintained under world market conditions in the beer and stout, tires and tubes, and textiles industry. Among the six largest industries only the cement and fabricated metal products industries are below the 18 percent return. For cement, the capital stock figures are highly suspect and the moderate extent to which profits depend on protection suggests that this industry should be ranked with the former group. The fabricated metals industry is highly profitable but it would barely make profits without high protection.

90. Adequate capital stock data would permit above normal profits to be distinguished from high factor costs, but the approximate capital stock data employed here is not reliable enough for this purpose.

Table 9: ACTUAL PROFITABILITY, PROFITABILITY AT WORLD MARKET PRICES, AND THE EFFECTIVE RATE OF PROTECTION TO PROFITS IN NIGERIA, 1968

	Actual profitability	Profitability at world market prices	Effective rate of protection to profits
	---- Percent of book value of fixed assets ---		
Rubber products	8	14	-42
Lumber and plywood	13	20	-35
Tanneries and leather finishing	111	170	-34
Non-ferrous metals (tin)	239	334	-28
Oil milling	204	279	-27
Distilling and blending spirits	108	6	- 7
Matches and candles	142	139	2
Beer and stout	56	41	36
Dairy products	11	6	83
Tires and tubes	38	18	111
Paints, varnishes and lacquers	38	18	111
Paper containers, boxes and paper board	17	8	112
Cement	15	7	114
Soft drinks	26	12	116
Structural clay products	42	18	133
Soaps, perfumes, cosmetics	74	28	164
Sugar refineries	324	106	205
Concrete products	25	8	212
Electrical apparatus and supplies	106	33	221
Textile spinning, weaving and printing	65	20	225
Miscellaneous products of petroleum, coal	95	28	239
Plastic products	67	18	272
Bakery products	23	6	283
Footwear except of rubber or plastic	21	4	425
Grain mill products	26	3	766
Structural metal products	29	17	982
Tobacco	77	7	1000
Made up textiles except wearing apparel	39	3	1200
Fabricated metal products	47	2	2250
Drugs and medicines	-11	-15	*
Travel goods	-28	-44	*
Cutlery, handtools and hardware	23	-15	*
Fruit and vegetable canning	6	- 1	*
Slaughtering, preparing and preserving meat	70	-24	*
Miscellaneous food products	-13	-26	*
Motor vehicle assembly	14	-19	*
Metal furniture	58	- 4	*
Pottery, china and earthenware	39	-42	*
Wearing apparel except footwear	47	- 7	*
Glass and glass products	27	-23	*
Radio, television and communications assembly	17	-28	*

* Industry not profitable at world market prices.

IV. FURTHER RESEARCH

91. The preceding analysis has attempted to indicate how the industrialization process in Nigeria has been affected by tariff and tax policies. In these following paragraphs, an indication is given as to the nature of further research that would be helpful in extending this analysis. We first consider how the reliability of calculations of effective rates of protection may be improved and then discuss other types of analysis that might be applied in Nigeria.

Refinements of Effective Rates of Protection

92. The present study of effective rates of protection should be refined by further efforts to (a) derive satisfactory data on comparison of ex factory and CIF prices, (b) indicate more reliably the extent to which an industry's effective rate of protection reflects the level of factor costs or the existence of excess profits, (c) calculate a 'net' effective rate of protection which adjusts the rates calculated here for possible exchange rate over-valuation as compared to the free trade equilibrium, and (d) carry out industry studies designed to isolate special aspects of particular industries that would justify special treatment.

93. Whenever the CIF price plus tariff does not reflect prices of comparable domestically produced commodities, price comparisons should be used to define an implicit nominal tariff to be used in calculating the effective rate of protection. This will be the case when quantitative restrictions have been imposed and when tariffs are prohibitive. While price comparisons were used in a few instances in this study, adequate price data are lacking. But even if ex factory and CIF price data were obtained for commodities where tariff rates do not reflect the degree of nominal protection, considerable analysis of quality differences between imported and domestically produced commodities would be required before these price comparisons could be adjusted for use in the calculation of effective rates of protection.

94. A further aspect of the effective rate of protection measure is that it is difficult to determine whether a high effective rate of protection indicates high factor costs or excess profits. While an attempt has been made to deal with this question by analyzing profit rates in industries studied in this report, the results could not be more than suggestive due to the lack of satisfactory data on the value of capital stock in Nigerian manufacturing. Improvement of the analysis in this respect must be delayed until more reliable capital stock data become available.

95. If the free trade shadow exchange rate is above the present exchange rate, export and import substituting industries are being penalized by an over-valued exchange rate. To indicate relative efficiency of domestic industry in comparison to the free trade situation, it is necessary to adjust the effective rate of protection for the difference in free trade and protected exchange rates. The new measure is termed the 'net' effective

rate of protection; it is considered in detail in Annex 2. If the free trade equilibrium exchange rate were calculated, it would indicate the degree of protection justifiable on grounds of over-valued exchange rates. This would be an important factor in adopting the policy of equalizing the degree of protection to different import substituting industries.

96. The value of the findings given in Chapter III of this report rests in defining the present structure of industrial protection; considerable study remains before these findings can be translated into detailed policy recommendations concerning specific industries. While there is an 'a priori' expectation that efficiency will be increased if the degree of protection is uniform between industries, this must be qualified by a consideration of possible factors which justify preferential treatment to certain industries. Thus, higher protection might be accorded (a) industries processing domestically produced inputs because of the beneficial effect these industries have on the domestic industries producing inputs, (b) industries which yield special benefits in terms of improving the quality of the labor force, (c) industries that require temporary 'infant industry' protection - a result that could be achieved by delaying the introduction of excise taxes on the industries' output. In the context of the Nigerian economy, preference might also be given to industries with a high ratio of Nigerian ownership, although it might be advisable to rely on differential tax treatment to achieve this objective.

An Alternative Measure: Domestic Resource Cost

97. In addition to the effective rate of protection, it would be useful to calculate an alternative criterion to evaluate domestic industries. This is the domestic resource cost measure which indicates the cost of a unit of foreign exchange earned in an export industry or saved in an import industry in terms of the domestic resources used in producing this earning or saving. The relative merits of the effective rate of protection and the domestic resource cost measure have been considered in detail elsewhere, 1/ so they can be briefly indicated here. The domestic resource cost measure is relevant if the whole domestic production process (including domestic production of inputs used in production of the final product) is being evaluated while the effective rate of protection is appropriate if only the processing activity carried out in the industry under study is being evaluated. The measure that should be used will depend on the nature of the particular industry. Thus if the output of an intermediate goods producing industry could be exported or used in other industries, it would be best to consider the final processing activity in isolation. On the other hand, if the intermediate goods producing industry is a mere satellite of the final goods industry with no alternative demand for its product, it is best to evaluate the combined production process.

1/ See B. Balassa and D. M. Schydlowsky, "Effective Tariffs, Domestic Cost of Foreign Exchange and the Equilibrium Exchange Rate", Journal of Political Economy, May/June 1968.

Inter-industry Relations

98. Finally, the data collected on inter-industry relations for the calculation of effective tariff rates represents an important first step in deriving an input-output table for the Nigerian economy. While such a table does exist in Nigeria, it is too aggregative and out of date to be used for evaluating different industries at the present time. Once a reliable table is calculated, estimates can be derived of the shadow prices of all factors of production, which can then be used to directly calculate the profitability of different industries.

ANNEX 1

MANUFACTURING STATISTICS IN NIGERIA

1. The basic source of statistics on the manufacturing sector in Nigeria is the annual survey of all firms with ten or more employees. Before 1962, all industrial surveys suffered greatly from non-response. By calculating average value added for different industries per unit of major raw materials from the scanty returns and using the results in conjunction with information on supply of raw materials (with some allowance being made for household consumption), a rough estimate of aggregate value added was obtained for the total manufacturing sector. After 1962, the aggregate value added estimates have been obtained directly from the annual surveys which achieved a much wider coverage. The major disruptions caused by the civil war resulted in the 1966 survey being discontinued in the Eastern Region and prohibited other surveys from being conducted in East Central, South Eastern, and Rivers States in 1967 and 1968. For these reasons, comparisons of the manufacturing statistics for the pre-1962 years, the 1962-1965 period, and the post-1965 period are not reliable.

2. Aside from the disruptions caused by civil war, recent data on manufacturing suffer from major deficiencies that will be briefly outlined in this Annex. These concern the definition of value added adopted by the Nigerian Federal Office of Statistics, the method of adjusting for non-reporting firms in the survey, the method of adjusting for firms with less than ten employees, and the method of deflating current price value added in order to obtain constant factor cost series.

Definition of Value Added

3. In official publications, value added is defined as gross output minus industrial costs. The latter are defined so as to include the cost of raw materials, fuel, electricity, contract work done by others, and the cost of goods bought and resold without further processing. Industrial cost excludes, however, an 'other cost' item comprising rental payments, professional fees, costs of water, office materials, postage, insurance, advertising, hired transport, non-specified costs, and excise taxes. All these latter costs are thus included in value added. This has important implications for published statistics on the industrial sector.

4. Firstly, it leads to a substantial over-estimation of value added in manufacturing, as reported in the industrial survey, by 30 percent in 1963 and 64 percent in 1967. Several adjustments are made to the survey value added aggregate before it is used in the Nigerian national accounts but excise taxes are not deducted. Subtracting excise taxes collected from domestic industry in 1965, (the last year for which a country wide survey is available), the size of the manufacturing sector is reduced by 20 percent from 4.8 percent to 3.8 percent of gross domestic product at factor cost.

5. Secondly, because rates of excise taxation have risen rapidly and have been extended to an increasing number of commodities, and since excise taxes account for about half of the 'other cost' item, the inclusion of other costs in value added has imparted an upward bias to the rate of growth of manufacturing. Between 1963 and 1967, for instance, revenue from excise taxation rose by 407 percent while in the same period gross domestic product contributed by manufacturing rose by 35 percent. If value added is redefined as gross output minus total non-factor costs except for depreciation, the rate of growth of value added in the period 1963 to 1967 in current prices as reported in the industrial survey is reduced from 59 percent to 10 percent, or on a compounded annual basis from 12.4 percent to 2.5 percent. Since manufacturing is reported to have grown in current prices at 7.9 percent per annum for the same period, adjustment made to the value added aggregate as reported by the Industrial Survey Branch of the Federal Office of Statistics before it is used in the National Accounts corrects to some extent the upward bias. However, since it is explicitly stated that excise taxes are not deducted, this correction is not complete, in terms of value added at factor cost.

Adjustment for Non-reporting Firms

6. Adjustment of the reported value added aggregate in the industrial survey must be made in order to account for firms failing to report. An indication of the magnitude of the required adjustment is suggested by the estimated coverage of the survey in 1965, the last year of a countrywide census. In terms of establishments responding to the questionnaires, the coverage was 83.5 percent. In terms of employment, the coverage is estimated to have been 94.1 percent. The adjustment of the value added aggregate is done by assuming the same value added per worker in non-reporting firms as in reporting firms and using estimates of employment in non-reporting firms to estimate value added in the latter firms.

7. It could be argued that the adjustment for non-reporting firms further inflates the value added in manufacturing on the grounds that efficiency in firms that haven't responded to the survey might be less than in reporting firms. But the unreliability of the estimates of employment in non-reporting firms and the wide variability of value added per man noted for reporting firms merely tends to increase general uncertainty in the statistics. The effect on estimates of the growth rate is also ambiguous and hard to quantify. The response to the surveys has generally improved and to the extent that non-reporting firms were previously inadequately accounted for, the rate of growth might be slightly upward biased. However, if value added in previously non-reporting firms was over-estimated, improved coverage of the surveys will tend to bias the growth rate slightly downward.

Adjustment for Firms with Less than Ten Employees

8. The industrial surveys cover firms with more than ten employees. It is therefore necessary to adjust the value added aggregates to account for firms with less than ten employees. For this purpose, an upward adjustment of 20 percent has been used. This may turn out to be reasonable, but it is only an arbitrary assumption. The value added aggregate might be upward or downward biased because of errors in this assumption.

9. The twenty percent adjustment can, however, be expected to upward bias the rate of growth. This is because in a growing economy the expansion of large scale industry tends to replace small scale operations. This would lead to a falling proportion of value added contributed by small scale industry. By assuming it constant, the growth rate is exaggerated.

10. The lack of adequate surveys on small scale industry substantially distorts data on the structure of manufacturing. The percentage of value added contributed by small scale enterprises, even if it should average out to 20 percent, can be expected to vary widely from industry to industry. This is not taken into account in published data on the sectoral distribution of manufacturing activities.

Price Index Used for Deflating

11. In order to obtain growth rates in real terms, the value added series in current prices is deflated by a producer price index. The method of deriving this producer price index is not adequate to permit reliable growth rates to be calculated. It is constructed by halving the number of points above or below 100 of a consumer price index for commodities. This is said to be justified on the grounds that consumer and producer prices tend to move in the same direction but that producer prices tend to lag behind consumer prices. However, in a period of rising prices, this can be expected to underestimate increases in producer prices. The lag in adjustment, if it occurs, will only be a temporary delay before producer prices can be expected to increase in line with consumer prices. The effect of using the calculated producer price index will be to upward bias the rate of growth shown by the constant price series. Thus, the implicit manufacturing and crafts deflator used in the national accounts shows an increase in manufacturing producer prices of 3.5 percent from 1966/67 to 1969/70, while the implicit gross domestic product deflator indicates a general price rise of 6.8 percent. While further study is required, the significant rise in tariffs and trade restrictions on manufactured commodities during these years suggests that producer price increases have been more substantial than this. If the manufacturing price increased at the same rate as prices in general, the industrial growth rate would be reduced by this factor alone from 15.1 percent in 1966/67 to 1969/70 to 11.8 percent. In any case, the arbitrary assumptions involved in deriving the producer price index add to the dubious quality of the growth rate estimates.

12. In summary, it is hard to escape the conclusion that part of recorded growth is illusionary. Thus, while the rate of growth of manufacturing and crafts is recorded as averaging 11.7 percent per annum in real terms over the period 1965/66 to 1969/70, excluding excise taxes and assuming producer prices move in line with retail prices of manufactured goods reduces growth in real terms by 22 percent to an average rate of 9.1 percent per annum.

ANNEX 2

CONCEPTUAL AND METHODOLOGICAL ISSUES IN THE CALCULATION OF EFFECTIVE RATES OF PROTECTION

1. In this Annex, certain properties of the effective rate of protection are considered in greater detail, and methodological issues that arose in calculating this measure in Nigeria are discussed.

2. The effective rate of protection (z) is given by formula (1), where t and t_m are the tariff or tariff equivalents on the final product and material inputs, m and v stand for the share of material inputs and value added in the world market price of the product, and w is the domestic value added distorted from the world value added by protective measures.

$$(1) \quad z = \frac{w - v}{v} = \frac{(1 + t) - m\,(1 + t_m) - (1 - m)}{1 - m} = \frac{t - mt_m}{1 - m}$$

It is assumed that the input coefficients for raw materials are constant and that all world prices are determined externally.

'Net' Effective Protection

3. As noted in Chapter III, the effective rate of protection represents the percentage margin by which the factor cost (value added) of a particular production process can exceed the factor cost of the same process if performed under world market conditions. The effective rates of protection indicate the efficiency of the domestic industry relative to international forces if it is assumed that the existing exchange rate is the free trade equilibrium exchange rate. However, existing exchange rates in many less developed countries are either over-valued at present or would become so if all import restricting measures were removed. It is therefore necessary to derive the 'net' effective rate of protection by adjusting the effective rate of protection for exchange rate overvaluation if the absolute degree by which protected value added exceeds free trade value added is to be indicated. Otherwise, the effective rate of protection merely serves to rank industries. In the example given in paragraph 60 in Chapter III, assume that under free trade conditions, the actual exchange rate overvalues the domestic currency by 50 percent. The values of final product and raw materials in domestic currency converted at the shadow exchange rate would be ₦N 1500 and ₦N 1200 (rather than ₦N 1000 and ₦N 800), respectively. The resulting value added of ₦N 300 is equal to the value added distorted by tariffs of 12-1/2 percent and 20 percent on raw materials and final products, respectively and calculated at the actual exchange rate. Thus, while the unadjusted effective rate of protection was 50 percent, the 'net' effective rate of protection is zero reflecting the fact that the domestic industry, capable of processing the raw materials at a factor cost of ₦N 300 would be viable under free trade conditions.

4. It would be useful to calculate the 'net' effective rate of protection. For instance, if it were then decided that, say 20 percent protection should be given to industry because of the effect of industrial

activity on promoting entrepreneurship and developing skilled labor, or because it is felt that an enclave petroleum industry, efficient in generating foreign exchange, will restrict the development of industry better integrated with the local economy by maintaining a lower exchange rate than would be viable without foreign exchange revenues from the petroleum industry, the 'net' effective rate of protection would identify those industries that meet the criterion decided upon. Calculation of the 'net' effective rates of protection required for the viability of proposed industrial projects could also be useful in their evaluation. The adjustment, once the shadow exchange rate is determined, is carried out by formula (2) z'

$$(2) \qquad z' = r\,\frac{(1+z)}{r'} - 1$$

$$z' = r\,\frac{(1+z)}{r'} - 1$$

is the 'net' effective rate of protection, r the actual exchange rate, and r' the shadow exchange rate. Note that the adjustment for overvaluation does not affect the ranking of industries given by the effective rate of protection.

5. The calculation of 'net' effective protection has not been attempted at the present time because of the difficulty of estimating the free trade shadow exchange rate given the extensive disruptions to trade resulting from the war. The quality of statistics in Nigeria even under normal circumstances would make the estimation of the shadow exchange rate difficult since it is required to know the demand and supply elasticities for exports and imports at home as well as abroad. Once the balance of payments returns to more normal conditions, an attempt should be made to calculate the shadow exchange rate.

The Effective Rate of Protection and Excise Taxation

6. While excise taxes on a product do not affect its protection if levied on both the domestically produced and imported varieties, they reduce protection if, as in Nigeria, they are levied only on the domestic products. Since the excise tax is placed on the ex factory value of the domestic goods, the price the domestic producer in competition with imports realizes net of these taxes is $p(1 + t)(1 - e)$, where p is the CIF price, t is the import duty, and e is the rate of excise taxation. Accordingly, the effective rate of protection is given by formula (3).

$$(3) \qquad z = \frac{t - e - te - mt_m}{1 - m}$$

7. The effect of the imposition of an excise tax on the nominal and effective rate of protection is substantial. Thus, if import duties were 33-1/3 percent and excise duties were 25 percent, the nominal protection to the industry would be zero ($t - e - te = 0$). Since nominal tariffs on final products are typically higher and excise tax rates lower than this, the nominal protection is still, of course, positive. But even a 100 percent nominal tariff will be reduced by 40 percent with the imposition of a 20 percent excise duty. The effect on the effective rate of protection is considered below.

Sensitivity of the Results

8. Because of the poor quality of data in Nigeria and variation in the input coefficients between firms in the same industry, it is important to appreciate the sensitivity of the results to errors in estimating the variables and parameters that enter into the calculations. For this reason, sensitivity elasticities have been derived from (3) that give the percentage change in the calculated effective rate of protection per unit percentage error in estimating each parameter or variable. The results are given in relations (4) through (7) where

$$(4)\quad E_t = \frac{(1-e)}{(1-m)} \cdot \frac{t}{z}$$

$$(5)\quad E_{tm} = \frac{-m}{(1-m)} \cdot \frac{t_m}{z}$$

$$(6)\quad E_e = \frac{-(1+t)}{(1-m)} \cdot \frac{e}{z}$$

$$(7)\quad E_m = \frac{-(1-m)\ t_m + (t-e-te-mt_m)}{(1-m)^2} \cdot \frac{m}{z}$$

E is the sensitivity elasticity of the effective rate to a one percent change in the subscribed parameter or variable. To evaluate these results, hypothetical values have been taken for the parameters that roughly approximate the values for the Nigerian economy. They are $t = .7$, $t_m = .3$, $e = .1$ and $m = .8$. The value of m may appear high, but it should be recalled that for manufacturing as a whole, the ratio of value added to gross output was 26 percent in 1967 (see table 7, Statistical Appendix). This would imply a share of inputs in final output of .74, but this is in tariff distorted values. International prices are relevant for calculating m and since final output is overvalued by tariffs on inputs (except for export industries) and excise, the .8 value seems reasonable. With these values, the effective rate of protection from formula (3) is 145 percent.

9. Substituting the hypothetical values in the formulae (4) through (7), it is determined that $E_t = 2.2$, $E_{tm} = .8$, $E_e = .6$, and $E_m = 3.2$; that is, for instance, that a one percent error in estimating the tariff on the final product will be translated into a 2.2 percent error in estimating the effective rate of protection. These findings show that the effective rate of protection is most sensitive to errors in estimating the tariff on the final product and the m parameter based on the input-output coefficients. Since t is the percentage increase (or decrease, if an export tax) in domestic price permitted by tariffs, it is adequately defined by the legal tariff (or export tax rate) only (a) if international prices cannot be affected by the domestic economy; (b) if the domestic commodity is qualitatively identical to the competitive imported commodity; and (c) if tariffs are not prohibitive and quantitative restrictions are not imposed. Condition (a) is satisfied for prices of imported commodities, but some degree of market power may exist for exports. Conditions (b) and (c) are not satisfied, at

least to some extent, for many or even most domestically produced import substitutes. Thus, errors in estimating t are very likely to occur. The estimation of t in Nigeria was based on three different sources of data, as described below, in order to improve the reliability, but some degree of error must be expected. The m was estimated from returns to the industrial survey by adjusting the reported share of inputs (valued at domestic prices) for the effect of the tariff distortions. Since moderate variations occur in the share of inputs in total output from year to year and from firm to firm in the same industry, the input share in domestic prices will not be perfectly stable and some variation of the effective rate of protection from firm to firm and year to year will occur. Added to this, errors may occur in reporting for the industrial survey, and more importantly (since tariffs and tariff equivalents must be used), in calculating the input share in world prices from the import share in domestic prices. The calculated effective rate of protection is least sensitive to variations in the two parameters that are most easily estimated, the excise tax rate and the tariff 'equivalent' on the input, which is usually the legal tariff in Nigeria, since most inputs are freely imported in Nigeria. However, even here, difficulties arise because of tariff rebate schemes that apply to some firms and not to others and depend on whether any output is exported or not.

10. An example of not completely unrealistic errors occurring in estimating the parameters that all tend to increase the effective rate of protection measure is useful for both indicating the sensitivity of the measure and how important it is to be very careful in making the calculations, and also suggests considerable care should be taken in using the measure for project evaluation. Assuming a ten percent over-estimation of t and m, and a ten percent under-estimation of t_m and e, the effective rate of protection is raised from 145 percent to 311 percent: an increase of 115 percent.

Nominal Tariff Rates Used in Calculating the Effective Tariff Rates

11. The nominal tariff rates used in calculating the effective rates of protection were derived from three types of information: (a) legal tariff rates; (b) observed tariff rates defined as duty collected as a percentage of CIF import value; and (c) price comparisons between ex factory prices and CIF (Lagos) prices. Legal tariff rates would be adequate if no quantitative restrictions or foreign exchange controls were imposed and if these rates were applied to all imports within a specific tariff classification. These conditions have not existed in Nigeria during the period of this study. Quantitative restrictions and foreign exchange controls were increasingly relied on during the crisis years. The tariff rates on raw materials applied to different producers differ depending on whether the producer has qualified for the approved user and tariff rebate schemes designed to stimulate industrialization. Further difficulties arise in relying solely on legal tariff rates because of changes in the tariff schedule during the period of study. While 'observed' tariff rates on the narrow five digit SITC commodity classification can help take into account these difficulties, they may also be misleading, because of special tariff rates applied to government (procurement) imports. They also show tariff collections gross of

tariff rebates. Furthermore, they give unreliable indication of nominal protection if import restrictions are used hand in hand with tariffs. Price comparisons are, in a sense, the ideal indicator since it is possible to calculate the nominal tariffs implicit in quantitative restrictions.

12. Nevertheless, besides the considerable practical difficulty of obtaining reliable ex factory prices in Nigeria, price comparisons have a major weakness for this purpose. In Nigeria, as in most less developed countries, considerable qualitative differences exist between the imported commodity and its domestically produced counterpart. Price comparisons are thus made up of two components: a difference due to the effect of tariffs and/or quantitative restrictions which will be reflected in a higher selling price for the domestically produced commodity, and a qualitative difference which will favor the imported commodity.

13. The importance of the qualitative difference was reflected in many price comparisons that were made, where, even with high nominal tariff rates, prices of domestically produced items were found to be lower than the CIF price. This was found to be the case, for instance, with tires, tubes, record players, confectionery, and shoes. Of course, with sufficient time and effort, it should be possible to obtain meaningful price comparisons on qualitatively similar commodities. This was not feasible within the time available for this study.

14. Modifications of the price comparisons made for this study may not greatly change the results obtained here. Firstly, quantitative restrictions, while imposed prior to 1968 and expanded during that year, had their greatest impact in 1969 and early 1970. The effective tariff rates calculated for 1968 for products where meaningful price comparisons could not be obtained may still adequately reflect the protective effect in that year. Secondly, there is reportedly a considerable lag in the adjustment of producer prices to higher retail prices. Even where quantitative restrictions were imposed in 1968, adjustment in 1968 producer prices may not have taken place in that year. Of much greater relevance to our purposes, however, is the expectation that with the end of the political crisis and the rapid recovery of foreign exchange earnings, especially from petroleum, there will be a relaxation of the quantitative restrictions. This expectation was buttressed by the lifting of some of the quantitative restrictions in April, 1970.

15. Where possible, all three of the above mentioned sources of information were used in arriving at appropriate nominal tariff rates. The exact sources used for particular commodities are discussed in the Industry Notes appended to this report. In the vast majority of cases, legal or observed tariff rates were employed. Only for wheat flour, matches, cigarettes, candles, beer, stout, textiles, and cement were price comparisons sufficiently reliable to be used.

16. In those cases where an industry produces more than one commodity, the nominal tariff rates on particular commodities have been weighted by the commodities' share in the total output of the industry to arrive at nominal

protection for the industry as a whole. For most studies, data with the required detailed breakdown of output by product are not available. However, for Nigeria the responses to the 1968 industrial census are quite good in this respect and no difficulty was encountered in finding an appropriate average for nominal tariffs.

The Data on Input-Output Relations

17. The structure of industrial costs used in deriving the estimates of effective rates of protection is based on the 1968 industrial survey that was conducted for all of Nigeria, except for the war affected East Central, South Eastern, and Rivers States. Since the structure of raw material costs is not published, and since the 1968 survey will not be published until 1971, this data was obtained from the individual industry responses. The quality of the returns varied widely from industry to industry. Many firms supplied a detailed breakdown while others simply aggregated all material costs and gave the aggregate value. In deriving the cost structure for the 42 sector breakdown, the data for all reporting firms could not be used for every industry. In certain cases, it was necessary to choose firms that did give a detailed breakdown as representative of the total industry. On the other hand, the breakdown of outputs produced and other industrial costs has been found to be very satisfactory. Similarly, data on employment and wage costs used in the alternative profitability calculations are very reliable, but data on the original book value of fixed capital assets is only a rough indication of the true value of capital stock. Data on tariff rates is satisfactory, but where price comparisons were necessary, the available price data was often found inadequate. Despite data difficulties and a rapidly changing trade system, the effective tariff rates derived do give a good indication of the degree of protection given different industries in Nigeria.

18. So that the reliability of these calculations may be easily judged and because it may be helpful to further work on defining the structure of industrial costs and inter-industry relations in Nigeria, extensive industry notes are appended to this report giving the data used in deriving effective tariff rates. In presenting this data, the confidentiality rule of the Nigerian Federal Office of Statistics has been complied with, so that in the cases where it has not been possible to use three or more firms, the detailed breakdown is not given.

The Treatment of Depreciation

19. For purposes of this study, depreciation allowances have been included in the definition of value added. Their inclusion in value added means that the effective rate of protection has been calculated as the percentage distortion of gross value added. Since a major share of industrial capital formation is comprised of traded commodities whose cost to domestic industry is affected by trade restrictions, it might be theoretically preferred to deal with net value added and to take into account the extent to which trade restrictions have increased depreciation allowances. The

effect of this modification of the analysis would be minor, however, since depreciation allowances are a small share of value added. Furthermore, practical difficulties exist in properly defining the commodity mix of items on which depreciation allowances are calculated. The accelerated depreciation allowance scheme heavily relied on in the past as an industrial incentive 1/ also distorts the figures available on total depreciation. The effective rate of protection calculated on a gross basis has therefore been adopted in this study.

Non-Traded Commodities

20. In calculating the effective rates of protection, it has been necessary to take into account the effect of the tariff system on non-traded goods. Non-traded commodities may be accounted for under several alternative assumptions. Corden adds the direct and indirect value added and the cost of direct and indirect material inputs in the non-traded goods to the value added and the material costs of the industry using these goods for which effective tariff rates are to be derived. An alternative procedure has been used by Balassa based on the assumption that non-traded goods are supplied at constant cost and that their prices vary in response to changes in the cost of material inputs used in their production. 2/ For the Nigerian study, non-traded goods consist of electricity and an 'other cost' item encompassing such expenses as repairs, advertisements, and entertainment. Since these are a very small part of total industrial costs, the choice of procedure for handling non-traded commodities does not have much practical significance. The Balassa procedure has been adopted and the percentage increase in price of electricity due to tariffs on material inputs in its production has been calculated, being 20 percent, and a rough estimate has been used for the total costs item, 35 percent.

1/ Cf. para. 38 of the report.

2/ The Corden and Balassa methods are discussed at greater lengths in Bela Balassa, Structure of Protection in Developing Countries, The John Hopkins Press, forthcoming.

STATISTICAL APPENDIX

Table 1: GROSS DOMESTIC PRODUCT AT CURRENT FACTOR COST
1963/64 - 1969/70

(In millions of £N)

	1963/64	1964/65	1965/66	1966/67	1967/68	1968/69	1969/70
Agriculture, Forestry and Fishing	837.5	839.0	845.9	892.2	856.5	863.3	871.9
Mining	28.0	40.8	74.3	81.7	40.8	44.9	60.6
Manufacturing and Crafts	78.9	82.4	96.4	98.0	115.6	135.2	155.5
Electricity and Water Supply	7.7	8.8	9.3	9.9	9.1	9.5	10.3
Building and Construction	61.4	63.2	80.6	82.7	74.4	77.0	81.6
Distribution	191.0	208.2	216.4	216.1	209.6	211.7	215.9
Transport	62.9	62.3	58.0	55.5	52.7	53.0	53.5
Communications	6.9	8.4	9.8	10.0	8.5	8.6	9.0
General Government	52.5	54.6	54.0	54.0	49.1	51.1	55.7
Education	37.6	44.1	45.0	49.4	46.4	47.3	49.7
Health	7.7	9.8	10.3	9.7	9.6	9.8	10.5
Other Services	31.1	35.4	40.3	45.8	53.6	59.0	64.9
Total	1403.2	1457.0	1540.3	1605.0	1525.9	1570.4	1639.1

Source: Federal Office of Statistics and Federal Ministry of Economic Development and Reconstruction.

Note: For 1967/68 to 1969/70 firm data on the three Eastern States are not available. However, as far as possible, production in these states is included in these figures. The figures for 1967/68 to 1969/70 are not strictly comparable to those of earlier years.

Table 2: GROSS DOMESTIC PRODUCT AT CONSTANT (1962) FACTOR COST
1963/64 - 1969/70

(In millions of £N)

	1963/64	1964/65	1965/66	1966/67	1967/68	1968/69	1969/70
Agriculture, Forestry and Fishing	870.8	866.7	870.9	869.5	817	805.8	801.8
Mining	31.3	47.5	82.4	114.4	51.5	55.6	68.4
Manufacturing and Crafts	76.8	78.8	91.7	93.1	108.9	126.3	142.7
Electricity and Water Supply	7.3	8.1	9.2	10.7	10.0	10.5	11.2
Building and Construction	66.0	65.0	80.0	81.3	72.3	73.4	76.3
Distribution	180.9	194.9	202.7	200.9	193.9	191.0	190.0
Transport	61.4	59.3	55.6	53.3	50.1	49.8	50.4
Communications	6.7	7.9	9.2	9.4	7.8	7.8	8.1
General Government	51.3	52.1	51.6	51.6	48.1	49.1	52.6
Education	37.8	43.0	43.7	48.2	46.3	47.3	49.2
Health	7.5	9.4	9.8	9.3	9.6	9.1	9.7
Other services	27.9	30.7	36.2	41.4	47.2	50.5	54.0
Total	1425.7	1463.4	1543.0	1583.1	1462.4	1475.2	1513.8

Source: Federal Office of Statistics and Federal Ministry of Economic Development and Reconstruction.

Note: See note to Table 1.

Table 3: VALUE ADDED OF THE MANUFACTURING SECTOR BY INDUSTRY GROUP 1958, 1963 AND 1967

Industry Group	£N million			% Shares	
	1958	1963	1967	1963	1967
Food and tobacco	4.76	10.77	16.02	19.6	17.7
Beverages	4.50	10.17	11.79	18.5	13.0
Vegetable oil milling	1.51	3.42	7.22	6.2	8.0
Textiles	1.76	3.99	13.68	7.2	15.1
Garments	0.04	0.09	1.02	0.2	1.1
Footwear	0.24	0.54	1.35	1.0	1.5
Furniture and fixtures	0.32	0.73	0.62	1.3	0.7
Glass products and pottery	0.01	0.02	0.05	0.0	0.0
Paints	0.16	0.36	0.59	0.7	0.6
Bricks & tiles	0.04	0.10	0.12	0.2	0.1
Cement and cement products	1.51	3.42	3.14	6.2	3.5
Basic industrial chemicals & petroleum products	1.27	2.87	7.04	5.2	7.8
Electrical equipment	0.05	0.12	0.44	0.2	0.5
Basic metal and metal products	1.27	2.88	6.07	5.2	6.7
Motor vehicle assembly	0.29	0.65	0.80	1.2	0.9
Other manufactures	6.57	14.80	16.68	27.0	18.4
Total Manufactures	24.3	54.9	90.5	100	100
Crafts	16.2	20.4	22.4		
Total Manufactures & Crafts	40.5	75.3	112.9		

Source: Federal Office of Statistics; Industrial Surveys, 1963 and 1967.

Table 4: VALUE ADDED AND EMPLOYMENT IN 1968 IN FIRMS WITH TEN OR MORE EMPLOYEES COMMENCING PRODUCTION IN 1966, 1967 AND 1968 BY INDUSTRY GROUP[1/]

Industry Group	Number of new firms	Value added (£N thousand)	Employment
Food and beverages	5	8	144
Textiles, footwear and apparel	9	1,420	3,344
Saw milling and wood products	12	9	302
Printing and paper products	4	72	261
Chemicals, paints and plastics	13	417	1,330
Rubber products, tires and tubes	2	220	161
Cement, pottery and glass products	5	-3	898
Metal products and miscellaneous	22	378	1,978
Total	72	2,521	8,148

1/ Eastern States excluded.

Source: Federal Office of Statistics, Industrial Survey 1968.

Table 5: RATIO OF IMPORTS TO TOTAL DOMESTIC SUPPLY FOR SELECTED COMMODITY GROUPS, NIGERIA 1968

Soft drinks	1%
Matches and candles	2%
Bakery products	1%
Flour	1%
Beer and stout	2%
Cigarettes	3%
Confectionery	4%
Roofing sheets	5%
Footwear	6%
Soaps, perfumes and cosmetics	5%
Cement	12%
Paints	19%
Furniture	20%
Miscellaneous products of petroleum and coal	26%
Textiles	28%
Dairy products	28%
Tires and tubes	36%
Radios, television sets and record players	40%
Suitcases and bags	44%
Potable spirits	47%
Refined sugar	57%
Structural clay products	76%
Drugs and medicines	90%
Glass and pottery	94%
Motor vehicles	98%

Source: Derived from: Federal Office of Statistics, Nigeria Trade Summary, December 1968, and Industrial Survey 1968.

Table 6: EXPORTS OF PROCESSED PRIMARY PRODUCTS, NIGERIA, 1965-1969

	Quantity unit	Quantity (thousand units) 1965	1966	1967	1968	1969	Value (£N million) 1965	1966	1967	1968	1969
Groundnut oil	tons	91	108	71	109	99	10.0	10.0	7.2	9.5	11.1
Groundnut cake	"	163	133	131	171	168	5.3	4.7	4.2	4.9	5.0
Rubber	"	68	70	48	52	56	10.9	11.5	6.3	6.3	9.6
Palm oil	"	150	140	16	3	8	13.6	11.0	1.3	0.1	0.4
Tin metal	"	11	11	16 10	11	10	14.9	15.4	13.0	13.7	13.9
Timber and plywood	Cu.ft.	20,106	18,896	11,598	11,353	12,133	7.7	6.8	4.3	4.3	5.2
Hides & skins	cwt.	171	163	150	144	144	4.7	5.8	4.4	4.0	4.2
Total major processed exports							67.1	65.2	40.7	42.8	49.4
Total exports							263.3	278.8	238.1	206.5	320.1
Major processed exports as % of total exports							25%	24%	17%	21%	16%

Source: Federal Office of Statistics.

Table 7: GROSS OUTPUT AND VALUE ADDED IN MANUFACTURING, 1967

Industry	Gross output	Value added including "other cost"	Value added excluding "other cost"	Ratio of value added to gross output Including "other cost"	Excluding "other cost"
	£N thousand			Percent	
Meat products	2,054	571	391	28	19
Dairy products	480	206	176	43	37
Fruit canning	46	17	12	35	26
Grain mill products	6,805	1,787	1,292	26	19
Bakery products	2,484	948	663	38	27
Sugar and spirit distillery	1,796	979	803	54	45
Sugar confectionery	3,094	1,056	768	34	25
Miscellaneous food preparations and tobacco	14,309	10,456	3,588	73	25
Beer	14,047	10,942	5,503	78	39
Soft drinks	1,280	844	475	66	37
Textiles	30,241	13,678	10,085	45	33
Footwear	3,636	1,344	1,146	37	32
Wearing apparel	483	253	231	52	48
Made up textile goods	1,929	767	601	40	31
Sawmilling	4,638	2,626	2,184	57	47
Furniture and fixtures	3,612	1,626	1,147	45	32
Paper produce	2,675	909	572	34	22
Printing	4,044	2,209	1,842	55	46
Tanning	2,077	360	258	17	12
Travel goods	252	48	11	19	4
Rubber goods	6,309	3,081	2,403	49	38
Basic industrial chemical and petroleum products	2,239	1,347	1,270	60	57
Vegetable oil milling	24,194	7,225	3,681	30	15
Paints	1,337	591	405	44	30
Miscellaneous chemical products	12,147	5,687	3,747	47	31
Bricks and tiles	230	125	97	54	42
Glass products and pottery	456	48	9	11	2
Cement and concrete products	5,806	3,139	2,794	54	48
Basic metals and metal products	25,599	6,069	4,821	24	19
Machinery other than electrical	533	213	88	40	16
Electrical equipment	1,817	440	330	24	18
Motor vehicle assembly	8,497	799	479	9	6
Motor vehicle repairs	28,525	6,348	4,820	22	17
Miscellaneous manufactured goods	1,573	892	657	57	42
Total	219,246	87,631	57,450	40	26

1/ "Other cost" includes excise taxes, professional fees, rental payments, water charges, cost of office materials, postage, insurance, advertising, hired transport, and miscellaneous operating costs.

Source: Federal Office of Statistics, Industrial Survey 1967.

Table 8: RATES OF PROFITS ON SALES IN NIGERIAN MANUFACTURING, 1967 AND 1963

1967	Sales (£N'000)	Profit (£N'000)	Rate of Profit on sales (%)
Foodstuffs and tobacco	31,068	5,462	18
Beverages	15,327	4,791	31
Textiles	30,241	6,589	22
Footwear, travel goods, wearing apparel and made up textiles	6,300	1,233	20
Saw milling	4,638	755	16
Wood products, furniture and fixtures	3,612		15
Printing and paper products	6,719	593	9
Tanning	2,077	117	6
Rubber products	6,309	1,623	26
Chemicals	14,386	3,583	25
Oil milling	24,194	3,119	13
Paints	1,337	251	19
Bricks, tiles, pottery, glass products	686	-62	-9
Cement and concrete	5,806	2,095	36
Basic metals	25,599	3,129	12
Metal products	25,599	3,129	12
Electrical equipment	1,817	187	10
Motor vehicle assembly	8,497	-25	-.2
1963			
Foodstuffs and tobacco	20,648	8,899	43
Beverages	14,036	7,625	54
Textiles	6,931	1,885	27
Footwear, travel goods, made up textiles	2,887	107	4
Saw milling	5,120	1,163	23
Wood products, furniture and fixtures	1,728	184	11
Printing and paper products	3,578	463	13
Tanning	743	165	22
Rubber products	7,621	953	13
Chemicals	6,897	1,335	19
Oil milling	14,371	1,202	8
Paints	757	202	27
Bricks, tiles, pottery, glass products	284	105	-37
Cement and concrete	5,894	2,174	37
Basic metals	10,676	157	1
Metal products	5,815	1,025	18
Electrical equipment	248	-1	-0
Motor vehicle assembly	9,478	-31	-0

Source: Federal Office of Statistics, Industrial Surveys, 1967 and 1963.

Table 9 : VALUE ADDED, GROSS OUTPUT, AND EMPLOYMENT IN 1968 IN FIRMS WITH TEN OR MORE EMPLOYEES COMMENCING OPERATION DURING 1966 TO 1968, BY STATE

State	Number of new firms	Value Added (£N '000)	Gross Output (£N '000)	Employment
Lagos	44	965	8,740	5,795
Western	15	199	625	415
Benin Plateau	5	504	2,313	841
Kano	4	247	447	661
North Central	1	442	1,480	221
North Eastern	1	-15	15	56
Mid Western	2	179	298	159
Kwara	-	-	-	-
North Western	-	-	-	-
Total	72	2,521	13,918	8,148

1/ Eastern States excluded.

Source: Federal Office of Statistics, Industrial Survey 1968.

Table 10: PRIVATE FOREIGN SHARE OF PAID UP CAPITAL, 1965 AND IN FIRMS COMMENCING PRODUCTION DURING 1966 TO 1968

Sector	Private foreign participation rate in paid-up capital[1]	
	1965	1968
	All firms	New firms entering in 1966-1968
Food and beverages	71%	90%
Vegetable oil milling	75%	-
Textiles, footwear and apparel	65%	46%
Saw milling and wood products	52%	14%
Printing and paper products	32%	57%
Chemical paint and plastics	69%[2]	84%
Rubber products, tires and tubes	47%	83%
Cement, pottery and glass products	37%	84%
Metal products and miscellaneous	94%	96%
Total	68%	67%

1/ Eastern States excluded.

2/ All of Nigeria, necessitated by an inconsistency in the data on paid up capital in the Eastern Region.

Source: Federal Office of Statistics, Industrial Surveys, 1965 and 1968.

Table 11: PIONEER COMPANIES BY INDUSTRY, 1968

	Industry	Number of Pioneer Companies	Estimated total value of investment (£N million)	Average per company investment (£N thousand)
1.	Metal (based on iron and steel)	33	22.5	680
2.	Textiles and textile products	21	19.0	900
3.	Food processing (including animal feed)	18	5.5	310
4.	Chemicals and paints	12	5.2	430
5.	Rubber and rubber products (including synthetic rubber)	9	6.6	730
6.	Pharmaceuticals	7	3.5	500
7.	Tin alloys and aluminium	10	2.5	250
8.	Cement	7	3.7	530
9.	Hotels	4	2.5	630
10.	Others	27	4.0	150
	Total	148	75.0	500

Source: Federal Ministry of Industry.

Table 12: COMMODITIES SUBJECT TO EXCISE TAXATION, 1960, 1965 AND 1970

1960	1965	1970
Cigarettes	Cigarettes	Cigarettes
beer	beer	beer
lemonade	lemonade	lemonade
confectionery	matches	matches
soap	soap	confectionery
	confectionery	biscuits
	apparel	blankets
	biscuits	cement
	blankets	enamelware
	cement	nails, barbed wire
	enamelware	paint
	footware	piece goods
	nails, barbed wire	plasticware
	paint	spirits
	piece goods	towels
	plasticware	travelling trunks
	spirits	yarn
	towels	tires
	travelling trunks	thread
	yarn	metal containers
	tires	household utensils
	thread	tanned leather
	metal containers	oils
	household utensils	wine and aperitifs
	tanned leather	LPG
	oils	radiograms and record players
	wine and aperitifs	tabs & raps
		snuff
		roofing sheets
		butter
		packing containers
		cosmetics and perfumes
		flour
		furniture
		records
		jewelry
		electric bulbs
		ballpoint pens
		bicycle tires
		socks
		mattresses
		batteries
		disinfectants
		bacon
		radios and television sets
		metal structures

Source: Federal Ministry of Finance.

Table 13: SELECTED EXCISE DUTIES, 1960, 1964 AND 1969

Commodities	1960	1964	1969
1. Cigarettes manufactured in Nigeria			
a) where 100 cigarettes are less 2 lb. weight	30% of selling price	30% of selling price	30% of selling price
b) 1,000 between 2 and 2 1/2 lb.	48% of selling price	40 or 48% of selling price	40-50% of selling price
c) 1,000 exceed 2 1/2 lb.	50% of selling price	50% of selling price	50% of selling price
2. Cigars manufactured in Nigeria	3/6d per lb.	3/6d per lb.	20% ad valorem per 1000 cigarettes or 30-40% or 50% depending on type.
3. Tobacco manufactured in Nigeria other than prepared in the primitive fashion for smoking	3/6d per lb.	3/6d per lb.	20% ad valorem
4. Beer brewed in Nigeria other than native liquor	4/- per gal.	7/6d per gal.	7/6d per gal.
5. Matches In boxes containing 80 matches or less	6/9d per gross box	6/9d per gross	3-12/- per gross
6. Lemonade and other aerated water	1/4d per gal.	1/8d per gal.	2/- per gal.
7. Confectionery	4d per lb.		2d per lb.
8. Biscuits		5% of selling price	10%
9. Blankets		50% of selling price	10%
10. Cement	Not locally manufactured	15/- per cwt.	£1 per cwt.
11. Corned beef	"	5% of selling price	10%
12. Enamelware	"	5% " " "	10%
13. Footwear (leather)	"	2/- per pair	3/6d per pair
(non-leather)	"	6d " "	1/6 " "
14. Piece goods: knitted	"	3d per lb.	2/6 per lb.
Cotton, bleached or unbleached	"	2d per sq. yd.	2d per sq. yd.
Other	"	6d per sq. yd.	6d per sq. yd.
15. Plasticware	"	5% of selling price	10%
16. Soap and soap products	"	5% " " "	15%
17. Spirits (potable)	"	£ 7 per gal.	£ 7.10s per gal.
18. Tires (pneumatic)	"	10%	15%
19. Yarns and threads	"	10% of selling price	15%
20. Apparel shirts	"	9d each	1/-each
singlets	"	6d each	9d each
21. Apparel socks	"	not produced	10%
22. Butter, margarine and other fats	"	10% of selling price	15% of selling price
23. Gramophone records	"	10% " " "	10% " " "

Source: Federal Ministry of Finance.

Table 14: REVENUES FROM EXCISE TAXES, IMPORT DUTIES, AND EXPORT DUTIES 1965/66 TO 1970/71

(£N million)

	Excise taxes	Import duties	Export duties	Total Federally collected revenues
1965/66	21.5	74.9	15.9	158.7
1966/67	36.0	58.5	14.0	159.6
1967/68	24.8	53.3	15.0	145.3
1968/69	28.2	58.0	14.8	145.8
1969/70 1/	38.0	69.1	19.7	187.6
1970/71 2/	54.2	69.7	22.1	273.0
	(% of total Federally collected revenues)			
1965/66	13.5	47.1	10.0	100
1966/67	22.5	36.6	8.8	100
1967/68	17.1	36.7	10.3	100
1968/69	19.3	39.8	10.2	100
1969/70	20.3	36.8	10.5	100
1970/71	19.9	25.5	8.1	100

1/ Revised Estimates.

2/ Approved Budget Estimates.

Source: Federal Ministry of Finance.

Table 15: INDUSTRIES RANKED BY THE NUMBER OF PROJECTED NEW FIRMS NIGERIA, 1970

Ranking	Industry
1.	Spinning, Weaving and Finishing Textiles
2.	Manufacture of Metal Products except Machinery
3.	Manufacture of Articles of Pulp Paper and Paper Board
4.	Electrical Apparatus and Appliances
5.	Miscellaneous Metal and Electrical Products
6.	Cordage, Rope and Twine
7.	Canning and Preserving of Fish and other Sea Foods
8.	Leather Products except Footwear
9.	Cocoa, Chocolate and Sugar Confectionery
10.	Miscellaneous Chemical Products
11.	Printing and Publishing
12.	Glass and Glass Products
13.	Furniture and Fixtures
14.	Miscellaneous Products of Petroleum
15.	Footwear
16.	Canning and Preserving of Fruits and Vegetables
17.	Grain Mill Products
18.	Paints, Varnishes and Lacquers
19.	Pulp and Paper
20.	Rubber Products
21.	Structural Clay Products

NOTES:

Industry Data Used in Calculating Effective Rate of Protection, etc.

The input-output and the tariff data used in calculating the effective rates of protection as well as the wage costs and original book value of fixed assets required in the profitability calculations are presented in this Annex. All the data relate to 1968. Tariffs of 20 percent have been used for fuel and electricity costs and 33 1/3 percent for other and unspecified costs.

3231 - Tanneries and Leather Finishing

All 7 reporting firms were used in the analysis of this industry. Employment in these firms was 591.

(₦N'000)

Output		Excise - 58
Processed skins, raw skins and products of hides	2,141	
Inputs		
Raw skins	1,132	
Chemicals and others	235	
	1,367	
Fuel costs	3	
Electricity costs	19	
Other costs	116	
Total costs - excise	1,563	
Wage costs	140	
Book value of fixed assets	392	

The export tax on processed and raw skins was 10 percent. The tariff on chemicals and other inputs (assumed) was 35 percent. The export taxes are legal rates but collected duties are the same. Actual value added was ₦N 578 thousand while calculated free trade value added was ₦N 808 thousand.

3720 - Non-ferrous Metal (tin)

Only the one large scale export firm reported in this industry. Because of the confidentiality rule of the Federal Office of Statistics, the details of the cost breakdown can therefore not be presented. There was no export tax on tin ingots, a ten percent tax on tin alloy, and a 4 percent tax on the export of tin slag.

3115 - Vegetable and Animal Oils and Fats

There were 17 firms reporting in this industry. Employment was 3,817.

	(₦N'000)	
Value of output	21,648	Excise 569
Cost of raw materials	14,337	
Fuel costs	119	
Electricity costs	228	
Other costs	1,128	
Total costs incl. excise	16,380	
Wage costs	657	
Book value of fixed assets	2,438	

Value added was ₦N 5,268 thousand. The effective rate of protection and profitability calculations were based on five firms with employment of 1,224.

	(₦N'000)	
Output		Excise 570
Groundnut oil	9,964	
Groundnut cake	5,446	
Groundnuts	360	
Palm oil	3,619	
Palm cake	912	
Total	20,301	
Inputs		
Palm kernels	3,222	
Groundnuts	9,993	
Groundnut shells	26	
Containers	8	
Total	13,249	
Fuel costs	103	
Electricity costs	209	
Other costs	2,833	
Total costs incl. excise	16,394	
Wage costs	325	
Book value of fixed assets	1,281	

Taxes on the processed products were all 10 percent. Since these products are handled by marketing boards, inputs are obtained at export prices despite the 10 percent export tax on the unprocessed commodities. There was a 25 percent tariff on the imported containers. Actual value added was ₦N 3,907 thousand and value in world market prices was ₦N 4,922 thousand.

3311 - Sawmills and Other Wood Mills

The calculations were based on one large firm producing output valued at over ₦N 2.2 million. By the confidentiality rule, the details on the firm cannot be given. The export tax was 10 percent on plywood, 4 percent on logs, and 2.5 percent on lumber.

3550 - Miscellaneous Rubber Products

All 17 reporting firms in this industry were used in the calculation of effective rates of production and profitability. Employment was 4,342.

(₦N'000)

Output	
Crepe and sheet rubber	3,460
Rubber and foam products	510
	3,970
Inputs	
Raw rubber	1,772
Chemicals	240
	2,012
Fuel costs	74
Electricity costs	20
Other costs	751
Total costs incl. excise	2,933
Wage costs	660
Book value of fixed assets	4,436

Export taxes were 10 percent on the final products. Inputs of raw rubber are purchased at export prices. A 33 1/3 import tariff is applied on imports of chemicals. Actual value added was ₦N 1,037 thousand while value added at world market prices was ₦N 1,287 thousand.

3131 - Distilling, Rectifying and Blending Spirits

There was only one firm in this industry. Because of the confidentiality rule, the details of this firm cannot be given. The tariff on imported spirits was 100 percent plus 7 1/2 percent surcharge.

3529 - Miscellaneous Chemical Products

Four of five reporting firms were used in the calculations. Employment was 483.

(₦N'000)

Output		Excise 344
Matches	1,071	
Candles	300	
	1,371	
Inputs		
Chemicals	16	
Splints	101	
Skillets	97	
Paper	25	
Cardboard	5	
Paraffin wax	138	
Wicks	10	
Other	50	
	443	
Fuel costs	14	
Electricity costs	4	
Other costs	95	
Total costs incl. excise	900	
Wage costs	99	
Book value of fixed assets	261	

The tariff on matches was based on actual duty collected, 55 percent. The tariff on candles was 33 1/3 percent. The tariff on chemicals, paraffin wax, and wicks was 33 1/3 percent. The tariff on splints and skillets was 10 percent. The tariff on paper and cardboard was 15 percent. Actual value added was ₦N 471 thousand and value added at world prices was ₦N 462 thousand.

3522 - Drugs and Medicines

Five of six reporting firms were used in the calculations. Employment in these firms was 515.

(₦N'000)

Output		Excise 29
Drugs	429	
Inputs		
Chemicals	130	
Packing material	28	
	158	
Fuel costs	-	
Electricity costs	12	
Other costs	73	
Total costs incl. excise	270	
Wage costs	215	
Book value of fixed assets	526	

The tariff on drug imports was 20 percent. Chemicals are imported freely by exemption. The tariff on packaging materials was 25 percent. Actual value added was ₦N 158 thousand, while value added at world prices was ₦N 135 thousand.

3112 - Dairy Products

All five reporting firms were used in the calculations. Employment was 383.

(₦N'000)

Output		Excise 6
Ice cream	230	
Butter	62	
Milk	200	
Other	163	
	655	

Inputs	
Milk powder	154
Containers	107
Sugar	6
Butter	35
Other	105
	407
Fuel costs	20
Electricity costs	23
Other costs	47
Total costs incl. excise	504
Wages	88
Book value of fixed assets	587

The tariff on butter imports was 72 percent and on milk 70 percent. Actual duty collection on milk powder was 4 percent, on sugar 70 percent, and on containers and wrapping the tariff was 25 percent. Actual value added was ₦N 151 thousand and value added at world market prices was ₦N 124 thousand.

3133 - Beer and Stout

All four reporting firms were used in the calculations. Employment was 1,884.

(₦N'000)

Output		Excise 4,800
Beer	11,362	
Stout	5,364	
Soft drinks	360	
	17,086	
Inputs		
Bottles	1,381	
Malt	912	
Hops	155	
Sugar	103	
Packaging	178	
Other	224	
	2,955	

Fuel costs	375
Electricity costs	98
Other costs	3,057
Total costs incl. excise	11,285
Wages	10,088
Book value of fixed assets	8,372

Price comparisons yield a tariff equivalent of 75 percent for beer. Actual tariff collections on soft drinks were 82 percent. Bottles are imported free by exemption. Tariff on malt and hops was 33 1/3 percent. Collected duty was 70 percent on sugar. Concentrates are imported duty free by exemption while a 25 percent tariff is applied to packaging materials. Actual value added was ₦N 5,801 thousand while value added at world prices was ₦N 4,555 thousand. The excise tax estimated is based on revenue collected from the beer industry.

3140 - Tobacco Products

Only two firms in this industry reported and only one was used in the calculations. Because of the confidentiality rule, the details cannot be given. A price comparison was used for cigarettes indicating a 133 percent difference between domestic price and CIF price.

3412 - Paper Containers, Boxes and Paper Boards

All six firms reporting in this industry, were used in the calculations. Employment was 702.

(₦N'000)

Output		Excise 54
Cement bags	435	
Cardboard and paper board	840	
Labels, cigarette slides	307	
Paper bags	33	
Cartons	381	
Wax paper	61	
	2,057	

Inputs	
Kraft papers	792
Papers	270
Glue	41
Ink	85
Other	134
	1,323

Fuel costs	5
Electricity costs	17
Other costs	229
Total costs incl. excise	1,628
Wage costs	233
Book value of fixed assets	1,117

The tariff on final products of this industry was 25 percent. The tariff on kraft papers was 10 percent. Actual tariff collection on papers was 19 percent and on ink 12 percent. The duty on glue was 33 1/3 percent. Value added was ₦N 430 thousand while value added at world prices was ₦N 327 thousand.

3521 - Paints, Varnishes and Lacquers

All six firms reporting were used in the calculations. Employment was 394.

(₦N'000)

Output		Excise 54
Paints	1,563	
Inputs		
Pigments, solvents, resins, and chemicals	706	
Packing materials	141	
	847	
Fuel costs	0.6	
Electricity costs	10	
Other costs	255	
Total costs incl. excise	1,166	
Wages	178	
Book value of fixed assets	589	

The tariff on final products was 40 percent and on the inputs 33 1/3 percent. Value added was ₦N 397 thousand while at world market prices it was ₦N 283 thousand.

3233 - Travel Goods

All four firms reporting were used in the calculation. Employment was 448.

(₦N'000)

Output		Excise 41
Suitcases and bags	405	
Input		
P.V.C. sheets	55	
Fiber boards	70	
Metal fittings	140	
Skins	4	
Other	6	
	275	
Fuel costs	0.03	
Electricity costs	2	
Other costs	42	
Total costs incl. excise	360	
Wages	80	
Book value of fixed assets	125	

The tariff on travel goods was 40 percent. The tariff on P.V.C. sheets was 33 1/3 percent, on fiber boards 15 percent, on metal fittings 33 1/3 percent. Skins are purchased at 10 percent below export prices because of the export duty. Actual value added was ₦N 45 thousand, value added at world market prices was ₦N 25 thousand.

3699 - Non-metallic Mineral Products

All six firms reporting were used in the calculations. Employment was 838.

(₦N'000)

Output		Excise: nil
Concrete products	1,512	

Inputs	
Wire and iron reinforcement	30
Cement	270
Gravel	21
Asbestos	253
Other	92
	667
Fuel costs	1
Electricity costs	22
Other costs	145
Total costs incl. excise	835
Wages	238
Book value of fixed assets	1,336

The tariff on concrete products was 33 1/3 percent. The tariffs on wire reinforcement, asbestos and gravel were 10 percent. The tariff on cement was 40 percent. Actual value added was ₦N 677 thousand and value added in world market prices was ₦N 452 thousand.

3692 - Cement

There were three firms reporting in this industry all of which were used in the calculations. Employment was 1,290.

(₦N'000)

Output		Excise 524
Cement	5,598	
Inputs		
Limestone and clinker	920	
Gypsum	230	
Cement bags	381	
Other	53	
	1,584	
Fuel costs	406	
Electricity costs	451	
Other costs	468	
Total costs incl. excise	3,433	
Wage costs	553	
Book value of fixed assets	10,626	

The tariff on cement was 40 percent, on clinker 20 percent, on gypsum 10 percent, and duty collected on bags was 16 percent. Actual value added was ₦N 2,165 thousand and value added at world prices was ₦N 1,378 thousand.

3813 - Structural Metal Products

There were 21 firms reporting of which 18 were used in the analysis. Employment in these was 1,603.

(₦N'000)

Output		Excise: nil
Trailer and trucks	801	
Tanks and trailers	421	
Structural steel	635	
Doors and windows	706	
Furniture	12	
Steel structures	325	
Other	389	
	3,289	
Input		
Metals (iron and steel)	1,331	
Pipes, tubes and beams	153	
Paints and chemicals	7	
Miscellaneous parts	90	
Other	639	
	2,221	
Fuel costs	4	
Electricity costs	32	
Other costs	210	
Total costs incl. excise	2,467	
Wage costs	485	
Book value of fixed assets	1,127	

The tariff on all final products was 33 1/3 percent except for metal furniture where it was 75 percent. The tariff on all inputs was 33 1/3 percent except for metal where it was 28 percent. Actual value added was ₦N 822 thousand while value added at world prices was ₦N 490 thousand.

3691 - Structural Clay Products

All seven reporting firms, with employment of 279, were used in the calculations.

(₦N'000)

Output		Excise: nil
Tiles, blocks and pipes	330	
Inputs		
Colored cement	23	
Cement	36	
Marble chip	9	
Sand	8	
Other	3	
	79	
Fuel costs	12	
Electricity costs	2	
Other costs	37	
Total costs incl. excise	130	
Wage costs	60	
Book value of fixed assets	335	

The tariff on final products was 50 percent. The tariffs on colored cement were 33 1/3, on cement 40 percent, on marble chip and sand 10 percent. Actual value added was ₦N 200 thousand and value added at world prices was ₦N 120 thousand.

3134 - Soft Drinks

All six reporting firms, with employment of 865, were used in the calculations.

(₦N'000)

Outputs		Excise 368
Soft drinks	1,770	

Inputs

Concentrates	193
Sugar	139
Cork	39
Carbon dioxide	24
Caustic soda	16
Bottles	8
Other	4
	423
Fuel costs	22
Electricity costs	20
Other costs	297
Total costs incl. excise	1,130
Wage costs	157
Book value of fixed assets	1,837

The tariff equivalent on the final product was derived from an actual tariff collected ratio of 82 percent. Bottles and concentrates are imported free by exemption. The tariff on sugar was 70 percent, on cork and carbon dioxide 33 1/3 percent, and on caustic soda actual duty collected was 126 percent. Actual value added was ₦N 640 thousand and value added at world prices was ₦N 378 thousand.

3523 - Soap, Perfumes and Cosmetics

There were twelve firms reporting with an employment of 2,866.

	(₦N'000)	
Output	11,387	Excise 651
Inputs	6,296	
Fuel costs	48	
Electricity costs	63	
Other costs	1,175	
Total costs incl. excise	8,234	
Wage costs	1,327	
Book value of fixed assets	655	

The calculations were based on two firms accounting for about 80 percent of output. Due to the confidentiality rule, the detailed breakdown is not presented.

3540 - Miscellaneous Products of Petroleum and Coal

All 4 firms, with employment of 740, were used in the calculations.

(₦N'000)

Output		Excise 155
Asphalt	94	
Lubricants	1,660	
Bitumens and chemical products	2,144	
	3,897	
Inputs		
Granite stone, dust and cement	42	
Base oils	618	
Chemicals & bituminous materials	1,057	
	1,717	
Fuel costs	15	
Electricity costs	41	
Other costs	120	
Total costs incl. excise	2,048	
Wage costs	699	
Book value of fixed assets	1,213	

Tariffs on all the outputs were 33 1/3 percent. Tariffs on granite stone, dust and cement were 33 1/2 percent while base oils and chemicals entered duty free. Actual value added was ₦N 1,849 thousand while value added at world prices was ₦N 1,045 thousand.

3240 - Footwear except moulded rubber or plastic ware

All 8 reporting firms, with employment of 1,434 were used in the study.

(₦N'000)

Output	Excise: nil

Shoes	3,475
Inputs	
Leather	973
P.V.C.	600
Rubber	542
Chemicals	20
Packing materials	42
Other	300
	2,479
Fuel costs	1
Electricity costs	49
Other costs	300
Total costs incl. excise	2,830
Wage costs	308
Book value of fixed assets	1,582

The tariff on shoes was 40 percent. The tariff on leather was 66 2/3 percent, on P.V.C. and chemicals 33 1/3 percent and on rubber minus 10 percent due to export taxation. Actual value added was ₦N 645 thousand and value added at world prices was ₦N 364 thousand.

3117 - Bakery Products

The calculations were based on 5 of the 33 reporting firms. These five firms employed 775.

(₦N'000)

		Excise 80
Output		
Bread and biscuits	1,166	
Inputs		
Flour	335	
Sugar	44	
Fats	8	
Packaging	100	
Other	139	
	626	

Fuel costs	20
Electricity costs	19
Other costs	67
Total costs incl. excise	812
Wage costs	126
Book value of fixed assets	983

The tariff on the final product was 50 percent (40 percent for bread and 75 percent for biscuits), on flour 15 percent equivalent based on duty collected, on sugar 40 percent, on fats 33 1/3 percent, and on packaging 25 percent. Actual value added was ₦N 354 thousand while value added at domestic prices was ₦N 184 thousand.

3839 - Electrical Apparatus and Supplies

All three firms reporting, with employment of 217, were used.

(₦N'000)

Output — Excise: nil

Batteries	207
Bulbs	49
	256

Inputs

Lead	45
Acids and chemicals	0.6
Battery components	48
Other	18
	112
Fuel costs	2
Electricity costs	8
Other costs	15
Total costs incl. excise	137
Wage costs	34
Book value of fixed assets	79

The tariff on batteries was 50 percent and that on bulbs 33 1/3 percent. The tariff on all imports was 33 1/3 percent except for lead which entered free. Actual value added was ₦N 118 thousand while value added at world prices was ₦N 60 thousand.

3811 - Cutlery, Handtools and Hardware

Three of five reporting firms, with employment of 101, were used in the calculations.

(₦N'000)

Output		Excise: nil
Springs	90	
Cutlery	39	
Locks	159	
	288	
Inputs		
Component parts for locks	128	
Aluminum	25	
Wire coils	54	
Packing materials	2	
	207	
Fuel costs	3	
Electricity costs	2	
Other costs	32	
Total costs incl. excise	245	
Wage costs	30	
Book value of fixed assets	58	

The tariffs on cutlery and locks were 50 percent and on springs 40 percent. The tariff on lock components was 50 percent, on aluminum 20 percent, on wire coils 33 1/3 percent, and on packaging 25 percent. Actual value added was ₦N 43 thousand while value added in world prices was ₦N 21 thousand.

3212 - Made Up Textiles Except Wearing Apparel

All 7 reporting firms, with employment of 2008, were used in the calculations.

(₦N'000)

Outputs		Excise 205
Tents and tarpaulins	370	
Blankets	1,368	
Towels	458	
Other	102	
	2,298	

Inputs	
Canvas	235
Cotton yarn	967
Dyestuffs and chemicals	17
Packaging material	6
Other	61
	1,286
Fuel costs	3
Electricity costs	30
Other costs	158
Total costs incl. excise	1,682
Wage costs	262
Book value of fixed assets	906

The tariff on tents was 40 percent, on blankets and other made up goods 50 percent, and observed tariff rate on towels was 108 percent. The tariff rates on canvas, cotton yarn, and packaging were 25 percent and on dyes 10 percent. Actual value added was ₦N 616 thousand while value added at world prices was ₦N 293 thousand.

3211 - Textiles Spinning, Weaving, Printing

There were 41 firms reporting from this industry with total employment of 19,074.

	(₦N'000)	
Output	38,200	Excise 4,583
Inputs	18,805	
Fuel costs	787	
Electricity costs	1,066	
Other costs	799	
Total costs incl. excise	26,040	
Wage costs	3,871	
Book value of fixed assets	21,361	

The calculation of the effective rate of protection was based on 4 firms employing 5,005. The detailed breakdown for the four firms is as follows.

(₦N'000)

Outputs		Excise 2,643
Grey baft	4,021	
Prints and piece goods	14,135	
	18,156	
Inputs		
Cotton	1,327	
Grey baft	6,826	
Chemicals and dyes	825	
Packaging	884	
	9,862	
Fuel costs	238	
Electricity costs	370	
Other costs	889	
Total costs incl. excise	14,002	
Wage costs	1,156	
Book value of fixed assets	4,291	

Based on price comparisons, the tariff equivalent on final output of every baft is 60 percent but the tariff levied on imports by a manufacturer was 48 percent. The observed tariff on prints was 75 percent. Chemicals were imported free by exemption while a tariff of 10 percent on dyes was in effect. Actual value added was ₦N 4,154 thousand while value added at world prices was ₦N 1,883 thousand.

3118 - Sugar Refinery

Only 2 firms reported in this industry and only 1 was used. By the confidentiality rule, the details cannot be given. The observed tariff on refined sugar was 83 percent while the tariff on raw sugar was 40 percent.

3113 - Canning and Preserving of Fruit and Vegetables

All 3 reporting firms, with employment of 195, were used in the calculations.

(₦N'000)

Outputs		Excise 2
Fruit squash	18	
Citrus fruits	45	
Fruit juices	7	
	70	

Inputs	
Citrus fruits	7
Bottles	4
Sugar	2
Saccharin	0.5
Corks	0.2
Others	4.8
	18
Fuel costs	1
Electricity costs	1
Other costs	9
Total costs incl. excise	31
Wage costs	19
Book value of fixed assets	346

Tariffs on squash and fruit were 75 percent and on juices 66 2/3 percent. Tariffs on saccharin and corks were 33 1/3 percent, on sugar 70 percent, and bottles and fruits could be purchased at world prices. Actual value added was ƀN 39 thousand and value added at world prices ƀN 16 thousand.

3560 - Miscellaneous Plastic Products

There were 41 firms reporting of which 3, with employment of 638, were used in the calculations.

	(ƀN'000)
Outputs	Excise 17
Plastic footwear	415
Plastic bags	370
Plastic buckets	247
Other	24
	1,056
Inputs	
Not specified	38
P.V.C.	109
Alkathene	28
Pigments	11
Polystyrene	99
Packaging	71
	356

Fuel costs	10
Electricity costs	30
Other costs	64
Total costs incl. excise	477
Wage costs	118
Book value of fixed assets	685

The tariff on plastic shoes was 86 percent, on bags and buckets 75 percent. The tariff on all the inputs was 33 1/3 percent. Actual value added was ₦N 580 thousand while value added at world prices was ₦N 241 thousand.

3891 - Fabricated Metal Products

There were 16 firms reporting with employment of 4,835.

	(₦N'000)	
Outputs	11,857	Excise 1,065
Inputs	6,035	
Fuel costs	133	
Electricity costs	121	
Other costs	1,210	
Total costs incl. excise	8,564	
Wage costs	1,281	
Book value of fixed assets	4,150	

Of these, 7 firms with an employment of 2,898 were used in the calculations on effective protection and profitability.

	(₦N'000)	
Outputs		Excise 947
Tins and drums	2,590	
Steel rods, fencing, nails, wire	1,664	
Enamelware	2,531	
Galvanized sheets	2,659	
	9,443	

Inputs	
Tinplate	930
Steel plates and sheets	3,765
Zinc and enamel	367
Other	183
	5,245
Fuel costs	88
Electricity costs	76
Other costs	737
Total costs incl. excise	7,093
Wage costs	888
Book value of fixed assets	3,091

The tariffs on all outputs were 33 1/3 percent except for enamel, where the tariff was 75 percent. All inputs entered freely by exemption except for enamel where there was a tariff of 10 percent. Actual value added was ₦N 2,351 thousand and value added at world prices was ₦N 966 thousand.

3111 - Slaughtering, Preparing and Preserving Meat

The return of a firm accounting for more than a third of industry output was used in the calculations. Due to the confidentiality rule, the details cannot be given. Tariff on the meat product outputs was 50 percent.

3116 - Grain Mill Products

There were 3 firms reporting of which 1 firm employing 638 was used for the calculations. Due to the confidentiality rule, the details cannot be given. The tariff on the major output of the firm, wheat flour, was 50 percent.

3121 - Miscellaneous Food Products

There were 4 firms reporting with employment of 600.

	(₦N'000)	
Output	1,245	Excise: nil
Inputs	784	
Fuel costs	0.1	
Electricity costs	7	
Other costs	417	
Total costs incl. excise	1,208	

Wage costs	108
Book value of fixed assets	234

Only 1 of these firms was used for the calculations and by the confidentiality rule the details cannot be given. The tariffs on the major products, tea and coffee, were 71 percent.

3843 - Motor Vehicle Assembly

There were 6 firms reporting of which 4, with employment of 1,405, were used in the calculations.

(₦N'000)

Outputs		Excise: nil
Assembled vehicles (lorries, buses, trailers)	8,162	
Inputs		
Vehicles unassembled	6,653	
Paints	220	
Other	157	
	7,030	
Fuel costs	4	
Electricity costs	25	
Other costs	446	
Total costs incl. excise	7,505	
Wage costs	469	
Book value of fixed assets	1,322	

The tariff on assembled vehicles was 33 1/3 percent and on unassembled vehicles 28 1/2 percent. The tariff on paints was 33 1/3 percent. Actual value added was ₦N 657 thousand while value added at world prices was ₦N 215 thousand.

3812 - Metal Furniture and Fixtures

There were 10 firms reporting with employment of 1,458.

(₦N'000)

Output	2,654	Excise 191
Inputs	1,352	
Fuel costs	9	
Electricity costs	12	
Other costs	935	
Total costs incl. excise	2,494	
Wage costs	227	
Book value of fixed assets	1,605	

The calculations were based on 2 firms, so by the confidentiality rule the details cannot be given. The tariff on metal furniture was 66 2/3 percent.

3320 - Furniture and Fixtures Except Primarily of Metal

There were 31 firms reporting of which 3 firms, employing 743, were used in the calculations.

(₦N'000)

Output		Excise 16
Furniture	515	
Inputs		
Timber	35	
Plywood	89	
Upholstery material	65	
Formica	20	
Paints and adhesives	25	
Other	31	
	267	
Fuel costs	-	
Electricity costs	7	
Other costs	49	
Total costs incl. excise	340	
Wage costs	117	
Book value of fixed assets	265	

The tariff on furniture was 75 percent. Lumber was purchased at prices 3 percent below world prices because of an export duty. The tariff on plywood was 30 percent, on upholstery 40 percent, and on formica 33 1/3 percent. Actual value added was ₦N 176 thousand while value added at world market prices was ₦N 45 thousand.

3610 - Pottery, China and Earthenware

Only 2 firms reported in this industry so by the confidentiality rule, the details cannot be given. The observed tariff on the final product was 68 percent while all important inputs were subject to a tariff of 33 1/3 percent.

3220 - Wearing Apparel Except Footwear

There were 12 reporting firms producing many different items. Only 1 firm, producing singlets, was used for the calculations. Due to the confidentiality rule, the details for the firm cannot be given. The tariff on singlets was 116 percent.

3620 - Glass and Glass Products

There were 5 firms reporting of which 2 were used in the calculations. Due to the confidentiality rule, the details cannot be given. The 2 firms used produced mirrors. The tariff on the final products was 50 percent.

3832 - Radio, T.V. and Communications Equipment Assembly

There were 7 reporting firms of which 5, employing 480, were used in the study.

(₦N'000)

Output		Excise 47
Radio and radiograms	1,141	
Record players	95	
Television	80	
Records	256	
Lamps	81	
Other	17	
	1,671	

Inputs

P.V.C. and material for records	65
Components for radios, phonographs and T.V.	1,190
Packing materials	11
Other	5
	1,272
Fuel costs	14
Electricity costs	7
Other costs	151
Total costs incl. excise	1,491
Wage costs	123
Book value of fixed assets	344

The following tariffs were applied to final products; 100 percent to radios, record players, and televisions; 66 2/3 percent to records; and 50 percent to lamps. All inputs had a tariff of 33 1/3 percent except packaging materials for which the tariff was 25 percent. Actual value added was ₦N 180 thousand while value added at world market prices was minus ₦N 180 thousand.