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EFFECTIVE PROTECTION RATES AND INDUSTRIALIZATION
STRATEGIES IN TANZANIA

A Thesis

Presented to the Faculty of the Graduate School
of Cornell University for the Degree of
Doctor of Philosophy

by

Dudley Mervyn Kessel

September 1969

BIOGRAPHICAL SKETCH

Dudley Mervyn Kessel was born in Port Elizabeth, South Africa on February 4, 1938. He attended elementary and high school in Johannesburg and then went on to the University of the Witwatersrand where he received a B. Sc. degree in 1959, having majored in Chemistry and Mathematics. From 1959 until 1962 the author studied in London, receiving a B. Sc. (Econ.) degree with Upper Second Class Honors from The University of London. In the fall of 1962 he entered the Graduate School at Cornell University having been awarded a Graduate School Fellowship. From September 1963 until June 1965 he was a teaching assistant in the Department of Economics at Cornell. From July 1965 until August 1967 he was a lecturer in Economics at The University College, Dar es Salaam, Tanzania. Since September 1968 Dudley Kessel has been an Assistant Professor of Economics at Goucher College in Baltimore.

To My Parents,
without whose support I would
not have come this distance

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INTRODUCTION

The debate among economists over whether industry or agriculture should be given priority in underdeveloped countries seeking to increase their rate of economic growth has largely subsided now after being waged most spiritedly for a number of years after the Second World War.¹ The prevailing orthodoxy today among Western economists seems to be that a steady increase in agricultural production is a more essential prerequisite to economic development than the rapid growth of an industrial sector. This does not mean that there is no place for the development of manufacturing industry in poor, predominantly rural economies. Rather it is the view that policies in underdeveloped countries which stress import substitution behind high tariff walls (policies which have been particularly prevalent in Latin American countries) have proved disappointing.

¹ An excellent example of the viewpoint favoring emphasis on industry can be found in Raul Prebisch "Commercial Policy in the Underdeveloped Countries," American Economic Review, Paper and Proceedings, May 1959, pp. 251-255. For the opposite position see Gustav Papanek "Development Problems Relevant to Agriculture Tax Policy," Papers and Proceedings of the Conference on Agricultural Taxation and Economic Development, Harvard Law School, Cambridge, 1954, pp. 193-6; Bruce F. Johnston and John W. Mellor, "The Role of Agriculture in Economic Development," American Economic Review, September 1961, pp. 571-581. For further views on this issue see the other readings and the bibliography in the Section on "Industrialization and Agriculture" in Gerald Meier, Leading Issues in Development Economics-selected materials and commentary, New York: Oxford University Press, 1964.

For economists like Bela Balassa such policies have led to a gross misallocation of resources within individual countries.²

It is not our purpose here to become bogged down in this debate on the broad issue of industrialization vs. development through agriculture. Instead the aim is to use a relatively new tool in international trade theory, the measure of effective protective rates, in an attempt to throw more light on the question of what kind of commercial policy may best be suited to promote economic growth in underdeveloped countries. More specifically we aim to use the concept of effective protection in a discussion of how Tanzania (a poor underdeveloped country in East Africa) can best develop its manufacturing sector. The questions we shall be attempting to answer include (a) should the main emphasis be on import substitution or export promotion; (b) what criteria can we use in deciding which types of industries to attempt to stimulate through relevant tariff and tax policies; (c) what types of tariff and tax policies should be used to achieve (a) and (b); (d) in the light of (a) and (b) which existing and potential industries should be favored through relevant commercial policy?

About 96 per cent of Tanzania's population live in rural areas; most of them being peasant farmers, laborers

²Bela Balassa, "Integration and Resource Allocation in Latin America," in T. Davis (ed.) The Next Decade of Latin American Development, Cambridge University Press (forthcoming).

on larger farms and estates, or herdsmen. Thus agriculture dominates the present Tanzanian economy, and for the foreseeable future, at least, Tanzania's economic growth will depend largely on what happens in the agricultural sector.³ Nevertheless there is a small (and in recent years rapidly growing) industrial sector and it is important that the growth of this sector takes place in a rational manner. More particularly, what is needed is a sensible commercial policy which facilitates the economic use in the industrial sector of two of Tanzania's scarcest resources, capital and skilled manpower. What should be avoided is the experience of the Latin American countries where

With very few exceptions, the Latin American countries cannot be said to apply a protectionist policy, if by this is to be understood a systematic body of measures deliberately designed to permit and encourage the development of certain industries rationally selected within an over-all framework of objectives established under a given economic development policy. What did and still does exist is protectionism, but as the largely indirect result of ad hoc measures, often adopted, at least initially or during a first stage, as emergency procedures, either in order to solve balance-of-payments problems, or under the pressure of other exogenous factors. Such measures, temporary to begin with, became permanent in most cases and more general in their scope, giving rise to a form of protectionism which has been characterized by extemporaneousness, lack of autonomy (since it is primarily motivated by external causes), extremely high levels and indiscriminate application, and whose basic objective

³For some statistics on the relevant importance of agriculture and industry in the Tanzanian economy see Chapter I (pages 10-12) below.

is import substitution at any cost, regardless of which industries it is most expedient to develop and how far the process should be carried.⁴

We begin in Chapter I with a description of the Tanzanian economy. Here we describe the structure and growth of the Tanzanian economy in recent years especially in the period since independence was obtained in 1961. The limited role of manufacturing industry in the Tanzanian economy is shown by relevant statistics. Also of relevance to our subsequent discussion is Tanzania's place in the East African common market and the extent to which close economic ties with neighboring Kenya and Uganda have helped or hindered the growth of the industrial sector of the Tanzanian economy. And we examine these questions in some detail. Finally in Chapter I we are concerned with the role of Government policy and its impact on industrial development to date.

Chapter II is devoted to a discussion of the concept of effective protection; first we present some of the antecedents of the concept as it has been developed in recent years; then we explain fully what the concept measures (given the assumptions necessary for a precise formulation) and how it can be used. Finally in Chapter II we discuss

⁴ Santiago Macario, "Protectionism and Industrialization in Latin America," Economic Bulletin for Latin America, March, 1964, p. 61.

some of the possible policy implications of the concept. Chapter III contains a critical review of some of the problems and weaknesses associated with the concept of effective protection as well as its possible practical use. We conclude that despite serious difficulties associated with the concept and use, it is a superior measure to the traditional nominal tariff (or tax) rate. Chapter IV deals with the application of the concept to the Tanzanian case. The methods used for measuring rates of effective protection for different industries in Tanzania are explained. The results obtained are then interpreted with particular emphasis on the relationship between effective and nominal rates of protection.

In Chapter V we discuss various criteria which might be used as possible guidelines to the kind of tariff structure most suitable for Tanzania at this stage of her economic development. We place a good deal of emphasis in Chapter V on the "efficiency now" criterion, which is essentially the application of static neoclassical analysis to the present Tanzanian context. In our view the economist's traditional concern with scarcity and efficiency in the short run is much more relevant to a poor country like Tanzania than to a rich one like the United States. Thus we stress the criteria which are based on the best utilization now of Tanzania's scarce resources; we give particular attention to the "efficient" use of Tanzania's two scarcest resources,

capital and skilled manpower. We recognize the limitations of this basically static approach, limitations which seem especially relevant if we are concerned with the generation of successful economic development over a long period of time. And we discuss in detail what the tariff structure might best be if we emphasized more dynamic criteria such as linkage effects and other more physiological factors emphasized as crucial to the development process by Hirschman and others. However we believe that while these criteria should always be borne in mind, Tanzania cannot afford to indulge unduly in policies based on dynamic effects which may materialize in the future but must concentrate on achieving the best allocation of resources for contemporary Tanzania. Throughout our analysis in Chapter V we are concerned with examining the present structure of tariffs in Tanzania in the light of these different criteria.

Chapter VI is focused on one aspect of Tanzania's trading relations with her East African neighbors; the possibilities for using the new transfer tax (introduced in the Treaty for East Africa Co-Operation⁵) as a measure to promote import substitution within Tanzania, i.e. as a means of promoting the growth of industry in Tanzania by the placing of the equivalent of a tariff on imports from her neighbors, Kenya

⁵ See below, Chapter II, pp. 42-45, for relevant details.

and Uganda. As in Chapter V, we discuss the usefulness of a number of criteria as guides to the best structure of transfer taxes for Tanzania at this time. And, as in Chapter V, we examine the present structure of transfer taxes (imposed by the Tanzanian Government at the end of 1967) in the light of these criteria.

Chapter I

I

By any accepted measure of economic development Tanzania¹ is a poor country. Per capita income in 1966 was estimated to be between 70 and 75 dollars.² Per capita electricity generated in 1967 was about 25Kwh.³ The comparable per capita figures for electricity in the same year in the United States, India, and Argentina were 6500, 75, and 540.⁴ In 1965 there were only about 500 African University graduates in a total African population of more than 10 million.⁵

1

Throughout what follows Tanzania refers to the mainland part only of what is now called The United Republic of Tanzania. The United Republic was formed in 1964 by the political union of the mainland (formerly known as Tanganyika) and the neighboring island of Zanzibar. As yet economic union between the mainland and Zanzibar is far from complete.

²The United Republic of Tanzania, Background to the Budget, 1967-68, Dar-es Salaam, The Government Printer, page 12. This figure is probably too high an estimate because the population estimates on which it is based are arrived at by projecting the 1957 Census figures using an estimated population growth rate of 2 percent per year. Preliminary returns from the 1967 Census indicate that 2 percent is far too low an estimate. It appears that the 1967 population of Tanzania is closer to 12 million than the 10.7 estimate arrived at by the above procedure.

3

Background to the Budget, 1967-68, page 35.

⁴United Nations, Monthly Bulletin of Statistics, Vol. XXIII, No. 3, March 1969, New York, Statistical Office of the United Nations, 1969.

5

Idrian N. Resnick, "Manpower Development in Tanzania," The Journal of Modern African Studies, Vol. 5, No. 1, 1967, p. 110.

Not only is Tanzania poor in terms of the present level of production of goods and services and the present stock of physical and human capital. It is also not well endowed with natural resources. Tanzania's only major discovered mineral resources are diamonds (which in 1967 made up just over 10 percent of the country's domestic exports⁶), a fairly large deposit of coal, and an iron deposit which, unfortunately, is located in the southwest corner of the country, a remote area poorly served by communications to the main centres of economic development and the major ports. Although the population density in Tanzania is low (about 12 million people living in a country of 362,000 square miles⁷), about 30 people per square mile, much of the land is not suitable for cultivation or grazing because rainfall is either too sparse or too irregular. As the World Bank Mission which visited Tanganyika in 1959 put it,

It is a fair generalization that Tanganyika has no problem of population pressure analogous to that of many Asian countries. Less than 10 percent of the land is cultivated, though a considerably larger portion is grazed. However the figures of population density and land use must be seen in relation to the low productive potential of much of the land. In some parts of Tanganyika there is already land hunger...so that

⁶ Background to the Budget, 1967-68, page 61. Domestic exports is the term used to refer to exports from Tanzania to countries outside of East Africa, i.e., it does not include exports to Tanzania's two neighboring countries, Kenya and Uganda, which form a Common Market with Tanzania. See below page 11, footnote 15.

⁷ East African Common Services Organization, Economic and Statistical Review, No. 2, March 1962, Nairobi, The East African Statistical Department.

measures to prevent deterioration of land in use and to increase production per acre are becoming increasingly urgent.⁸

As already mentioned, the Tanzanian economy is dominated by agriculture. Although the manufacturing sector has grown at a rapid rate in recent years (from 1960 to 1966 the average annual growth in the net output of the manufacturing sector, in current prices, was 16.4 percent;⁹ at constant prices the average growth has been estimated to be 11.9 percent per annum¹⁰), net output in manufacturing made up only 5 percent of total GDP¹¹ and about 7 percent of monetary GDP in 1966.¹² The comparable figures for 1960 were 2.9 and 4.5 percent respectively. On the other hand total net output of the

⁸The Economic Development of Tanganyika, (a report of an Economic Survey Mission to Tanganyika, organized by the International Bank for Reconstruction and Development at the Request of the Governments of Tanganyika and the United Kingdom.) Baltimore, The John Hopkins Press, 1961, page 12. See also chapter 4 for a full discussion of the question of land use and tenure.

⁹See Table 1:2.

¹⁰Background to the Budget, 1967-68, page 11.

¹¹Gross Domestic Product (GDP) rather than Gross National Product (GNP) is the measure preferred in the official Tanzanian statistics because of the relative importance of factor incomes paid abroad. With the recent nationalization of industry such incomes may no longer be an important part of GNP.

¹²At constant prices these shares are even lower. See Background to the Budget, 1967-68, Table 3, page 11.

agricultural sector (i.e., the sum of agricultural net output in the subsistence and monetary sectors) which constituted 61 percent of GDP in 1960, had fallen to 53 percent in 1966. Of total monetary GDP, agriculture's share was 40.7 percent in 1960 and 35 percent in 1966.¹³ Of a total of 336,500 persons (i.e., about 3 percent of the total population) in wage employment in 1966, 29,890 (about 9 percent) were employed in the manufacturing sector. Employment in the manufacturing sector grew by about 10 percent per year between 1963 and 1966.¹⁴ This is significant in a period when employment in the monetary sector as a whole was falling because of a sharp drop in the number of those employed for wages in the agricultural sector.

Another important characteristic of the Tanzanian economy is its openness. In recent years total imports and exports¹⁵ have been equal to from 40-45 percent of monetary GDP (see Table 1.1). As is the case with most underdeveloped countries Tanzania's exports are largely made up of primary products while the bulk of her imports are manufactured goods. In

¹³ See Table 1.1.

¹⁴ Statistics on employment from Background to the Budget, 1967-68, Table 54, page 80.

¹⁵ Total imports are the sum of "net imports" (the term for imports into Tanzania from outside East Africa) and "interterritorial imports" (the term for imports from Kenya and Uganda); while total exports are the sum of "domestic exports" (the term for exports to countries outside East Africa) and interterritorial exports.

Table 1.1

Major Economic Aggregates for Tanzania 1949-1966

	1949	1954	1960	1961	1962	1963	million shillings		
							1964	1965	1966
GDP		2833	3701	3870	4189	4547	4837	4880	5455
Monetary GDP		1582	2453	2524	2697	3011	3424	3527	3959
Agricultural Output			2256	2282	2485	2787	2805	2651	2919
Manufacturing Output		75	109	139	154	156	194	222	271
Total Exports	403	776	1143	1018	1073	1330	1509	1374	1675
Total Imports	617	756	940	1006	1030	1056	1194	1335	1613
Interterritorial Exports	18	21	46	45	48	68	107	118	93
Interterritorial Imports	65	117	184	212	234	247	314	334	328

Sources: Budget and Statistical Abstract published by the Tanzanian Government; The Economic Development of Tanganyika, report of a World Bank Mission, Baltimore, The Johns Hopkins Press, 1961.

1966 nearly 84 percent of Tanzania's domestic exports¹⁶ fell into Section 0, "foodstuffs", and 2, "inedible crude materials", of the Standard Industrial Trade Classification (S.I.T.C.) System. Tanzania's major exports in 1966 were cotton (which made up about 22 percent by value of total exports), coffee (about 19 percent), sisal (about 15 percent),¹⁷ and diamonds (about 11 percent). By contrast manufactured goods¹⁸ made up less than 1 percent of domestic exports in 1960 which share had grown to only a little over 1 percent in 1966.¹⁹ Looking at net imports we find that in both 1960 and 1966 imports classified under SITC section 6, 7 and 8 made up about 75 percent of total net imports. Within the total of

¹⁶ The pattern of Tanzania's trade with Kenya and Uganda does not differ much from her trade pattern with the rest of the world i.e. Tanzania imports largely manufactured goods from her neighbors, especially from Kenya, and exports largely foodstuffs to them. For a detailed description of the pattern of interterritorial trade in East Africa see P. Ndegwa, The Common Market and Development in East Africa, Nairobi, East Africa Publishing House, 1965, Chapter V.

¹⁷ Until the drastic fall in price on the world market in late 1964, sisal was Tanzania's chief export.

¹⁸ Exports of manufactured goods were calculated by taking exports in SITC Section 6 and 8 (i.e. manufactured goods classified chiefly by material and miscellaneous manufactured articles) minus exports of diamonds.

¹⁹ The figures in this paragraph are based on statistics in Tables 4, 6 and 7 of I. Resnick's Chapter on "Foreign Trade and Payments in Tanzania" which is to appear in a book on The Economy of Tanzania to be published for the Department of Economics, University College, Dar-es Salaam.

imports of manufacturers there was some shift in the relative importance of consumption and investment goods. In 1960 imports of consumption goods (SITC Section 6 and 8 together) constituted 45 percent of total net imports. By 1966 the share had fallen slightly to 42 percent. Net imports of investment goods (as measured by imports in SITC Section 7) grew from 29 percent of total net imports in 1960, to 33 percent in 1966. This would seem to be evidence of some import substitution taking place in Tanzania though it must be pointed out that net imports of consumer goods still rose by 60 percent between 1960 and 1966.

The statistics at the beginning of the previous paragraph are an indication of how important foreign trade is in the Tanzanian economy. A large part of money incomes is earned directly from the sale of primary products to the rest of the world and in exchange Tanzania receives an important share of the goods bought by consumers and investors within her borders. Government fiscal policies which affect the exporting and importing sectors of the economy (or sectors which are competing with or dependent on imports and exports) are therefore of crucial concern to the economic growth of Tanzania.

Before going on to discuss the recent performance of the Tanzanian economy and the role of Government policy towards the economy in general, and towards industrialization in particular, it is necessary to look briefly at (a) the

political background to Tanzania's recent economic performance and (b) Tanzania's important economic relationship with its East African neighbors, Kenya and Uganda.

After more than forty years (1919-1961) as a Trust territory administered by the United Kingdom (first under the League of Nations and after 1945 under the United Nations), Tanganyika became independent on December 9, 1961. The path to independence in Tanganyika was much smoother than in most other African countries. Dominated by one party, the Tanganyika African National Union (TANU), the nationalist movement achieved its major objective of political independence for Tanganyika before the same goal was reached in neighboring Uganda (1962) and Kenya (1963). With the exception of a brief period after an Army mutiny in January 1964²⁰ (which followed the successful revolution against the Sultan in Zanzibar), Tanzania, since independence, has been blessed with relative political stability especially as compared with most other newly independent African countries. Another striking characteristic of the Tanzanian political scene has been the commanding role played throughout by the President, Julius Nyerere. Nyerere was the first President of TANU when it was formed in 1954 and he has dominated the political scene in Tanzania ever since. The policies of the Tanzanian Government since independence unmistakably show the influence of

²⁰ For a brief account see Judith Listowel, The Making of Tanganyika, London. Chatto and Windus, 1965, Appendix III, pp. 430-440.

Nyerere's own personal thinking.²¹

While Tanzania's recent political development has been generally characterized by freedom from major political upheavals and by Nyerere's dominating influence, the Government's policies on a number of major issues have shifted significantly since independence. At the time of independence Nyerere was favorably regarded in the Western world as a sensible moderate leader of a country pursuing a non-dogmatic approach to economic development. Foreign aid and private foreign investment were openly encouraged and welcomed by the Tanzanian Government.²² Today the Tanzanian Government is pursuing what is in many ways the most socialist type policies of any government in newly independent Africa south of the Sahara. In February 1967, following the proclamation of the famous Arusha Declaration²³ (in which Tanzania's new policies of socialism and self reliance were spelled out), all the commercial banks and most of the major industries were wholly or partly nationalized. Trade with China and the Communist countries of Eastern Europe has increased significantly in recent years.²⁴ Today Tanzania has

²¹ President Nyerere's most important speeches have now been reprinted in a book, Nyerere, Julius K. Kambage, Freedom and unity: Uhuru na umoja; a selection from writings and speeches, 1962-65 by Julius K. Nyerere. London, Nairobi: Oxford Univ. Press, 1967. See below, pp. 58-61, for some evidence of the attitude of the Tanzanian Government to foreign owned industry in the early years of independence.

²³ The Arusha Declaration and TANU's Policy on Socialism and Self-Reliance, Dar es Salaam, The Publicity Section, TANU, 1967.

²⁴ See e.g. Background to the Budget 1967-68 pages 60-63 for the changing composition of Tanzania's foreign trade.

closer diplomatic ties with China than any other African country south of the Sahara. In December 1965 President Nyerere broke off diplomatic relations with the United Kingdom over the latter's handling of the white Rhodesian Government's unilateral declaration of independence.²⁵ Earlier (in 1964) Nyerere had requested the West Germans to withdraw all forms of technical and economic assistance from Tanzania because of West Germany's insistence that Tanzania follow the Hallstein Doctrine and not give any form of recognition to East Germany which already had a consulate in Zanzibar.

Some Western observers have attributed the shift to the left in Tanzania's recent policies to the influences on Nyerere of the more avowedly Socialist leaders of the 1964 Zanzibar revolution, a number of whom are or have been in Tanzania's Cabinet.²⁶ But probably a greater factor in recent policy decisions in Tanzania has been the development of Nyerere's own personal thinking: Policy decisions on the international front can often best be explained in terms of Nyerere's logical pursuance of a policy of positive non-alignment. On the domestic front the shift to a more socialist type economic strategy reflects Nyerere's growing dis-

²⁵ ~~and~~ In July 1968 formal diplomatic relations between the two countries were resumed.

²⁶ See particularly the misguided editorial in The Times, London, of February 13, 1967, entitled "Green Guards in Tanzania".

enchantment with a capitalist or elitist type²⁷ approach to economic development as well as an attempt to move towards his own ideal of a more egalitarian non "exploitive" type society.

This is no place to embark on a detailed analysis of the causes of the development of Tanzanian Government policy on major issues. It is hoped that the importance of the interaction between political choices made by the Tanzanian Government and the development of the Tanzanian economy will become apparent in this chapter.

²⁷ The President's disenchantment is probably strengthened by the fact that the capitalist class in Tanzania is largely made up of non-Tanzanians, i.e. Europeans and Asians, many of whom are not citizens of the country.

II

Although the East African territories of Kenya, Uganda and Tanganyika were ruled separately by the British during the "colonial period"²⁸ (the first two as Crown colonies and the last as a trust territory), there has been a long history of close economic cooperation between them. From 1920 until 1966 they had a common currency, the East African shilling, which was closely linked to the pound sterling. In 1923, Tanganyika, although still retaining a separate customs department, joined an already existing arrangement between Kenya and Uganda whereby the free transfer within East Africa of all domestically produced goods was agreed upon.²⁹ In 1927 the agreement was extended to include the free movement interterritorially of goods imported from outside East Africa. In practice since the early days of economic cooperation the three countries have had a common external tariff on virtually all imports entering East Africa from the rest of the world. Although there has, until very recently, been no formal commitment to maintaining a common external tariff,³⁰ it has been

²⁸ At various times in the recent history of East Africa there has been serious debate about the possibilities of a political federation between the three countries, most notably in the early 1920's and again at the stage of political independence in the early 1960's.

²⁹ Ndegwa, *op. cit.*, page 85.

³⁰ In the most recent attempt at formalizing economic cooperation between the three East African countries there is a clause specifying a common tariff; see, Treaty for East African Co-operation Government Printer, Nairobi, 1967, Article 5, page 4. See also below, pp.42-45, for a discussion of some of the major provisions of the new Treaty.

the custom for the Finance ministers of the three territories to consult each other before making changes in tariffs on specific items. This became virtually inevitable once the countries had agreed on the free movement interterritorially of goods imported from outside East Africa. Thus "the customs union among Uganda, Kenya and Tanganyika...developed into a de facto common market..."³¹

The other major area of economic cooperation between the East African countries has been in the common administration of certain important services. Here again there has been a history of close cooperation. From 1927 until 1948 under an advisory body, the Conference of Governors of British East Africa, customs tariff, railway rates, the posts and telegraph systems and scientific research activities were coordinated.³² After the Second World War the common administration was given a permanent constitutional basis with the setting up of the East African High Commission which administered about thirty services and departments. During the early years of the High Commission (which lasted from 1948 until 1961), cooperation between the three East African countries was extended. The railway systems were amalgamated in 1948 and a common rail tariff was introduced;

³¹ Ndegwa, *op. cit.*, page 85. The East African countries also have joint administration of excise and income tax.

³² For information on the history and workings of common services in East Africa see Jane Banfield, "The Structure and Administration of the East African Common Services Organization," a chapter in *Federation in East Africa*, C. Leys & P. Robson (eds.), Nairobi, Oxford University Press, 1965, especially pages 30-34.

the East African Airways Corporation was established with sole responsibility for developing internal air services; the Posts and telecommunication administration was made an independent commercial undertaking;³³ and statistical and research activities were significantly expanded by the High Commission secretariat in Nairobi.

With the prospect of political independence for all three countries the High Commission was replaced in December 1961 by a new body, The East African Common Services Organization (EACSO). Instead of being ultimately responsible to the British Government, as was the case with the High Commission, the executive of EACSO is responsible to the three East African Governments. In terms of its major functions EACSO does not differ much from the High Commission. A distinction is usually made between the self-contained services administered by EACSO (i.e. those services which pay their own way like the railways, East African Airways and the Post and Telegraph system) and the non self-contained services (such as the Income Tax and Customs and Excise Department, and the Statistical and Research Departments).

One other area where there has been an attempt at cooperation between the three East African countries has been with respect to industrial licensing. In 1952 an East African

³³Ibid., page 32.

Industrial Licensing Council³⁴ was set up with powers to determine a list of "scheduled" industries. Licenses to set up new establishments in these industries are supposed to be granted by the Council only after the consideration of any objection by a local producer, the object being to protect manufacturers within the East African common market. At present there are ten scheduled industries,³⁵ the list having remained unchanged in the past ten years. In practice the granting of licenses has become virtually automatic.

It is generally agreed that Kenya has derived greater benefits than Uganda and Tanzania from the close economic links between the three countries. Whether Tanzania would be better off today (in terms of her achievements of and potentialities for economic growth), if she had not been part of the common market is an interesting, but of course unanswerable question. A more relevant question which has been of paramount concern in Tanzania in recent years is whether it is in Tanzania's interests to continue these traditionally close links with her neighbors. A number of economists have tried to measure the benefits and costs of the common market and the common services to each of the three countries.

³⁴ Made up of the three principal civil servants of each of the countries Ministries of Commerce and Industry. See Investment Opportunities in Tanganyika prepared for the Government of the United Republic of Tanzania by the Economist Intelligence Unit, page 59.

³⁵ Cotton yarn, cotton piece goods other than knitwear, cotton blankets, woollen piece goods other than knitwear, woollen blankets, fabric spun from soft fibres other than fibres derived from cotton and flax, steel drums, glassware, sheet or window glass and metal window frames, metal doors, and door frames.

The advantage to Tanzania from the common services have been significant. Tanzania has always suffered from a tremendous shortage of trained administrative personnel. Thus the sharing with Kenya and Uganda of a common tax collection administration, a common posts and telegraph service and the many other services (performed first by the East African High Commission and then by EACSO) has helped economize on the use of one of Tanzania's scarcest resources.³⁶ Moreover the operation of some of the self-contained services has seemed to work to Tanzania's advantage. Professor Hazlewood has concluded that the intra-Tanzanian sectors of East African Railways and East African Airways are being subsidized by the Kenyan and Ugandan sectors, which serve more densely populated and often more developed areas.³⁹

On the other hand the workings of the common market have been much less clearly favorable to Tanzania. The two main advantages usually cited in support of larger free trade areas being formed between underdeveloped countries are (1) the increased investment (both domestic and foreign) which results from the existence of a larger market, presumably protected by tariffs on goods imported into the free trade area

³⁶ Though it should be pointed out that Kenya has benefited in a different sense (in terms of greater employment and income) from the placing of EACSO and all the self-contained services headquarters in Nairobi.

³⁷ Arthur Hazlewood, "Economic Integration in East Africa," a paper presented to an International Seminar on Economic Cooperation in Africa, sponsored by the University College, Nairobi and The Congress for Cultural Freedom in Nairobi, 13-18 December 1965, page 24.

from countries outside the area; mainly because of economics of scale, investments which would not have been profitable to undertake if the market was the smaller one existing in one country alone; (2) the increased trade and specialization that results within the larger common market.

In the case of the East African Common market both of these favorable consequences seem to have resulted. With the added advantage of a stable common currency the East African market as a whole has probably been more attractive to prospective investors than would any of the three countries alone; even though the advantages of a duty-free area have been somewhat offset by the poor communications and long distances over much of East Africa especially in Tanzania. The advantages of a larger common market have been most evident in more recent years, when with growing incomes and better communications, East Africa has seen the establishment of a number of new industries, manufacturing mainly consumer goods. Certainly trade between the three countries has increased very rapidly, especially in the post Second World War period.³⁸ One indicator of the growing importance of trade within the East African Common Market is the increasing share of the three countries total imports that is coming from their partners in the common market. The ratio of interterritorial to total imports for the three countries

³⁸ For a detailed description and discussion of the growth of intercountry trade see Ndegwa, op. cit., Chapter IV.

combined grew from 17.9 percent in 1956 to 22.2 percent in 1963³⁹ and to 25.1 percent in 1965⁴⁰. Tanzania's exports to her neighbors grew at an average annual rate of 20.7 percent between 1960 and 1965⁴¹ while her imports from Kenya and Uganda in the same period grew at an average rate of 12.7 percent per year.⁴²

However these statistics are misleading indicators of the impact of the Common Market on the Tanzanian economy. Most of the industrial development that took place in East Africa in the preindependence period was centered in Kenya, particularly around Nairobi. And since independence, although Uganda and Tanzania have attracted a number of new manufacturing industries,⁴³ Kenya remains far ahead in terms of industrial development. For strong historical and geographical reasons Nairobi has long been the financial and commercial centre of East Africa. It is not surprising

³⁹ Ibid., page 42.

⁴⁰ East African Customs and Excise, Annual Trade Report of Tanganyika, Uganda and Kenya for the year ended 31 December 1965, Commissioner of Customs and Excise, Mombasa

⁴¹ 1965 has been used as the terminal year instead of 1966 in order to emphasize the fast rate of growth; for in 1966 trade between Tanzania and her neighbors was less than in 1965 partly because of restrictions imposed by Tanzania; see below, page 39.

⁴² These growth rates are derived from the figures in Table 1.1.

⁴³ See below, pages 50-52, for some details of recent industrial growth in Tanzania.

country exports which fell into SITC Sections 5-9 rose from 32.7 to 48.5 percent. This contrasts with shares of 11.8 and 9.3 percent in 1959 and 1963 for manufactures share of domestic exports (i.e. exports from East Africa to the rest of the world).⁴⁹ Given Kenya's more advanced state of industrial development it is not surprising that she enjoys the lion's share of interterritorial trade in East Africa. In each year between 1959 and 1963 Kenya accounted for more than 60 percent of total interterritorial exports while Tanzania's share fluctuated from a low of 8.9 percent to a high of only 12.8 percent in the same period. On the other hand in each of the years between 1959 and 1963 Kenya accounted for less than 31 percent and Tanzania for more than 39 percent of total interterritorial imports.⁵⁰

There are two seemingly distinct ways in which the Common Market can be said to be working to Tanzania's disadvantage. The first is in terms of the concept known as "trade diversion".⁵¹ By trade diversion in a common market is meant the situation where a good which was formerly imported from a non-member country of the common market is now produced under protection in one of the member countries. In East Africa this type of import substitution has taken place mainly in Kenya, and Tanzania finds herself purchasing manufactured

⁴⁹ Ibid., page 46, Table IV.3.

⁵⁰ Ibid., page 53.

⁵¹ This was introduced by Jacob Viner in The Customs Union Issue, New York 1950, Chapter IV.

goods from Kenya which she presumably would have purchased from outside East Africa if there had been no protection and no consequent production in Kenya. If we assume that these goods Tanzania buys from Kenya are as expensive as the equivalent imports from outside East Africa would be after the levying of customs duties,⁵² then as a result of the trade diversion, the Tanzanian Government suffers a loss of customs revenue (and foreign exchange reserves) equal to the duty foregone on these goods. Because the consumer in Tanzania pays the same price for his purchase there is no gain in welfare to him. To the extent that the price of a Kenyan good is less than the c.i.f. price of imports from outside East Africa plus the import duty, there is a gain in welfare (really a lower loss in welfare when compared with the "free trade" situation) to the Tanzanian consumer which offsets the loss in revenue to the Government. One student of the benefits and costs of the East African Common Market in the early 1960's concluded that

Tanganyika bears the largest share of the costs of import-substitution, both because the value

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One East African economist believes that this is a realistic assumption, Dharam Ghai, "Territorial Distribution of the Benefits and Costs of the East African Common Market," in Leys and Robson (eds.) *op. cit.*, page 80. However, for a different view see Alan Roe "Terms of Trade and Transfer Tax Effects in the East African Common Market: An Empirical Study," Economic Research Bureau Paper 68 A. The Economic Research Bureau, The University College, Dar es Salaam; see also Chapter VI, pp. 255-256 below.

of her imports from the other territories is about 50 percent greater than those of either Kenya and Uganda and also because the average protection on her interterritorial imports, or taxation on foreign competing imports, is greatest.⁵³

The fact that the average protection on Tanzania's interterritorial imports is greater than that of the interterritorial imports of her neighbors is further evidence (given the prevailing tariff structure in East Africa) that Tanzania exports mainly primary products to her neighbors while importing largely manufactured products from them.⁵⁴

A second way of looking at the workings of the Common Market as being to Tanzania's disadvantage is in terms of investment and employment opportunities lost as a result of being part of the Common Market. It is possible that if Tanganyika had not joined the Common Market in the 1920's more investment would have taken place in Tanganyika than has actually occurred since then. Moreover the multiplier effects and external economies in Kenya probably lead to capital, and less importantly to labor, being attracted to Kenya from Tanzania. Hirschman has dealt at length with the possible adverse effects of a closer economic union between sovereign units on the less developed of the partners in the union terming them "polarization" effects.⁵⁵ These are akin to Myrdal's "backwash" effects experienced by under-

⁵³ Ibid.

⁵⁴ See Ndegwa, op. cit., Table IV.8 page 57 for detailed evidence of this.

⁵⁵ Hirschman, A.O., The Strategy of Economic Development, Yale University Press, New Haven, 1958, Chapter X, especially pages 187-190.

developed countries as a result of trading with more developed countries.⁵⁶

It is worth pointing out that this second way of looking at the disadvantages which may be experienced by a less developed partner in an economic union is not really a separate cost, which is different from the cost incurred as a result of trade diversion. If we measure the cost to Tanzania in terms of the customs revenue foregone⁵⁷ we cannot at the same time count the cost of investment opportunities foregone as a result of the common market. For, if this investment and import substitution were to take place in Tanzania behind Tanzania's own tariff walls then imports from the rest of the world would decline and the import duties would again not be received by the Government. Thus Tanzania's real income loss is measured either in terms of the reduction in revenue from import duties or in terms of the cost of investment and employment foregone. However it should be pointed out that Tanzania is not indifferent between these two "measures" of cost. Compensation for revenue loss would not make up for the national income lost from foregone investment since the latter is very likely to have beneficial "multiplier" and "external economics" effects.

⁵⁶ Gunnar Myrdal, Economic Theory and Under-Developed Regions, London, Gerald Duckworth & Co. Ltd., 1957, pp. 27-29.

⁵⁷ The method used by Ghai, op. cit.

Of course the common market can work in the opposite direction, i.e. to Tanzania's favor, in the sense of more investment in import substitution taking place and Tanzania thereby being able to increase her exports to her neighbors. Quite clearly Tanzania has lost more than she has gained from the Common Market over the years in this respect. Though in general there must have been some beneficial "spillover" or "spread" effects⁵⁸ on Tanzania resulting from Kenya's expansion.

Over the years a number of commentators have held the view that Tanzania has not benefited much, if at all, from the workings of the East African Common Market. As early as 1932 a British expert, Sir Sydney Armitage-Smith, advising his government on Tanganyika's financial position, took a gloomy view of Tanganyika's membership in the Common Market. While recognizing the a priori appeal of closer economic ties in East Africa

The idea of a large East African Territory, without customs barriers and open to the free exchange of goods, is a a priori attractive...⁵⁹

⁵⁸ The former, "spillover" effects is the term Hirschman uses for the opposite of "polarization" effects; the latter, "spread" effects is Myral's term for the opposite of "backwash".

⁵⁹ Report by Sir Sydney Armitage-Smith on a Financial Mission to Tanganyika, 26 September 1932, Presented by the Secretary of State for the Colonies to Parliament by Command of His Majesty October 1932, London HMSO 1932, CMnd 4182.

his examination of the details of intra East African trade led him to comment that

there is no escape from the conclusion that... the protection afforded to the other territories has injured both the consumer and the revenue of Tanganyika and that their injury has been accentuated by the suspended duties....The loss which the revenue of Tanganyika has suffered and is suffering through the exclusion of foreign and revenue-producing foodstuffs etc., is not offset by the advantage to its producers of exporting rice and ghee to the neighboring territories free of duty.⁶⁰

And he went on to recommend

...that Tanganyika should take steps forthwith to levy customs import duty at the same rates on foodstuffs imported from Kenya and Uganda as those chargeable on foodstuffs imported from foreign ports, and cease to deplete her revenue and impoverish her citizens by protecting the product of her neighbors.⁶¹

It is interesting that in recent years the views of the Tanzanian Government have been so strikingly similar to those of Armitage-Smith, although now the problem is not the imbalance in the trade of foodstuffs but the imbalance in the trade of manufactured products.

We do not have the time here to examine fully the historical antecedents of the founding of the East African Common Market. It does seem fairly clear however that the views of the white settlers in Kenya in the 1920's had much to do

⁶⁰ Ibid., pages 22, 25.

⁶¹ Ibid.

with the British Government accepting the idea of a Common Market for the whole of East Africa with protective tariffs on a number of products. Armitage-Smith's comment that "there can be no doubt that the Agreement forming the Common Market was conceived and carried into effect on the assumption and in the hope of mutual advantages and unfettered trade,"⁶² is less accurate than Jacob Viner's reference to the East African common market as:

....a striking instance where a territory Tanganyika was brought into a customs Union by external authority in order to provide an expanded field for the tariff protection of the industries of another country Kenya."⁶³

Acting on the advice of the Bowring Committee, which it had appointed, the Kenya Government in 1924 introduced protective tariffs, averaging 30-50 percent, for sugar, timber, wheat and wheat flour, butter ghee, cheese, ham and bacon.⁶⁴ These tariffs became relevant to Tanganyika too since she had first joined with Kenya and Uganda in 1923.⁶⁵ Towards

⁶² Ibid., page 19.

⁶³ Viner, op. cit., quoted in Peter Newman "The Economics of Integration in East Africa," in Leys and Robson (eds.) op. cit., page 58.

⁶⁴ Ndegwa, op. cit. page

⁶⁵ See page 19 above.

the end of the 1920's a tariff committee in Uganda complained of the poor quality and high prices of Kenya goods being produced behind the protective tariff barriers. But they nevertheless recommended the continuation of the common market and the existing tariff structure,⁶⁶ perhaps because it was already clear that Uganda with its close geographical and communication ties with Kenya benefited on balance from the workings of the common market. As we saw earlier⁶⁷ Armitage-Smith, viewing the market from Tanganyika's viewpoint, took a less sanguine position.

The workings of the common market did not become a controversial issue again until the second half of the 1950's. Then a number of factors led to renewed concern in Uganda and Tanganyika that they were not benefiting from the Common Market as much as Kenya. Firstly the slump in export prices after the end of the Korean War led to the post war boom in East Africa being short-lived.⁶⁸ Secondly, as already mentioned, Kenya was enjoying an increasing share of inter-territorial trade as a result of her more rapid growth in manufacturing industries. Thirdly there was now more awareness in each country of the need to speed up the rate of

⁶⁶ Ndegwa, op. cit., page 95.

⁶⁷ See page 32.

⁶⁸ Uganda in particular suffered from the fall in export prices.

growth and arguments that the common market might be a drag on development, especially of the industrial sector, in Tanzania and Uganda, were coming to the fore. Fourth, with the approach of political independence the individual territories were more concerned with the possible inhibition on independent fiscal policy which resulted from being part of a closely integrated common market.

The first attempt to satisfy the grievances of Uganda and Tanzania resulted from the recommendations of a Commission, (generally known as the Raisman Commission after its chairman) set up by the Colonial Secretary to examine the workings of the Common Market and the Common Services.⁶⁹ Recognizing that the existing arrangements worked more to Kenya's advantage than to Tanzania's and Uganda's, the Raisman Commission proposed a scheme for the redistribution of revenue from Kenya to Uganda and Tanzania. Under this scheme each country contributed 40 percent of net yearly proceeds from income tax charged on the profits of manufacturing and finance companies and 6 percent of each country's net yearly collection of customs duties and excise taxes. 50 percent of this revenue was to be distributed to the self contained services of E.A.C.S.O. and the other 50 percent in equal

⁶⁹ East Africa, Report of the Economic and Fiscal Commission, London. Her Majesty's Stationery Office. Cmnd 1279, 1961.

parts to the three countries. Since Kenya earned more from company income tax and from custom duties and excise taxes, Tanzania and Uganda would contribute much less than Kenya to the costs of the non self-contained services. Ndegwa has estimated that in the fiscal year 1962-63 the Raisman scheme saved Tanzania 6.2 million shillings compared with the old system of assessing contributions to the cost of the non self-contained services of E.A.C.S.O. On the basis of most estimates of Tanzania's tariff revenue for income loss, the Raisman formula did not go anywhere near compensating Tanzania for her loss of customs revenue as a result of trade diversion in the Common Market. Furthermore the Distributable Pool did nothing to attack the root of the problem, the imbalance in industrial development in East Africa.

In the early 1960's there was much talk of the possibility of a political federation between the three East African countries. President Nyerere had even offered to delay Tanganyika's independence until Kenya and Uganda received theirs in order to facilitate the formation of such a federation. But the nationalist leaders in the latter two countries, especially Uganda where there was incipient internal dissension, were reluctant to commit themselves. In a political federation with more centrally directed planning of economic development for the whole of East Africa, Tan-

ganyika would expect a larger share of any new investment in industry than she would expect to receive under the existing common market arrangement. When in April 1964, talks on federation broke down, Tanzania (the union between Tanganyika and Zanzibar was formed in the same month), by threatening to withdraw from the common market and to have its own currency, put pressure on her neighbors to modify the free trade nature of the common market so that the imbalance in East Africa industrial development and interterritorial trade could be corrected.⁷⁰ It was at this time too that Tanganyika's first Five Year Plan was being drawn up in which industrial development was to receive important emphasis.⁷¹

Largely as a result of Tanzania's pressure the economic ministers of the three countries formed an Emergency Committee "to inquire into the measures necessary to bring about a trade balance between the three East African countries."⁷² Uganda refused to link any discussion on a possible political federation with the talks on trade imbalance. As a result of the meetings of this committee the Kampala Agreement was arrived at by the Ministers at the end of April. Under the Kampala Agreement five methods for correcting the imbalance

⁷⁰ See The Tanganyika Standard, Dar es Salaam, April 8 and 9, for Nyerere's reported position at this time.

⁷¹ See below, pp. 50-53 for more details of industrial development in the plan period, 1964-1969.

⁷² Kampala Agreement as issued by the Information Service of the United Republic of Tanganyika and Zanzibar, Dar es Salaam, 1964, page 1.

in trade were put forward:

- (a) Immediate action with certain interterritorially connected firms to increase production in a deficit country and thereby reduce imports from a surplus country.
- (b) Agreement as to the immediate allocation of certain major industries.
- (c) The application of a system of quotas and suspended quotas whereby exports from surplus countries would be progressively reduced, and local production increased in the deficit countries according to the building up of the productive capacity of the deficit country.
- (d) Increased sales from a country in deficit to a country in surplus.
- (e) Early agreement within the East African Common Market on a system of inducements and allocation of industry in order to secure the equitable distribution of industrial development as between the countries.⁷³

In addition the Kampala Agreement provided for the formation of a Committee of Industrial Experts to analyse methods of locating industries in those countries.

Under the first method, (a) above, for correcting trade balances, four industries (tobacco, shoes, cement and beer), which were already operating in all three countries were requested to expand their production in order to supply as much as possible of the demand of each country for those products out of domestic production. It was estimated that if Tanzania ceased to import these products from Kenya and Uganda the interterritorial deficit of 178 million shillings would be reduced by 42 million shillings. Under the second method (b) Tanzania was to be given exclusive rights (under the

⁷³ Ibid., page 3.

Industrial Licensing Acts) for the manufacture of aluminum foil, circles and plain sheets; wireless radios and parts; and motor vehicle tires and tubes.⁷⁴

But the Kampala Agreement was never properly implemented. The Kenyan legislature, aware of the effects the agreement might have on Kenya's flourishing export trade to her East African partners, dragged its feet over ratification. Moreover political relations between Kenya and Tanzania were becoming somewhat strained at this time. The Kenyan Government viewed with suspicion Tanzania's increasing ties with China and the Communist countries of East Europe -- during 1964 and 1965 Tanzania had negotiated bilateral trade agreements with Bulgaria, Czechoslovakia, Federal Republic of Germany, Poland, U.S.S.R., Yugoslavia, China and North Korea.⁷⁵ In May 1965 when Tanzania announced her intention of withdrawing from the common currency arrangement⁷⁶ and establishing her own independent currency, the death-knell of the Kampala Agreement was sounded. For one of the conditions which the Kenya delegation insisted on in accepting the Kampala Agreement was the continued existence of a common currency.⁷⁷

⁷⁴ Ibid., pages 6 and 7.

⁷⁵ Hadley Smith, Industrial Development in Tanzania, Dar es Salaam, Institute of Public Administration, University College, 1966, page 47.

⁷⁶ Ibid., page 83.

⁷⁷ Kampala Agreement, op. cit., page 8 .

Meanwhile Tanzania, following what she believed to be the spirit of the Kampala Agreement, had imposed quantitative restrictions on a wide range of imports from Kenya and Uganda. By the beginning of 1966 Tanzania had listed 91 classifications of imported goods from Kenya and Uganda which require application for Specific Import Licenses. According to the terms of the Kampala Agreement the imposition of quotas was to be formalized by a later exchange of letters but this has not been done. Smith found that Tanzania issues licenses

....only for monthly periods in accordance with demand and production to prevent excessively high local prices and encourage local industries. Licenses for paints, distemper, enamels, lacquers, and varnishes below specific prices are not granted. The import of galvanized iron sheets, aluminum circles, coils, sheets and plates and aluminum domestic wares and household articles is prohibited. Shirts costing less than Shs 250 per dozen f.o.b. may not be imported. In practice, outright prohibition is used rather than quotas.⁷⁸

Tanzania's imposition of quotas began to affect interterritorial trade in 1965 and even more sharply in 1966. Tanzania's imports from Kenya and Uganda had grown rapidly between 1959 and 1964 (at an average annual rate of 13.9 percent). Interterritorial imports increased by only 6.4 percent in 1965⁷⁹ and in 1966 they fell below the record 1965 level. But Tanzania's exports to her partners which had begun to rise at

⁷⁸Smith, op. cit., page 83 [my emphasis].

⁷⁹See Table 1.1.

a rapid rate after 1962 (even though they remained small in absolute terms), also fell in 1966 from the record high of 118 million shillings in 1965.⁸⁰

A look at the more detailed statistics of the trends in the exports of and imports of individual items being traded by Tanzania with Kenya and Uganda reveals some interesting changes. In 1960 Tanzania's exports to her partners of manufactured goods (i.e. goods falling under Section 6 of the S.I.T.C. classification) constituted only 7 percent of total interterritorial exports. By 1966 this share had risen to 36 percent.⁸¹ The main increase occurred between 1963 and 1965 when Tanzania began exporting cotton fabrics, blankets, corrugated plates, aluminum coils, and footwear, to her neighbors following the establishment of manufacturing plants in these industries. However by 1966 the growth in interterritorial exports of these commodities had been reversed. For cotton fabrics, corrugated plates and footwear the high was reached in 1964; for blankets and aluminum coils in 1965.⁸²

On the import side, the decline in the interterritorial imports of certain manufactured goods began in 1964 and was markedly accelerated in 1965. The imports of cigarettes from Kenya fell from 22.5 million shillings in 1963 to 16.5 million

⁸⁰ At the same time Tanzania's imports from outside East Africa rose by 13.8 percent in 1965.

⁸¹ Resnick, *op. cit.*, Appendix Table 10c.

⁸² *Ibid.*, Table 11a.

in 1964, 7.3 million shillings in 1965 and 3.3 million in 1966. Imports of corrugated plates and sheets fell from a high of 7.5 million in 1963 to 2.9 million in 1964 and to only 0.1 million shillings in 1966. Imports of clothing from Kenya fell off dramatically in 1966 to 3.6 million shillings from more than 20 million shillings in 1965.⁸³

The extent to which the falling off of interterritorial trade in recent years has been due to the restrictions imposed following the Kampala Agreement rather than to a process of import substitution within East Africa which would have occurred anyway as firms in industries like cigarettes, beer, clothing, etc. expanded into Uganda and Tanzania would require further study. In any event no one in East Africa was really happy at the prospect of further deterioration in economic and political relations between the East African countries. Although Tanzania had herself introduced the restrictions on trade and initiated the breaking up of the common currency system, she valued too much the obvious benefits that she derived from the common services. Moreover if the common market could be modified so as to enable Tanzania and Uganda to share more fully in future industrial growth in East Africa the clear advantage of close economic cooperation could be maintained.

Accordingly in September 1965 the three heads of State appointed a Commission to examine how economic cooperation in

⁸³ Ibid., Table 11b.

East Africa could be strengthened. The Commission, headed by Kjeld Philip, an economist working for the United Nations and former Minister for Finance in Denmark,⁸⁴ was given very wide terms of reference. Essentially it was concerned with the future regulation of the Common Market and the future operation of the common services. The fruits of the Philip Commission were a far reaching "Treaty for East African Cooperation," agreed to by the heads of State in June 1967, and which came into effect from December 1 1967.⁸⁵ In the Treaty relations between the three countries were formalized through the establishment of an East African Community with the East African Common Market and common customs tariff as an integral part of the Community.⁸⁶

For our purposes, the most interesting aspect of the new Treaty is the provision for the introduction of a transfer tax on certain goods entering interterritorial trade. Unlike the Kampala Agreement the Treaty permits no quantitative restrictions, i.e. no quotas, on goods produced in one State and exported to a partner State.⁸⁷ Instead a

⁸⁴ Smith, op. cit., page 94.

⁸⁵ Treaty for East African Cooperation, printed on behalf of the East African Common Services Organization: by the Government Printer, Nairobi, Kenya, 1967.

⁸⁶ Ibid., Articles 1 and 5.

⁸⁷ Exception to this ban on quotas is provided for in case of general balance of payments problem, see Treaty for East African Cooperation, op. cit., Article 12, pages 8, 9.

transfer tax is envisaged as one device for preventing further imbalance in industrial development and trade in manufactures within East Africa. This transfer tax is really a tariff on interterritorial trade and may be imposed on manufactured goods by a country "which is in deficit in its total trade in manufactured goods" with the other two countries. In addition transfer taxes can only be imposed on manufactured goods of a Partner country where the value of these manufactured goods does not exceed the deficit in trade between the country imposing the tax and the country producing the goods. Furthermore, transfer taxes may only be imposed if at the time of imposition "goods of a similar description are being manufactured in that State or are reasonably expected to be manufactured in the State within three months of the imposition of the Tax". Finally the industry within the tax imposing country must have the

....capacity to produce in the ensuing year - (a) a quantity of goods equivalent to not less than 15 percent of the domestic consumption within that Partner State of goods of that particular kind in the period of twelve months immediately preceding the imposition of the tax; or (b) the goods of that particular kind having an ex-factory value of not less than 2,000,000 shillings.

The maximum rate at which the transfer tax can be imposed is 50 percent of the duty on the same goods entering the tax imposing Partner from outside East Africa. Should the imposition of a transfer tax result in "a significant

deviation" of trade (i.e. where the country imposing the tax now tends to import from outside East Africa goods it used to import from one of its partners in East Africa), the country imposing the transfer tax, with cooperation from its partners, is required to "take measures to counteract such deviation and....to make such measures effective." Finally there is provision for the revoking and freezing of transfer taxes in certain circumstances. A country can request the Common Market Council to agree to a revocation of the transfer tax on a particular commodity if the tax-imposing country begins to export (to the other Partner States and to the rest of the world) 30 percent or more of its domestic product of that commodity. More generally where one State exports to its Partners 80 percent or more of what it imports from them in the same year, "that Partner State shall not thereafter be entitled to impose any new transfer tax or bring any suspended transfer tax into operation; but this paragraph shall not affect any subsisting transfer tax." Although no new taxes will be permitted after 1985 and each tax may only be applied for a maximum of eight years, the entire system will be reviewed in 1972 in order to determine whether or not it is bringing about the industrial balance it is trying to promote.⁸⁸ We shall examine in detail

⁸⁸ The above description of the more important aspects of the transfer tax is a summary of the Article on the tax in The Treaty, op. cit., Article 20, pages 12-18.

in Chapter VI the implications for Tanzania of this new transfer tax. Will it assist the promotion of industries in Tanzania? Can we use the concept of effective protection to help in choosing those products on which a transfer tax could most usefully be imposed? What other criteria can be used in choosing which products are suitable for the transfer tax? These are some of the questions we shall look at in Chapter VI.

Another interesting feature of the new Treaty is the establishment of the East African Development Bank which will act as a source of financial and technical assistance for industrial development in East Africa. At first though (i.e. at least for the first ten years), it is envisaged as playing a significant role in correcting the industrial imbalance among the three countries. To this end, Tanzania and Uganda will each receive $38 \frac{3}{4}$ percent of its resources and Kenya 22 $\frac{1}{2}$ percent during the first ten years of the Bank's operation.⁸⁹

With regard to the future operation of the common services the Treaty provides for substantial decentralization of the headquarters of different branches of E.A.C.S.O.⁹⁰ This should meet the long standing objections of Tanzania and Uganda, who saw Kenya benefiting through greater em-

⁸⁹ See the Treaty, *op. cit.*, Annex VI for the Charter of the East African Development Bank.

⁹⁰ *Ibid.*, Chapter XXII.

ployment and income, from the existence of almost all of E.A.C.S.O.'s administrative operation in Nairobi. It is of course too early to say anything about how the new Treaty is working since it has not been really implemented as yet. But it is somewhat encouraging for the future of East Africa economic cooperation that two neighboring African states, Somalia and Zambia, have expressed an interest in joining the East African community.⁹¹

⁹¹ For a discussion of the possibility of a greater economic tie between the countries of Eastern and Central Africa see Ndigwa op. cit., pages 120-135, 141-147 and Smith, op. cit., pages 90-93.

III

In terms of the growth rates for important aggregates shown in Table 1.2 the performance of the Tanzanian economy in recent years appears to have been reasonably satisfactory.⁹² Monetary GDP has grown at an average rate of more than 7 percent since 1954. However this average rate masks the significant fluctuations that have occurred in the annual growth rate. With agriculture and particularly the export of agricultural products playing such a large role in the Tanzanian economy, exogenous factors (such as the weather and the prices of primary products on the world market) can significantly affect the rate of growth of GDP in any particular year. Thus in 1961 a severe drought together with a fall in export prices led to the value of Tanzania's exports being reduced to more than 10 percent below their 1960 level. When in 1965 the price of sisal on the world market fell by more than 30 percent Tanzania's exports of sisal fell by 151 million shillings and her total domestic exports fell by 143 million shillings or by about 10 percent, even

⁹² These statistics on growth rates must be treated with some caution since they depend on the terminal years chosen. Given the tendency for fluctuation in the output of agriculture in Tanzania, the choice of terminal years is especially crucial here, since agriculture is such an important part of GDP in Tanzania. Smith used 1965, a year in which GDP grew very slowly, as his last year. For growth rates in the period 1960-65 (which tend to be lower than for 1960-66, though not by much for many measures) see Smith, op. cit. page 6, some of which are reproduced in Table 1.2.

Table 1.2

Average Annual Growth Rates for Major Tanzanian Aggregates
for Selected Periods from 1949-1966

	Per cent			
	1949-54	1954-60	1960-66	1960-65
Total GDP		4.6	6.7	5.2
Monetary GDP		7.6	8.3	7.0
Agricultural Output			4.4	3.0
Manufacturing Output		6.4	16.4	12.5
Exports	14.0	6.6	6.6	2.8
Imports	4.1	3.7	9.4	5.8
Interterritorial Exports	3.1	25.4 ^a	12.4	20.7
Interterritorial Imports	11.9	11.5 ^a	10.1	12.7

^a These rates of growth are for the period 1954-1958 because figures for interterritorial trade after 1958 are not comparable with those for earlier years, because beginning in 1959 the value of interterritorial exports and imports did not include excise taxes or any customs duties paid.

Sources: See Table 1.1.

though the quantity index for domestic exports fell by less than 2 percent.

As mentioned earlier exports make up a large part of monetary GDP in Tanzania. Consequently there is a correlation between changes in exports and changes in monetary GDP. But the fluctuations in monetary GDP are less great than those in exports. One reason for this has been the steady growth in the nonagricultural sectors of the Tanzanian economy. But in addition the growth in agricultural production in general has been striking. The marketed output of the agricultural sector (measured in value terms) grew at an annual average rate of 6.1 percent between 1960 and 1966. In the case of seven major cash crops,⁹³ the average rate of growth in this period was greater than 10 percent per year.⁹⁴ Tanzania was cited in a U.S. Department of Agriculture study on progress in agriculture as one of the few underdeveloped countries in which agricultural production had consistently outstripped population growth in the post-war years.⁹⁵ One disappointing development in the agricultural sector in the last few years has been the sharp fall-off in the numbers employed. In each year since 1961 the numbers of wage earners in the agricultural sector has declined. Whereas more

⁹³

Cotton, coffee, cashew nuts, sugar, tobacco, pyrethum wheat and groundnuts (for tea it was 9.8 percent a year).

⁹⁴

Background to the Budget, 1967-68, op. cit., page 18.

⁹⁵

Changes in Agriculture in 26 Developing Nations 1948 to 1963, Foreign Agricultural Economic Report No. 27, Economic Research Service-U.S. Dept. of Agriculture, Washington, 1965.

than 200,000 were employed in agriculture in 1962, the number had fallen to a little over 126,000 in 1966. Thus even though employment had increased in all other sectors, excepting mining and quarrying, and construction, the total number employed for wages and salaries in Tanzania in 1966 was more than 17 percent below the 1960 level.⁹⁶ One factor leading to a decline in numbers employed in agriculture was the increase in minimum wages which resulted from minimum wage legislation,⁹⁷ and which led to increased mechanization and more efficient use of labor in estate agriculture, especially on sisal estates.⁹⁸ Another factor may have been the relative decline in estate agriculture (mostly owned by nonAfricans, many of whom were not citizens) after independence.

The growth rate in manufacturing in Tanzania has been extremely high since 1960 (the annual average from 1960 to 1966 was 16.4 percent). Of course the level of manufacturing production in 1960 was so low that a high growth rate must be viewed with some caution. Nevertheless the list of new industries that have been initiated in Tanzania since 1960 is impressive. According to a report of investment oppor-

⁹⁶The United Republic of Tanzania, Statistical Abstract 1965 Dar es Salaam, Government Printer, 1967. Table 5.1, page 140; Background to the Budget, 1967-68, op. cit.

⁹⁷See Smith, op. cit., pages 15-16.

tunities commissioned by the Tanzanian Government,⁹⁸

From independence to April 1966 nearly 40 major new industrial or commercial projects either started operations or reached an advanced planning stage, involving nearly 20 industries new to Tanganyika. The most important were in the fields of textile manufacture, cement production, oil and sugar refining, sisal rope spinning and galvanizing and aluminum rolling.

By 1965 three of these industries, galvanizing and aluminum rolling, sugar refining and textile manufacture, were the first, second, and fifth largest manufacturing industries in Tanzania in terms of value added.⁹⁹ In 1965 two sisal factories started production as did several factories for making shoes, shirts and soap.¹⁰⁰ Also in 1965 construction began in Arusha on a radio assembly factory, an industry reserved to Tanzania under the Kampala Agreement. Overall in 1965 the net output of the manufacturing sector rose by 16 percent in value terms and by 10.3 percent in real terms.¹⁰¹ In 1966 growth was even faster, the net output of manufacturing and processing increasing by over 22 percent. About two thirds of capital investment in the

⁹⁸ Investment Opportunities in Tanganyika, Prepared for the Government of the United Republic of Tanzania by the Economist Intelligence Unit, p. 39.

⁹⁹ The United Republic of Tanzania, Survey of Industries 1965, Dar es Salaam Central Statistical Bureau, 1967. Industries such as grain milling and sisal decortication (which are more properly part of the agricultural sector though they are often included in the manufacturing sector) have been excluded in this ranking exercise.

¹⁰⁰ Background to the Budget, 1966-67, Dar es Salaam, the Government Printer, 1966, page 28.

¹⁰¹ Ibid., page 27.

industrial sector was financed from foreign sources. Thirty-eight medium and large factories were completed, most notably the large oil refinery and a cement factory, both in the Dar es Salaam area. However the largest growth in the number of companies registering in Tanzania took place in small factories set up to produce consumer goods particularly food products and ready-made garments.¹⁰² It is the Government's view that

The manufacture of garments, shirts, footwear, biscuits, matches and paper products, has been stimulated by controls of imports...from Kenya and Uganda pursuant to the Kampala Agreement but also to the 1964 East African industrial licensing of new textile production which has encouraged the Tanzanian industry and textile using industries such as clothing.¹⁰³

The production of textiles will receive further impetus in the next few years with the opening of three more large integrated spinning and weaving mills. The first mill to use local cotton commenced operations in June 1966. "It is anticipated that by 1970 the total capacity of the Tanzanian textile industry will be in....excess of half the projected domestic consumption."¹⁰⁴

One indicator of recent growth in the industrial sector has been the sharp increase in certain types of capital

¹⁰²Background to the Budget, 1967-68, op. cit., page 34.

¹⁰³Ibid.

¹⁰⁴Ibid. In 1966 Tanzania's production of textiles was approximately 15 percent of the total consumption of textiles in the country (as measured by the sum of domestic production plus total imports of piece goods of cotton and other materials).

formation since 1963. The annual gross investment in machinery more than doubled between 1963 and 1966. This was accompanied by a rapid growth in the purchase of transport equipment (in 1966 this was largely because of the need for trucks to carry fuel to Zambia) and a 50 percent increase in non-residential building in two years.¹⁰⁵ As a result the ratio of Gross Capital Formation (GCF) to monetary GDP (at current market prices) exceeded 20 percent in both 1965 and 1966.¹⁰⁶ The ratio of 21.1 percent in 1966 is particularly significant since this was a year of rapid growth (11.8 percent) in monetary GDP; GCF growing by 12.5 percent. Between 1960 and 1964 this ratio varied from 14.5 percent to 19.1 percent, the latter in 1961, a year in which monetary GDP grew by a little over 3 percent. In 1963 gross capital formation was less than 5 percent above the 1960 level, having shown a decline in both 1962 and 1963.¹⁰⁷

There is evidence that in many underdeveloped countries recent growth in output in manufacturing industry has not been accompanied by much growth in the numbers employed in the manufacturing sector. This is usually thought to be due to the capital-intensive nature of modern production techniques used in most industries. Surprisingly, as the figures in

¹⁰⁵ Background to the Budget, 1967-68, op. cit. page 74, Table 48.

¹⁰⁶ Ibid., page 75, Table 48. The ratio of 21.3 percent given for 1965 in Table 48 is incorrect. It should be 20.8 %.

¹⁰⁷ Ibid..

Table 1.3 show, this has not been the case in Tanzania since 1963. Between 1961 and 1963 employment in manufacturing did decline while output was increasing. But since 1963 the increase in numbers employed in manufacturing has been of the same order as the increase in real output, i.e. about 30 percent. And in 1966 employment in manufacturing grew by 16.3 percent while output (in real terms) grew less quickly, 14.6 percent. These figures must however be treated with considerable caution. For firstly the 1966 figures in Table 1.3 are provisional and likely to be revised, though not by much. Secondly, the estimates of real output are even more unreliable than the estimates of monetary output on which they are based. The latter are subject to the usual problem associated with collecting accurate production statistics in an underdeveloped country like Tanzania. And the former are obtained by deflating monetary output by means of a price index which is itself highly unreliable.

Nevertheless one fact is clear in the Tanzanian case. In terms of numbers employed manufacturing has become a relatively much more important sector. In 1962 manufacturing accounted for only 5.9 percent of total employment. By 1966 this percentage had risen to 9 percent. Another interesting point which emerges from the figures in Table 1.3 is that since 1960 output per worker (in value terms) in manufacturing has been growing at about the same pace as average wages

Table 1.3

Indexes of Output, Employment and Wages in the Manufacturing Sector
1961-1966

Year	Real Output	Output at Current Prices	Employment	Wages	1961=100		Wages Output (%)
					Average Wages	Average Output	
1961	> 100 ^a	100	100	100	100	100	46
1962		111	89	117	129	125	47
1963	122	112	84	116	138	132	48
1964	131	140	89	130	146	155	43
1965	144	160	97	156	158	162	45
1966	165	195	113	197	175	172	46

^a1960-1962 average =100

Sources: Annual Background to the Budget and Statistical Abstract printed by the Government Printer in Dar es Salaam.

so that labor's-share of the net output of manufacturing industry has remained stable in this period. However wages have been rising more rapidly than real output per worker. Hence one of the causes of the disparity between the growth in real output and the more rapid growth in monetary output.

IV

We turn now to examine the nature, role and impact of the Tanzanian Government's economic policies in recent years. In particular we shall concentrate on the policy towards industry, including a detailed look at commercial policy in the next section. As we have already mentioned, the Tanzanian Government today pursues overall policies which are distinctly socialist. Ever since independence the Tanzanian Government, like most governments of newly independent African countries, has paid lip service to African Socialism. Yet the actual content of the Government's policies has shifted in the years since December 1961. In the earlier part of this period the Government's economic policies were directed mainly at achieving a more rapid rate of growth through the transformation of the country's economic structure. One clear implication of such a policy was the need for more emphasis on industrialization. On introducing the first five year economic plan to the Tanzanian Parliament in May, 1964, President Nyerere explained the rationale for such a policy.

Simply to expand agricultural output would be to condemn Tanganyika to a position of permanent economic inferiority in the world. We must have more balance in our economy, and end this absolute reliance on the prices of primary commodities. We must have an industrial base to our economy. Only when we have achieved this will our future be to some extent safeguarded.108

¹⁰⁸ The United Republic of Tanganyika and Zanzibar, Tanganyika Five-Year Plan for Economic and Social Development, July 1, 1964-June 30, 1969, Volume 1, General Analysis, Dar es Salaam, 1964, p. x .

And, as we shall see, the Tanzanian Government, until very recently, appeared to envisage an important role for private enterprise, including private foreign capital, in the industrialization process. Now, after the Arusha Declaration, the key features of the Tanzanian Government's overall policy are emphasis on the rural sector and self-reliance, the latter implying a much lesser role for foreign capital, both private and government.

Just before Independence, a Ministry of Commerce and Industry's booklet designed to inform investors of the advantages of investing in Tanzania pointed out that, in addition to rebates on duties on imports, "inducements for the investment of capital from outside the country include the pre-servicing of industrial sites, facility of transfer of capital and profits, research and information facilities."¹⁰⁹ And in the first years of independence the Government continued this line of trying to attract foreign private capital. In September 1963, the Foreign Investment (Protection) Act was passed in order to protect, with the approval of the Minister of Finance, proposed or existing Foreign investment in Tanganyika. The Bill guarantees for foreign investors:¹¹⁰

1. The payment in the relevant foreign currency and a transfer out of Tanganyika of full compen-

¹⁰⁹ Commerce and Industry in Tanganyika, Arusha, Ministry of Commerce and Industry, December 1961.

¹¹⁰ "A Bill for an Act to give Protection to certain approved Foreign Investments and for matters incidental thereto" published as a Special Supplement to the Tanganyika Gazette, Volume XLIV, No. 32, dated June 14, 1963, Government Printer, Dar es Salaam.

sation in the event of the nationalization or expropriation of the relevant enterprise and 2. The transfer out of Tanganyika in the relevant foreign currency of the profits (after taxation) of the investment, his share of the proceeds of sale of the relevant enterprise, and any approved loan.

In reviewing the progress in the industrial sector during the first two years after independence the Minister of Commerce and Industry referred to what he considered Tanganyika's "satisfactory start" on the development path. He then went on to appeal for more private investment and drew the attention of readers to the new Foreign Investment (Protection) Act described above.

A number of important investors have shown faith in our stability, and since the numbers of investment opportunities tend to increase, rather than diminish, I hope that many more will follow their example. Readers of this Journal will have noted the measures the Government has taken to encourage investment, notably by the introduction of Foreign Investment (Protection) Act, 1963.¹¹¹

The publication in which these remarks of the Minister appeared was put out by the Ministry of Commerce and Industry with potential foreign investors very much in mind. It frequently contains advertisements which read "Tanganyika Welcomes Investors."

¹¹¹ "Two Years Old...", by The Hon. C. G. Kahama, Minister for Commerce and Industry, Tanganyika Trade Journal, Volume I, No. 6, Oct.-Dec. 1963, pp. 16-17.

In his article, "Two Years Old...", Mr. Kahama also stressed that

It is...the Government's general economic policy to encourage the establishment of secondary industries devoted mainly to processing the raw materials which we can grow or mine in such abundant quantities.¹¹²

To further that policy it was suggested that incentives to investors include a proposal to extend the scope of the investment allowance to industries engaged in processing local, as opposed to imported, raw materials, and an increase in the rate of investment allowances from 10% to 20%.¹¹³ Such a policy is in accord with one of the main conclusions of our study of desirable industrialization strategies for Tanzania today.¹¹⁴

The encouragement of private investment in the early 1960's did not mean that the Tanzanian Government was cool to public ownership. But rather, as Hadley Smith has pointed out, the Government's support of private enterprise was based on pragmatic rather than idealistic grounds.¹¹⁵ Given the shortage of indigeneous managers and capital, complete public ownership appeared impractical. Yet the fact that

¹¹² Ibid.

¹¹³ Tanganyika Trade Journal, Volume I, No. 5, July-September 1963, p. 17.

¹¹⁴ See Chapter V, especially pp. 198-205.

¹¹⁵ Op. cit., p. 40.

most private firms were in the hands of non-Africans gave added stimulus to any desire for public ownership. In early 1965 the TANU newspaper wrote

The virtual monopoly now held by foreign firms and minority groups within Tanzania must be broken. It must be broken not by destroying what exists, but by the policies adopted in our expansion. Those must be such that we gradually extend the collectively owned sector of the economy and thus ensure both growth itself and the capability of our economy to serve the national interest at all times.¹¹⁶

The main method used until 1967 for extending public ownership was the development corporation, i.e., ownership of shares by the Government in development corporations which own shares along with private shareholders. By 1966 there were at least eight of these, most notably the National Development Corporation, in addition to eight marketing boards with corporate status and several public utility corporations. According to a paper given by an official Tanzanian representative to the Cairo Symposium on Industrial Development in Africa held by the United Nations,

The principal reason underlying the establishment of the organization (development corporation) is not simply to help the mobilisation of savings...nor...to confer on the community a rate of net social benefits to the community much higher than the private sector would otherwise do, but simply to the fact that...participation

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The Nationalist, March 15, 1965.

by the indigeneous population in industries (and also other economic activities) has been very insignificant...and it is thought that various means have to be devised whereby the indigeneous people or, on their behalf, the government can participate in various important industries in Tanzania.117

From 1964 until early 1967 the precise role envisaged by the Government for private capital in the future of the Tanzanian economy was uncertain. In addition the overall political climate following the leftist Zanzibar revolution seemed much less favorable to potential foreign investors. Yet in mid-1964 the then Minister of Commerce and Cooperatives made a statement in which he envisaged a continuing and important role for private enterprise.

I am determined to execute effectively Government's policy that cooperatives and other Government supported organizations shall obtain a slice of the commercial cake, but I am equally determined that this slice will be a reasonable one, allowing private enterprise to be an active and effective force in the vital and important role it is being called upon to play in the development of our country.118

And in 1965 Cabinet Ministers made frequent statements pointing to the many opportunities for new investments in Tanzania as well as the confidence which private investors should

117 Quoted in Smith, op. cit., page 38.

118 Statement by Minister for Commerce and Cooperatives, Hon. J. S. Kasambala, printed in the Tanganyika and Zanzibar Trade Journal, No. 9, July-September 1966, p. 39.

have in the country.¹¹⁹ The President himself wrote in the introduction to a Government commissioned study on "Investment Opportunities in Tanganyika", published in 1966, that "The promotion of African Socialism is a process which necessarily embraces private initiative and enterprise..."¹²⁰ In the Five-Year Plan nearly 50 percent (116 million out of a total of 240 million pounds) of investment projected for the plan period (1964-1969) was expected to come from the private sector.¹²¹

On the other hand we have already mentioned the firm demands from some quarters for greater local management and ownership of industry. In mid-1966 in a memorandum to the National Executive of TANU President Nyerere clearly outlined his own position on the role of private enterprise.

We wish to build our economy on the basis of equality of all citizens, and have specifically rejected the concept of creating a class system where one group of people own the means of production for the purpose of getting personal profit and another group works for them. We have not excluded private enterprise, and we want people to start their own productive and commercial undertakings. But we have said that the emphasis in our economy should be on ownership by the people, through the peoples' own institutions. What we are thus trying to do

¹¹⁹ See examples quoted in Smith, op. cit., p. 60.

¹²⁰ Investment Opportunities in Tanganyika, prepared for the Government of the United Republic of Tanzania by the Economist Intelligence Unit, p. 3.

¹²¹ This includes investment financed by parastatal organizations such as the National Development Corporation, Tanganyika Five-Year Plan, op. cit., p. 97.

is build public and private enterprise -- with the emphasis on the former -- so as to get the most rapid and most beneficial economic development.¹²²

In Smith's view Government support of the private sector was not "very enthusiastic" in the mid-1960's.¹²³ Nevertheless it came as a great surprise to many informed observers of the Tanzanian scene when in February 1967, following the proclamation of the Arusha Declaration, the Government announced its intention of nationalizing all commercial banks and obtaining complete or majority ownership of most of the largest industrial and commercial enterprises (including leading sisal estates) in the economy. In the Arusha Declaration read at a public meeting on February 5 by President Nyerere, it had been stated that,

The way to build and maintain socialism is to assure that the major means of production are under the control and ownership of the Peasants and the Workers themselves through their Government and their cooperatives.¹²⁴

Yet the nationalization of the banks on the very next day and the announcement over the next few days of which firms were to be taken over was not expected so soon. After he had listed the firms and the areas of the economy which the

¹²² The Standard, Dar es Salaam, June 10, 1966.

¹²³ Op. cit., p. 41.

¹²⁴ The Arusha Declaration and TANU's Policy on Socialism and Self-Reliance, Dar es Salaam, 1967, p. 3.

Government intended to control, the President went on to say that although "we have rejected the domination of private enterprise...we shall continue to welcome private investment in all those areas not reserved for Government in the Arusha Declaration."¹²⁵ It was the Government's view, and Ministers repeated this in the months following, that the Arusha Declaration improved the climate for private investment in Tanzania. For now the uncertainty as to which sectors of the economy might be taken over by the State no longer need exist. It is hard to believe that individual investors would take a similar view of the widespread nationalizations.

As the title of the Arusha Declaration shows, the two main planks of the new policy are "socialism" and "self-reliance". What this means in terms of overall economic strategy for the economy is (1) much less reliance on foreign capital, private or public, and (2) a shift from emphasis on industry as the 'primum mobile' of the economy to much greater reliance on the agricultural sector for increased output. As we have already noted, President Nyerere, when presenting the first Five Year Plan to the Tanzanian Parliament, stressed the need for emphasis on industry

¹²⁵ President Mwalimu Julius K. Nyerere, "Public Ownership in Tanzania," Appendix I to The Arusha Declaration, op. cit., p. 23.

so that the economy could be transformed from its dependence on the exports of primary products.¹²⁶ This emphasis was clearly reflected in the investment and growth patterns envisaged in the Tanganyika Five Year Plan for 1964-1969. More than 20 percent of the total gross capital formation was planned for the processing and manufacturing industries; in the private sector the share of investment going to those two categories was expected to be about 33 percent. The output of manufacturing and processing was expected to grow at 14.8 percent per year between 1960/62 and 1970 compared with an envisaged average annual growth rate for the economy as a whole of 6.7 percent.¹²⁷ Consequently the share of processing and manufacturing in total GDP was expected to increase from roughly 4 percent in 1960-62 to nearly 8 percent in 1970 and more than 13 percent in 1980.¹²⁸ As we have already seen, the output of the manufacturing sector has grown rapidly in the 1960's, the average annual rate of growth between 1960 and 1966 being 16.4 percent. And in his Budget Speech a year after the Plan period began, the Minister of Finance again referred to the importance of industry.

The increasing interest which is being displayed in industrial development has been a most encouraging feature of the past twelve months, and there are now a number of specific projects whose planning has reached an ad-

¹²⁶ See the quote on page 57 above.

¹²⁷ Tanganyika Five Year Plan, *op. cit.*, p. 10.

¹²⁸ *Ibid.*, p. 9.

vanced stage. It is essential that there is adequately serviced land available, and I have therefore earmarked some 885,000 pounds /equal to about 7 percent of the Government's capital budget/ for site clearing and servicing in industrial areas and for the disposal of industrial effluent.129

But in the Arusha Declaration such emphasis on industry is considered to have been a mistake. The following extract illustrates well the reasons for the dramatic shifts away from reliance on foreign assistance and industrialization, which shifts are at the very core of the socialist rhetoric of the Arusha Declaration.

The mistake we are making is to think that development begins with industries. It is a mistake because we do not have the means to establish modern industries in our country. We do not have either the necessary finances or the technical know-how. It is not enough to say that we shall borrow the finances and the technicians from other countries to come and start the industries. The answer to this is the same one we gave earlier, that we cannot get enough money and borrow enough technicians to start all the industries we need. And even if we could get the necessary assistance, dependence on it could interfere with our policy on Socialism. The policy of inviting a chain of capitalists to come and establish industries in our country might succeed in giving us all the industries we need, but it would also succeed in preventing the establishment of socialism unless we believe that without first building capitalism we cannot build Socialism.130

129 Speech by the Honourable the Minister for Finance, introducing the Estimates of Revenue and Expenditure 1965/66 to the National Assembly, on 10 June 1965. Dar es Salaam, The Government Printer, 1965, pp. 8-9.

130 The Arusha Declaration, op. cit., pp. 11-12.

We cannot here get into a detailed discussion of the causes of why the Arusha Declaration came when it did. One reason given in the manifesto itself for the need for more self-reliance was that the country would not get the assistance from outside that it needed for its development.¹³¹ Yet the inflow of private capital and more especially the private gross capital formation in the first two years of the plan period were well up to expectations.¹³² Certainly Tanzania received much less foreign aid in 1965, 1966, and 1967 than she had expected.¹³³ A large part of the drop in the latter two years was due to the breaking off of diplomatic relations with Britain in December, 1965 over UDI in Rhodesia which resulted in the freezing of a 7 million pound interest free loan from the British Government, part of which had already been spent in anticipation.

It appears that the Arusha Declaration was based much more on 'political' than on purely 'economic' grounds. More specifically it appears to have been largely the consequence of the development of the President's own thinking on the kind of economic strategy his country needs. He was appalled by the economic dependence on Britain of her ex-colonies in Africa, revealed by their unwillingness to sever relations

¹³¹ Ibid., pp. 8-9.

¹³² Smith, op. cit., p.

¹³³ According to the Plan, 80 million pounds in the form of loans and grants was expected over the five years. Yet in the first two years, only a little over eight million pounds had been received by the Tanzanians.

over the Rhodesian issue. This strengthened his belief that Tanzania should become more self-reliant. Moreover Rene Dumont's book, "False Start in Africa" (which called for more concern with peasant agriculture), and his own disapproval of any signs of the growth of a local urban elite and bourgeoisie, were important factors in shaping the President's thinking. These various strands all point to an economy in which foreign influence and the role of industry are played down, while the role of the agricultural sector, particularly the part played by the masses of peasants, becomes much more important.

A good case can be made for parts of the Arusha Declaration on more purely 'economic' grounds. G. K. Helleiner, a leading economist in Dar es Salaam, only a few days after the Arusha Declaration, presented a paper in which he urged the Tanzanian Government to give greater incentives to the agricultural sector. Pointing to the shrinkage in government-to-government economic assistance throughout the world, he argued that Tanzania's best hope for a rapid rate of economic growth lay in increasing agricultural output. This was true even though price prospects for Tanzania's major exports were not bright.¹³⁴ For, the lack of foreign

¹³⁴G. K. Helleiner, "Trade, Aid and Development," The East African Journal, May 1967.

assistance, the shortage of a local managerial class and the smallness of domestic markets, were all unfavorable to the rapid growth of import substitute industries.¹³⁵ The main conclusion of the present study points in the same direction, namely that it makes more sense for Tanzania to concentrate on increasing output in the agricultural sector and in those industries which use agricultural products as their major inputs.

¹³⁵It was believed in some quarters that because of the proximity in time of the Arusha Declaration and Dr. Helleiner's paper that the latter had been influential in the Government's decision. There is no truth in this view, although after reading Helleiner's paper some weeks later the President ordered copies for all his Ministers and Civil Servants.

The commercial policy of the Tanzanian Government in the period since independence has not been as haphazard as seems to have been the case in most Latin American countries or at least as Macario has portrayed the commercial policies of these countries.¹³⁶ In terms of the statements of Government Ministers (most notably in the annual Budget speeches of successive Ministers for Finance presented to the National Assembly each June) the Tanzanian Government has clearly been concerned with and aware of both revenue and protection goals in the setting of tariff and related tax rates.¹³⁷ Whether these tax rates have always had the desired and expected effect, particularly in terms of protection, is one of the major questions of this study.

In general the need to raise revenue has been the dominating objective of the Tanzanian Government. It is hardly unexpected that in an underdeveloped country with primitive accounting and administrative institutions the use of the tariff as a major source of government revenue has a long and important history. Already back in 1950 a committee set up by the Colonial Government to examine the rising cost of living in Tanzania,¹³⁸ in rejecting arguments for a

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See the long quote of Macario cited in the Introduction, page .

137 For details see the annual speeches which provide an excellent idea of how the Government views the progress of the economy. For example, The United Republic of Tanzania, Speech by the Honourable the Minister for Finance introducing the Estimates of Revenue and Expenditure 1965-66 to the National Assembly, on 10 June 1965. Dar es Salaam, The Government Printer, 1965.

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The committee was concerned essentially with the non-indigenous population, particularly the white civil servants in Dar es Salaam.

reduction of tariffs, observed;

it has to be remembered that the purpose of customs duties is to produce revenue for meeting the day-to-day expenses of Government and that these themselves rise in sympathy with rising costs generally. Customs duties are relatively cheap to collect and if any alterations are made in the customs tariff which involve any considerable loss of revenue to Government it would normally be necessary for an equivalent amount of revenue to be raised by some other form of taxation.¹³⁹.

In general there are and have been for a number of years four types of tariff rates used by the Tanzanian Government. Firstly most raw materials and capital goods can be imported duty free. Secondly there is a general revenue tariff rate applicable to the imports of many consumer goods. Thirdly there are higher rates which are levied on what are considered luxury goods. Thus in describing the general level of customs duties at independence the Ministry of Commerce and Industry stated

The tariff provides for the free importation of industrial, mining and agricultural machinery, certain foods, packing materials and equipment, tractors, electrical machinery not for domestic use, metals, chemicals and several other items considered essential for the development of the country.

The basic rate for other goods is 25 percent ad valorem but a few luxury goods and toilet preparations are subject to as much as 66-2/3 percent.¹⁴⁰

¹³⁹ Report of the Committee on Rising Costs. Dar es Salaam, The Government Printer, 1951, page 26.

¹⁴⁰ Commerce and Industry in Tanganyika, op. cit., page 23.

As we point out shortly there have been a large number of increases in tariff rates in recent years. Yet this basic three tier tariff structure is still the major feature of the overall tariff picture in Tanzania. In addition there is a fourth class of tariff rates for certain goods. The tariffs on these goods are designed primarily as protective tariffs and are set at varying rates, usually below the general revenue rate. This above scheme is somewhat neater than the real world. For tariffs on consumer goods produced in East Africa frequently serve both a protective and a revenue function. For example, the tariff rates on textile goods tend to be at the prevailing revenue rate. Yet this tariff now serves a definite protective function for the rapidly expanding textile industry.

Since Independence tariff rates have been increased on a wide range of imports entering Tanzania from outside East Africa. In each budget since 1961 the Minister for Finance has announced increases on a significant number of imports.¹⁴¹ In two recent years, 1965 and 1966, the Tanzanian Government found it necessary in April (that is, two months before the regular Budget) to legislate special measures introducing higher tariff rates in order to raise more revenue because

¹⁴¹ For details see the annual speeches by the Ministers for Finance introducing the Estimates of Revenue and Expenditure, op. cit.

the revenues anticipated in the Budget presented the preceding June were not materializing. There have been very few instances in this period of tariff reductions. The few that did take place were usually due to the discovery of an anomaly in the existing structure of tariffs. In spite of the frequent and widespread increases in tariff rates between 1961 and 1966 the overall structure of tariffs in Tanzania has not changed much from what we were describing above.

The extent and significance of the increase in the tariff rates in this period can be looked at in two ways: Firstly by comparing the overall picture in 1966 with that in 1961 as presented by the Ministry of Commerce and Industry in the statement quoted above; secondly, by examining what happened to the ratio of Government revenues from import duties to the value of net imports (that is, imports into Tanzania from outside East Africa). By 1966 the range of imports that is duty free had narrowed somewhat as compared to 1961; more foodstuffs are now subject to duty, and there are now duties on a few chemicals and metals being produced in East Africa. The basic revenue tariff is now between 30 and 40 percent compared with 25 percent in 1961; and the ad valorem duties on certain luxuries is now 75 percent. For some items widely consumed in Tanzania, such as matches, beer, cigarettes, and petroleum products, duties are now levied at rates equal to greater

than 100 percent in ad valorem terms. (The duties on these commodities are mostly set in specific terms).¹⁴² That these duties have been set so high for revenue raising purposes is evident from the fact that the domestic production of these products is subject to significant excise duties.¹⁴³

Table 1.4 shows what happened to the ratio of Government revenue from duties to the value of commercial net imports¹⁴⁴ in recent years. In each year from 1960 to 1964 the overall (aggregate) ratio increased and by 1964 it was double what it had been in 1954. It is seemingly paradoxical that this ratio did not increase further in 1965 and 1966. For, as we have seen, these were years of special budgets when tariff duties on some products were raised twice. The decline in the overall ratio in these years was due to the fall in this ratio for imports in S.I.T.C. Sections 0, 1, and 6 (See Table 1.4). Sections 0 and 1 (Food and Beverages and Tobacco) and a large part of Section 6 (Manufactured

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For detailed tariff rates see the official Customs and Excise Tariff Handbook published annually by the East African Common Services Organization.

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In Chapter IV below we "correct" for the impact of excise taxes on the "true" degree of protection enjoyed by domestic producers in East Africa. This point is also touched on briefly in our theoretical discussions in Chapters II and III.

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Commercial net imports excludes imports by the public sector which are exempt from duty.

Table 1.4

Duty collected by the Tanzanian Government as a percentage of value of net commercial imports, 1954 and 1960-1966

S.I.T.C. Section	1954	1960	1961	1962	1963	1964	1965	1966
0. Food	13.0	17.2	21.5	22.5	20.7	21.4	20.7	15.0
1. Bever- ages & Tobacco	216.8	241.2	233.7	249.0	243.7	258.5	223.9	192.6
2. Crude Materials	4.5	2.4	3.0	3.4	7.4	8.1	12.1	13.2
3. Mineral Fuel, Lu- bricants, Etc.	21.4	33.8	42.7	62.7	78.9	94.9	103.8	102.6
4. Animal and Vege- table Oils & Fats	10.0	25.7	26.0	25.2	26.7	5.6	1.1	3.9
5. Chem- icals	9.0	7.3	8.4	9.3	10.0	10.5	10.3	9.7
6. Manu- factured Goods (Clas- sified)	13.1	25.6	26.6	29.2	31.2	31.6	27.8	33.5
7. Machinery & Transport Equip.	6.1	10.0	7.7	9.5	12.3	12.8	12.0	13.5
8. Misc. Mfd. Arti- cles	13.7	28.4	29.8	28.6	30.3	30.8	33.0	29.9
9. Misc. Transac- tions & Commodi- ties	17.5	37.6	38.0	49.7	49.2	52.7	52.5	49.2
Total	15.5	22.3	23.8	27.8	30.0	30.9	28.5	29.4

Source: East African Customs and Excise, Annual Trade Reports, 1954 and 1960-1966.

Goods) are made up of consumer goods. The fall in the ratio in Table 1.4 for these sections appears to be an indication of successful import substitution within East Africa in the production of commodities like canned goods, textiles, clothing, beer, matches and tobacco products. Thus, while the tariff rates on these products has gone up their relative importance in Tanzania's total net imports has declined. The decline in the ratio of import duties to the value of net imports for S.I.T.C. Section 6 is also due to the rapid growth in the imports of parts and manufactured inputs used in the new industries producing import substitutes. The former are subject to much lower duties than the latter and they therefore pull down the overall ratio for this S.I.T.C. Section.

There are two additional aspects of Tanzania's commercial policy in recent years which are worth pointing out. It has been the policy of the Tanzanian Government for a number of years to grant rebates on duties on goods which are used as inputs in domestic production. According to the Local Industries (Refund of Customs Duties) Ordinance (Cap 289), industries which have been scheduled as "approved industries" can apply for refund of all or part of the duties paid on imported inputs. In 1961 there were 13 such "approved industries".¹⁴⁵ And in March 1967 the Government announced

¹⁴⁵ Ministry of Commerce and Industry, Commerce and Industry in Tanganyika, op. cit., page 21.

the granting of full customs duties rebates on raw materials imported by local industries for use in the manufacture of products which are eventually sold beyond the borders of East Africa.¹⁴⁶ The refunds granted under Cap 289 prior to that date were not always equal to the full amount of the duties paid by the local manufacturer.

In general Tanzania has made little use of quantitative restrictions on imports. A notable exception to this occurred early in 1965 when the Government introduced import restrictions on Japanese goods in a bid to improve the country's unfavorable trade balance with Japan, which had reached a record 94 million shillings in 1964. The Minister for Commerce and Cooperatives, Mr. Babu, announced that the only imports affected were piece goods and synthetic fibres. But these totalled 75 percent of Tanzania's gross imports from Japan in 1964. The Government argued that one major reason for imposing these restrictions was that it would be improper to allow Japan to maintain its lucrative connections while efforts were being made to correct the trade imbalance between the East African countries.¹⁴⁷ To this end, in October 1964, the Tanzanian Government had placed import restrictions on a wide range of goods imported from

¹⁴⁶ Monthly Statistical Bulletin, April 1967.

¹⁴⁷ Tanzania Trade Journal, Number 12, April/June 1965
page 16.

all sources including Kenya and Uganda.¹⁴⁸ A few months later some of these restrictions were relaxed and quotas were set for a number of commodities.¹⁴⁹ These quotas were used in practice largely on items imported from Kenya and Uganda, but with the introduction of the new Treaty for East African Cooperation quantitative restrictions on interterritorial trade were no longer permissible (i.e. after December 1, 1967.)¹⁵⁰

¹⁴⁸ Tanzania Trade Journal, No. 10, October/December 1964, page 21.

¹⁴⁹ Tanzania Trade Journal, No. 11 January/March 1965, page 28.

¹⁵⁰ See above page 42.

Chapter II

I

The concept of "effective protection" rests on the proposition that nominal (official) tariff rates on the imports of final products do not really measure the protection offered to domestic producers of the import. While the tariff rate on the final product is an accurate indicator of the "consumption cost" of protection to the marginal consumer¹ it is an unreliable and often misleading measure of the "production cost". In order to measure the "production cost", or protection offered to domestic producers by the tariff structure it is necessary to calculate effective protective rates for a particular activity. Rates of effective protection differ from nominal tariff rates in two fundamental ways. Firstly, to measure the effective rate of protection, it is necessary to take into account tariffs (and other relevant taxes) on inputs as well as those on the final product. For a tariff on an input (or any tax which raises the domestic price of an input as compared to its world price) is a tax on domestic producers. Such taxes increase the costs of domestic producers as compared to the costs of their foreign competitors. Moreover pro-

¹ Harry G. Johnson, "Tariffs and Economic Development: Some Theoretical Issues," The Journal of Development Studies, Volume I, Number 1, October 1964, page 16.

tection should be measured not in terms of the increase in the final price received by the domestic producer, but in terms of the increase in value added made possible by the tariff and tax structure.

The idea that tariffs on inputs should be taken into account in any discussion comparing the level of protection between different activities in one country or between similar activities in different countries has, until very recently, been largely ignored by writers on international economics. In what is to date the most comprehensive article on the theoretical aspects of effective protection, Corden begins by writing that:²

The theory of tariff structure...allows for the vertical relationships between tariff rates derived from the input-output relationships between products, an aspect until recently completely neglected in the literature of international trade theory.

In the last few years, a few economists, notably Corden himself, H. G. Johnson and Bela Balassa³ have explicitly

² W. M. Corden, "The Structure of a Tariff System and the Effective Protective Rate," The Journal of Political Economy, Vol. LXXIV, No. 3 (June 1966), page 221.

³ See particularly, Harry G. Johnson, "The Theory of Tariff Structure, with Special Reference to World Trade and Development," in Trade and Development, Etudes et Travaux de l'Institut Universitaire de Hautes Etudes Internationales, No. 4 (Geneva: Librairie Droz, 1965); Bela Balassa, "Tariff Protection in Industrial Countries: An Evaluation," The Journal of Political Economy, Vol. LXXIII, No. 6, December 1965.

developed the concept of effective protection and some of its possible implications and applications. Prior to that, isolated instances can be found in the literature on international trade where authors have been aware of the relevance to protection of tariffs on inputs and the share of final price which is made up of value added in the production process. All such references by theorists, as opposed to an implicit awareness on the part of policy makers, have appeared since 1955.

Corden observes that it is "not surprising" that one of the earliest expositions, albeit brief, of the idea of measuring protection in terms of value added was put forward by J.E. Meade.⁴ In the chapter on taxes and subsidies in his book, Trade and Welfare, published in 1955, Meade writes about the concept of effective protection (without putting a name to it) both in terms of import duties and export duties. Thus, with respect to import duties:

In passing it may be worth noting that in order to obtain a correct estimate of the ad valorem incidence of a duty on any particular commodity it is very important to define correctly the commodity which is, in economic fact as opposed to legal fiction, the subject of the duty. Suppose that it costs \$10 to produce a shirt in B and to transport it to A, and suppose that, of this total cost of \$10, \$4 represents the cost of producing the necessary raw cotton for the shirt.

⁴Corden, op. cit., page 221, footnote 1.

Suppose, further, that raw cotton can be imported into A free of import duty, but that there is a \$2 import duty on a shirt when it is imported into A, so that the market price of a shirt in A is \$12. It might appear that the "ad valorem" incidence of the import duty on shirts is 20 percent (i.e. $\frac{\$2}{\$12 - \$2}$).

But in fact it is not the production of shirts including the production of the necessary raw cotton which is being protected in A. Raw cotton can be freely imported into A to be made up into shirts in A. The whole of the \$2 import duty in A protects the making up of the raw cotton into shirts. The market price in A of the making up of the foreign shirt, i.e. of the shirt less the value of its raw cotton content, is only \$8; and thus the "ad valorem" incidence of the duty on the manufacturing of shirts from raw cotton, which is what is in fact being protected, is 33 1/3 percent (i.e. $\frac{\$2}{\$8 - \$2}$). In what follows

when we speak of the "ad valorem" incidence of an import duty we shall have in mind, unless we state the contrary, its "ad valorem" incidence measured in respect to that commodity or part of a commodity which it is in fact designed to protect.⁵

In the case of export duties on the final product which, unlike taxes on imports, are taxes on the domestic producer, Meade uses an identical example to the one quoted above for measuring the incidence of an import duty. There an ad valorem export tax of 20 percent on the export of shirts is truly a "tax of 33 1/3 percent....on the export of the manufacturing processing embodied in the shirt."⁶ Meade

⁵ J. E. Meade, The Theory of International Policy, Volume II: Trade and Welfare, London, Oxford University Press, 1955, page 157.

⁶ Ibid., pp. 162-163.

goes on to briefly discuss the effect of subsidies, production and consumption taxes on the level of the country's foreign trade as well as on the level of domestic protection and consumption.⁷

The earliest use of the term effective protection appears to have been by Clarence L. Barber. In a paper on tariffs in Canada, also published in 1955, Barber writes, "In attempting to assess the protection given by any particular tariff rate it is important to distinguish between the formal or published rate and what I propose to call the tariff's effective level."⁸ Barber then goes on to provide an excellent exposition of what is at the heart of the theory of measuring the "production costs" of protection by means of rates of effective protection. Barber points out that "the effective level of a tariff rate on its finished product may vary widely depending on the proportion of the final value of the industry's products that consist of raw materials and supplies and on the terms on which the materials can be purchased."⁹ Using a simple example Barber, like Meade, explains how to measure rates of effective

⁷ Ibid., pp. 163 ff.

⁸ Clarence L. Barber, "Canadian Tariff Policy," The Canadian Journal of Economics and Political Science, Volume 21, Number 4, November 1955, p. 523.

⁹ Ibid.

protection. His analysis, containing as it does, the two crucial factors relevant to effective production, viz. the value added coefficient and the cost of raw materials (as implicitly affected by tariffs and other relevant taxes) contains the essence of the approach which has more recently been refined and made more precise, particularly by Corden and Johnson.

Corden's own earlier work on tariffs in Australia makes use of the concept of effective protection. In a 1957 article,¹⁰ reviewing the 1929 report on the Australian Tariff by a committee of economists, Corden points out that the committee was aware that "removal of the tariff [on materials or semi-finished products] leads to a fall in industrial costs, including the costs of import-competing and export industries..."¹¹ Later in the same article Corden is explicit about the relevance of tariffs on inputs without developing his ideas systematically and without using the term "effective protection".

The first indirect repercussion arises when materials or semi-finished goods are being protected. A tariff upon the import of materials has an effect similar to that of an indirect tax on materials. Such an indirect tax raises the costs of the material-using industries, including perhaps import-competing (protected or non-protected) and

¹⁰W. M. Corden, "The Calculation of the Cost of Protection," The Economic Record, Vol. XXXIII, No. 64, April 1957, pp. 29-51.

¹¹Ibid., page 31.

export industries. From their point of view it has the same effect on a rise in money factor prices. It is an effect similar to an appreciation of the exchange rate. It will lower the volume of exports and raise the volume and value of imports. Thus it is possible that some import competing output needs protection only because its materials are being protected.¹²

By 1962 Corden had become aware of Barber's articles and the concept of effective protection. In Corden's chapter on, "The Tariff," in a book on Australian industry¹³ section (d) is entitled "effective protection rates". Having acknowledged Barber as the first to elaborate the "distinction between apparent and effective protection" Corden goes on to propose a formula for measuring the effective protective rate (g).

$$g = \frac{1 - m}{\frac{1}{a \cdot t + 1} - \frac{m}{b \cdot q + 1}} - 1$$

where t = tariff rate for the protected product (f.o.b. basis),

q = tariff rate for the material (f.o.b. basis),

a = ratio of f.o.b. price to c.i.f. price for the protected product,

b = ratio of f.o.b. price to c.i.f. price for the material,

m = share of material cost in total cost after tariffs have been imposed.

a and b are needed in the Australian case because tariffs there are expressed in terms of f.o.b. price of imports.

¹² Ibid., page 39.

¹³ Alex Hunter (ed.), The Economics of Australian Industry, Parkville, Melbourne University Press, 1963.

Where tariff rates are expressed in terms of c.i.f. prices, as in the case of most countries, a and b are not needed and t and q are tariff rates on a c.i.f. basis. Corden's 1962 formula for effective rates of protection then simplifies to

$$g = \frac{1 - m}{\frac{1}{t + 1} - \frac{m}{q + 1}} - 1 \quad (2.1)^{14}$$

This formula is

exactly analogous to one of the alternative methods currently used for calculating rates of effective protection (see formula 2.5a 108 below). The numerator of the first term represents the value added coefficient after tariffs have been imposed, the denominator is the value added coefficient if there were no tariffs, given certain assumptions which will be discussed in detail in section II of this chapter.

For Corden the central point of his section on effective protection rates was

...that if the duty payable on an imported material, or one which could have been either imported or exported, is lower than the duty on the final product, then the effective protection on the value added in Australia in the particular industry or process making the final product must be higher than the final apparent tariff rate. Once this is allowed for one's whole view of the degree of protection provided to certain Australian industries must alter.¹⁵

Here Corden is dealing with an important point which is relevant to most, if not all, countries. Countries typically

¹⁴ Ibid.

¹⁵ Ibid.

tend to have "escalating" (or what Johnson calls "cascading")¹⁶ tariff structures i.e. tariff rates tend to rise with stage of production. The result is that for most processes effective protective rates are higher than the nominal tariff rate on the final output of the process. In other words nominal tariff rates frequently understate the production cost of protection. We shall return to a detailed discussion of what effective protective rates measure (see pp. 104-112 below).

Another author clearly aware of the shortcomings of nominal tariff rates for measuring the level of protection was Don Humphreys. Concerned in the early 1960's with the relevance of tariffs to the relationship between the United States and the European Common Market, he writes:

But in comparing the position of various industries, the figures we use are misleading for the incidence of a tariff depends on what proportion of the total value of its output is produced within the industry, as compared with the cost of materials purchased from other industries. In order to illustrate this problem, we must assume that the dutiable product is being imported.¹⁷

This last mentioned assumption is necessary if any precise measure is to be given to effective protective rates

¹⁶ Johnson, "Tariffs and Economic Development: Some Theoretical Issues," op. cit., page 19.

¹⁷ Don D. Humphrey, The United States and the Common Market, A Background Study. Revised Edition, New York: Praeger, 1964, pp. 60-61.

for different activities in a particular country at a particular time. For if we assume that products on which an import duty is levied continue to be imported, it is reasonable to assume further that the price received by the domestic manufacturer is equal to the c.i.f. price plus the tariff. This enable us to estimate the increase in value added made possible by the tariff structure. If, on the other hand, as import duty leads to complete elimination of imports i.e. the tariff is 100 percent protective then the domestic price may be below the c.i.f. (world) price plus the tariff (in other words there is "water" in the tariff). Humphrey uses a simple example to show that the lower the value added as a share of total costs of production the higher the true incidence of the tariff, i.e. the greater the protection given to domestic manufacturers.¹⁸

Secondly he stresses the point that the cost of inputs affects the degree of protection and these costs can be affected by other factors as well as the tariffs on the inputs.

....the degree of protection needed by a specific industry is dictated by the changes in costs or prices of other domestic industries. This inter-relation can be observed in the price of raw cotton. The protection of cotton manufacturers has been reduced by the government support of raw cotton of prices above the world market....

Similarly manufacturers who pay higher wages because of higher food costs have had their protection reduced by the disparity between government

¹⁸ Ibid., p. 61.

supported farm prices and world market prices.... All producers who use dutiable imports, or would use imports under free trade, have less protection than it appears unless their tariff is adjusted to take account of their disadvantage with regard to materials supply. All producers using petroleum for fuel, including railroads, truckers and electric power industries, have had their costs increased by quota restrictions on imports and by the restriction of domestic production. The imposition of these artificial cost increases on domestic industry involves a competitive disadvantage with foreign producers who obtain fuel and other materials at world-market prices.¹⁹

While Humphrey is here correctly aware of both the fundamental pillars of measures of effective protective rates, his exposition is not strictly correct. A producer who uses a dutiable import as an input may not have less protection (as measured by the rate of effective protection). For, as will be shown more precisely below, as long as the tariff rate on the final output exceeds the weighted average of tariffs on inputs, the rate of effective protection enjoyed by the producer will be greater than the nominal tariff rate on his product.

In an article similar to Corden's 1957 review of the Australian Tariff Harry Johnson commented on an official report on the Canadian automotive industry carried out for the Canadian Government by Dean V. Bladen.²⁰ As in the

¹⁹ Ibid., p. 68.

²⁰

Harry G. Johnson, "The Bladen Plan for Increased Protection of the Canadian Automotive Industry," A Review Article, Canadian Journal of Economics and Political Science, Volume 29, Number 2, May 1963, pp. 212-238.

case of the Australian inquiry the Commissioner was aware of the relevance of tariffs on inputs for the competitive position of Canadian car manufacturers.

In pointing to the fact that the Canadian automobile manufacturer is burdened with higher costs as a result of the policy of protecting parts manufacturers, the Commissioner is recognizing an element of economic inefficiency and inequity in the granting of free entry to completed vehicles from Britain. To the extent that their costs are raised by parts protection, Canadian automobile manufacturers are in effect being taxed to support the parts manufacturers, and equity in competition as well as efficiency would indicate the imposition of an offsetting tax on imported British vehicles.²¹

Johnson in the same article concludes a discussion of the effect of a reduction in tariffs on inputs with the somewhat surprising remark that "This is of course only a particular example of the well-known principle that reduction of the tariff on an input increases the effective protection of the output."²² Johnson's view that already by 1963 "effective protection" was a well-known concept runs counter to the proposition put forward at the beginning of this section i.e. that tariffs on inputs were by and large ignored until very recently by writers on international trade theory. It would be interesting to examine the textbooks on international economics published in the late 1950's and early

²¹ Ibid., page 216.

²² Ibid., pp. 218-219.

1960's to see how many of them discuss the effect of tariffs on inputs on the level of protection, let alone mention the term "effective protection". In an article published towards the end of 1964 Johnson himself uses the term "implicit protection" rather than "effective protection", and tells of "the degree of protection accorded to processed of production" as "the rate of protection of value added, as it is sometime terms..."²³

²³ Harry G. Johnson, "Tariffs and Economic Development: Some Theoretical Issues," The Journal of Development Studies, Volume 1, number 1, October 1964.

II

In the past policy makers and industrialists have frequently shown more awareness than theorists of how tariffs on inputs can affect the level of protection given to a particular production process. In 1955 Barber commented on the surprising number of recent reductions in duties on raw materials imported into Canada. He attributed these changes to "the sophisticated tariff expert [who] no longer seeks to have the tariff on his product increased but tries instead to obtain duty reductions on parts and components that will increase his industry's effective protection."²⁴ As mentioned earlier the committee of economists which in 1929 examined the Australian tariff referred to the reduction in costs resulting from the removal of tariffs on inputs, though they did not develop the idea further.

In Johnson's view, "The complexities resulting from... [this]... dual role of tariffs have long been recognized in tariff legislation, and exploited in tariff bargaining, though not always with a clear understanding of the issues."²⁵ Many countries, (Tanzania being one),²⁶ have provisions for

²⁴ Barber, op. cit., p. 529.

²⁵ Johnson, "The Theory of Tariff Structure, with Special Reference to World Trade and Development," op. cit., pp. 13-14.

²⁶ See above, Chapter I, page 76.

remission of import duty paid on materials, parts and equipment which contribute to the output of a commodity, whose domestic production is considered important. Thus, for example remission or "drawbacks" of tariffs may be allowed where the imports are used in the production of goods subsequently exported. However, as Johnson points out,

Where the purpose of the tariff on inputs is protective, its imposition raises a problem for the policy-makers, since by taxing the process employing the input the tariff may destroy the market for the product it seeks to protect. To avoid this, it is usually necessary to grant a tariff also to the product in whose production the protected input is used; such a tariff is primarily "compensatory" rather than "protective", in the sense that it seeks to offset the competitive disadvantage imposed by the tariff on the input rather than to grant a competitive advantage.²⁷

In the Report of the Royal Commission on the Canadian Automotive Industry²⁸ which was reviewed by Johnson in the article referred to earlier, the Commission's case for a Canadian tariff on imports of British automobiles is based on the need to offset the tariff on parts production. For the latter puts the Canadian car manufacturer at a competitive disadvantage if British automobiles are allowed into Canada duty free. A good example of a "compensatory"

²⁷ Johnson, "The Theory of Tariff Structure," op. cit., page 14.

²⁸ Report, Royal Commission on the Automotive Industry, Ottawa: The Queen's Printer, April 1961.

tariff necessary to offset the higher cost of an input to domestic producers is the duty President Kennedy imposed on the imports of cotton textiles at a time "when U. S. sales of raw cotton in the world market at prices below the supported domestic price encouraged foreign manufacturers to manufacture textiles from U. S. cotton to export to the U. S. market."²⁹

Countries can also increase the effective protection enjoyed by domestic manufacturers of inputs by incorporating in their tariff legislation provisions by which duties are applicable to goods of a type produced domestically. This is done by the system of "content protection" whereby, according to Johnson,

...free entry of components is allowed providing a certain proportion (by value, and sometimes by weight) of the final product is produced domestically; the consequence is to increase the protection afforded to that part of the product that is domestically produced by transferring to it the protection that would otherwise have to be shared with the imported part.³⁰

Although the major objective of the General Agreement on Tariffs and Trade (GATT) is to lower barriers to international trade its policy of encouraging the reduction of

²⁹ Johnson, "The Theory of Tariff Structure," op.cit., page 14.

³⁰ Ibid., page 15.

duties on final products at the same time as it allows countries to reduce the duty on parts and components frequently has the opposite effect. For countries choose to widen the effective degree of protection they give to their industries by concentrating on the reduction of duties on inputs. By lowering their tariffs on inputs countries are often thought to be lowering their protective barriers for the height of their barriers is usually measured in a "rather naive fashion,"³¹ i.e. by weighting tariff rates by import volumes. By such a method the measured degree of protection will be reduced as the imports of materials and semi-finished goods (on which there is low or zero duty) are encouraged and the imports of finished goods (the production of which now enjoys higher effective protection) are discouraged.

On the other hand, tariff rates are usually structured without any consideration of the consequences for the effective rate of protection. Barber's view of Canadian tariff experts is that while they "are undoubtedly aware of the distinction I have made between the effective and apparent level of protection provided by a tariff rate", this distinction is rarely raised in Canadian tariff discussion.³² He

³¹ Ibid.

³² Barber, op. cit., p. 524.

cites examples of debates on tariffs in which mention is made of "effective protection" or its equivalent nor is there any attempt to measure rates of effective protection.³³

In most countries tariffs are introduced on an ad hoc basis as a result of pressures for protection from interested groups. Rarely has there been any kind of systematic study to examine the level of protection for different activities. With the growing acceptance of the concept of effective protection in recent years, studies of rates of effective protection have been carried out for a number of countries. But Barber's suggestion, made in 1955, that investigations on monopoly in Canada "should include as a matter of course a calculation of the effective level of protection provided by a tariff"³⁴ is still relevant to more general studies on commercial policy.

³³Ibid.

³⁴Ibid., p. 525.

III

This section will contain a comprehensive description of the concept of effective protection as it has been formally developed. First, the formula for measuring rates of effective protection will be explained, with the assumption necessary to its use spelled out. Then follows a discussion of what such rates of effective protection measure and mean. We then introduce refinements to the analysis. For example, what are the effects of non-traded goods or exchange rate adjustments on the concept and measure of effective protection rates? Another modification we shall examine is the idea of measuring the effective protection of total value added. Finally we shall relax certain of the assumptions made at the outset.

The presentation in this section follows closely that adopted by Corden in his article "The Structure of a Tariff System and the Effective Protective Rate".³⁵ Although other economists, particularly Johnson and Balassa, have been leading proponents of the usefulness of the concept and have used effective protection widely in recent theoretical and empirical analyses of trade and tariff questions, Corden's work stands out as the first and thus far only really thorough comprehensive theoretical treatment of the concept

³⁵Corden, "The Structure of a Tariff System and the Effective Protective Rate," op. cit.

and its more important ramifications.

As already stressed, if we are interested in the protection given to an economic activity, tariffs on inputs and input coefficients are relevant as well as tariffs on final products. For Corden, one major advantage of measures of effective rates of protection over nominal tariff rates is that the former allow us "to discover the resource-allocation effects of a tariff structure...".³⁶ This is because resources move between economic activities and thus what is crucial is not the addition in the final price of a commodity made possible by the tariff structure, (as measured by the nominal tariff rate under certain assumptions), but the increased cost of production or increased returns to factors of production, i.e. the increase in value added in the economic activity that is made possible by the tariff structure as a whole. The latter, as we shall see shortly, is given by the formula for the rate of effective protection.

If we make the following rigorous basic assumptions:

(1) the physical input-output coefficients are fixed for all non-primary inputs

(2) the elasticities of demand for all exports and supply of all imports are infinite

(3) all tradable goods remain traded even after tariffs and other taxes and subsidies have been imposed so that the internal price of each importable is given by the c.i.f.

³⁶ Ibid., page 222.

price plus the tariff (i.e. there is no "water" in any of the tariffs)

(4) the government pursues appropriate fiscal and monetary policies so that full employment is maintained

(5) all tariffs and other trade taxes are non-discriminating as between countries of supply and demand.

Then it is simple to show that the rate of effective protection is given by the formula

$$E_j = \frac{t_j - \sum a_{ij} t_i}{v_j} \quad (2.2)^{37}$$

where t_j is the ad valorem tariff rate on the product of activity j ,

t_i is the ad valorem tariff rate on input i in an activity,

a_{ij} is the input coefficient for non-primary input i in industry j under "free trade" conditions, i.e. where there are no tariffs and other taxes affecting traded commodities,

and v_j is what the value added coefficient would be in free trade (the "free trade" value added coefficient).

But the rate of effective protection, E_j ,

...is the percentage increase in value added per unit in an economic activity which is made possible by the tariff structure relative to the situation in the absence of tariffs but with the same exchange rate.³⁸

³⁷ Ibid., pp. 222-223. Corden, as in his earlier work, uses g_j to denote the rate of effective protection (see formula 4.2, page 223 of the cited article). We choose henceforth in this study to use E_j to denote rates of effective protection.

³⁸ Ibid., page 222.

In other words, $E_j = \frac{v_j^j - v_j}{v_j}$, where v_j^j is the value added coefficient in industry j in the post-tariff situation, i.e. the "observed" or "actual" value added coefficient. It is easy to show the equivalence of the two formulae. If we assume that the "free trade" (c.i.f.) price of the product of industry j is unity, then $v_j = 1 - \sum a_{ij}$; and as long as assumption (3) holds, $v_j^j = 1 + t_j - \sum a_{ij}(1 + t_i)$

$$\begin{aligned}
 &= 1 + t_j - \sum a_{ij} - \sum a_{ij}t_i \\
 \text{Thus } v_j^j - v_j &= 1 + t_j - \sum a_{ij} - \sum a_{ij}t_i - (1 - \sum a_{ij}) \\
 &= t_j - \sum a_{ij}t_i \\
 \text{and } \frac{v_j^j - v_j}{v_j} &= \frac{t_j - \sum a_{ij}t_i}{1 - \sum a_{ij}} \quad (2.3)
 \end{aligned}$$

The first term of the numerator of the right hand side represents the increase in value added per unit of domestic output in activity j made possible by the tariff on the final product. The second term of the numerator measures the increased costs to activity j of its inputs resulting from the tariffs on these inputs. Thus the whole numerator measures the net increase in value added per unit of output made possible by the tariff structure.

If, following Corden we were to consider the simple case where there is only one input in activity j , then formula (2.3), which Corden calls the "key" formula³⁹ simplifies to

$$E_j = \frac{t_j - a_{ij}t_i}{1 - a_{ij}} \quad (2.4). \quad \text{From formula (2.4) a}$$

³⁹ Ibid.

number of implications follow, the most important of which are that

$$E_j \begin{cases} \geq \\ < \end{cases} t_j \text{ as } t_j \begin{cases} \geq \\ < \end{cases} t_i$$

$$\text{and } \frac{\delta E_j}{\delta t_j} = \frac{1}{1 - a_{1j}}$$

$$\frac{\delta E_j}{\delta t_i} = \frac{a_{1j}}{1 - a_{1j}}$$

$$\frac{\delta E_j}{\delta a_{1j}} = \frac{t_j - t_i}{(1 - a_{1j})^2} \quad 40$$

Where there is more than one input in the production of activity j , t_i is replaced by a weighted average of the tariff on inputs, i.e. by $\frac{\sum a_{ij}t_i}{\sum a_{ij}}$ and $E_j \begin{cases} \geq \\ < \end{cases} t_j$ as $t_j \begin{cases} \geq \\ < \end{cases} \frac{\sum a_{ij}t_i}{\sum a_{ij}}$

From formula (2.4) it is clear that E_j will be negative where $a_{1j}t_i > t_j$. A negative rate of effective protection indicates a tax on the domestic production in an activity j . For if $\frac{\sum a_{ij}t_i}{\sum a_{ij}} > t_j$ the tariff structure results in the costs of inputs in activity j increasing by more (relative to world prices) than the price of the final product of activity j . An obvious case of negative effective protection occurs when there is no tariff on the final product but there is a tariff on one or more of the inputs. As mentioned earlier, for most countries tariff rates are

higher the later the stage of which the commodity enters the production process. Because of this escalation of tariff rates, for most activities therefore

$$t_j > \frac{\sum a_{ij} t_i}{\sum a_{ij}}$$

and rates of effective protection of the activity are higher than the nominal tariff on the product of the activity. We shall examine the implications of this for commercial policy in the next section of this chapter.

We can readily introduce export subsidies and taxes into the formula in order to measure effective protective rates in export industries, given our original assumptions. Since an export subsidy raises the price received by the domestic producer (and the domestic price of the product) relative to its world price (assuming demand for the export on the world market is infinitely elastic), the subsidy is the equivalent of a tariff. On the other hand, an export tax on the final product of an activity is a negative t_j since it lowers the price received by the domestic producer and also the domestic price of the product below world prices. But an export tax on an input increases effective protection since it is a subsidy on the input under the assumption that the domestic producer of the input charges the domestic user of the input the same price he receives for the input when it is exported i.e. the world (f.o.b.) price less the export tax. This last case is of particular relevance in underdeveloped countries like Tanzania where

the processing of primary products is a potentially significant growth point in the economy and where primary products are frequently subject to export taxes.

A production tax on final products has the same effect as an import subsidy or export tax; it reduces effective protection by lowering the price received by the domestic producer below the market price. But production (excise) taxes on inputs while reducing effective protection for the activity producing the input have no effect on effective protection in the using activity, which buys the input at the market price which is not affected by production tax, since supply of the input from the rest of the world is perfectly elastic. By contrast, consumption taxes on final products do not affect effective protective rates since they are levied on both imports and domestically produced goods. Consumption taxes on inputs, however, have the same effect as tariffs on inputs since they raise the costs of inputs to the using industry and therefore reduce effective protection rates for users.

Thus in our formulae t_i should be redefined to represent the net effect of the tariff or export subsidy and any production tax on activity i , while t_i nets the tariff or export subsidy on input i with any consumption or export tax on it.⁴¹

As Corden points out, it is also important to remember that:

the effective protective rate for a product is not influenced by tariffs on inputs into its inputs.

⁴¹ Ibid., page 224.

One need go only one step downward in the input-output structure. For example, a tariff on raw cotton, while it reduces effective protection for spinning, has no effect on the effective rate for weaving. To the weavers only the cost of yarn matters, and that is determined by the given world yarn price plus tariff.⁴²

As already stressed, given the assumptions listed on pages 98-9, the rate of effective protection measures the percentage increase in value added made possible by the structure of tariffs and relevant taxes. Or, as Basevi puts it,

the effective rate of protection afforded a particular domestic industry by the tariff structure can be defined as the maximum proportion by which the value added per unit of output by primary resources employed in the domestic industry can exceed the value they would add if all inputs entered duty free.⁴³

In other words, the effective protective rate measures the extent to which the remuneration of domestic primary factors (in particular for our purposes, labor and capital) can be increased because of the structure of tariffs and relevant taxes. What is being compared, as Basevi stresses

⁴² Ibid., page 223.

⁴³ Giorgio Basevi, "The United States Tariff Structure: Estimates of Effective Rates of Protection of United States Industries and Industrial Labor," Review of Economics and Statistics, Volume XLVIII, Number 2, May 1966, pp. 148-149.

in the above quotation, is the remuneration of domestic factors after tariffs and taxes have been imposed, compared with what they would earn if there were no such tariffs and taxes. The latter situation I shall refer to as the "free-trade" situation.

The assumption that input coefficients are fixed makes the comparison between the post-tariff and the free-trade situation simple to carry out in practice, i.e. the formulae discussed above can be readily used. As Johnson points out, this assumption, which lies at the heart of the Leontieff input-output system is "not usually employed in conventional tariff theory" because it

is generally considered to be too restrictive for most analytical purposes, since it assumes constant costs and ignores all possibilities of substitution between...inputs of commodities and original factors in production but it is useful for bringing out the main points raised by the present problem.⁴⁴

While the assumption about fixed input coefficients is clearly necessary for a simple application of the formulae for measuring rates of effective protection, there appears to be some confusion in the literature as to what is meant by fixed input coefficients. More precisely the question is what are the coefficients that are assumed to be fixed? In Chapter III the implication of this uncertainty will be

⁴⁴Johnson, "The Theory of Tariff Structure with Special Reference to World Trade and Development," op. cit., page 10.

explored in depth. Here it is sufficient to touch only briefly on the difficulty.

We can either assume that the input coefficients that are fixed are "standardized" coefficients which are the same for different countries. Thus Johnson writes, "That it is important to note that throughout the analysis the basic technological input-output relationships are assumed to be the same in domestic and in foreign production..."⁴⁵ Balassa used this interpretation in his study of effective protection in six industrialized countries when he took as his standard input coefficients those of the Benelux countries.⁴⁶ He defended his choice on the ground that the input-output structure of the Benelux countries was little affected by commercial policy since for the most part these countries followed policies of free trade. More rigorously, such a policy would be justified, according to Balassa,

if the countries in question have identical production functions with unitary substitution elasticities in all industries, or if inter-country differences in efficiency are neutral in the sense that production function differ only by a multiplicative constant. Under these assumptions differences in the relative prices of inputs would not affect the coefficients.⁴⁷

The alternative assumption about what input coefficients

⁴⁵ Ibid., page 11.

⁴⁶ Balassa, "Tariff Protection in Industrial Countries," op. cit.

⁴⁷ Ibid., page 578.

to take as fixed is less restrictive than the first. In this approach the coefficients considered fixed are the actual input coefficients observed in the country under study. In other words it is assumed that, if for a particular industry (activity) tariffs and taxes were removed, the physical input coefficients would remain the same in the "free trade" situation (for the particular industry) as they are in the observed post-tariff situation. It is this second approach which Basevi uses in his study on rates of effective protection for the U.S.A. He writes that the "relevant purpose for welfare analysis" of measuring rates of effective protection "is to calculate the difference between the return to domestic primary resources when protected and what they would get if tariffs were eliminated..."⁴⁸

In order to calculate this difference in practice the second ("derived") approach is much easier to apply. For, which fixed input coefficients common to domestic and foreign production are to be used? It is much simpler to work with the coefficients observed in the country being studied and to assume that physical input coefficients would not be changed if tariffs and relevant taxes were removed. With

⁴⁸Basevi, *op. cit.*, page 149, footnote 6.

the exception of Balassa's work, studies on effective protection in a given country have been based on the "derived" approach. The "derived" approach necessitates the use of a variant of the formulae for rates of effective protection discussed above. The "free trade" value added coefficient for an activity has to be derived from the observed value added coefficient by correcting for the effect of tariffs and taxes on the prices of inputs and the final product on the basis of assumption (3) stated on page 98 above.

$$\text{From } E_j = \frac{v'_j - v_j}{v_j} = \frac{v'_j}{v_j} - 1$$

it follows that

$$E_j = \frac{v'_j}{\frac{1}{1+t_j} - \sum \frac{a_{ij}}{1+t_i}} - 1 \quad (2.5)$$

where a_{ij} is the "post tariff" input coefficient for input i in activity j , i.e. the actual or observed input coefficient in the country under study.

(2.5), like the earlier formulae, is based on the assumption that the domestic price of the product of activity j is unity. Basevi found that it was more convenient to work with aggregative figures so that multiplying the numerator and denominator of (2.5) by the dollar value of the output of activity j at domestic prices we have

$$E_j = \frac{V_j}{\frac{S_j}{1+t_j} - \frac{M_{ij}}{1+t_i}} - 1 \quad (2.6)$$

which is the formula Basevi used.⁴⁹ Here S_j is the dollar value of the output of activity j , V_j is the dollar value added in the domestic production of j at domestic prices and M_{ij} is the dollar value of the material input i used in the domestic production of j at domestic prices.

As Basevi notes,⁵⁰ formula (2.5) is identical to the original formula put forward by Corden in 1957 (see page 85 above) except that Corden had to correct for the fact that Australian tariffs are calculated on an f.o.b. basis.

Ellsworth, in discussing a paper by Soligo and Stern on rates of effective protection for industry in Pakistan,⁵¹ explains what implication the use of the "derived" approach and formula (2.5) or (2.6) has for any meaning that can be attached to rates of effective protection

The whole purpose of the computation [in formula (2.5) or (2.6)] is not to discover what the factors in the...industry would be paid in the absence of tariffs, but what they could be paid. And this the procedure of division tells us, by converting domestic values with protection into what those values would be without protection... all the computation tells us is that if a particular set of duties on a single finished product and its inputs is removed, the sum available to remunerate the factors in the...industry that accounts for the value added will be such and such an amount. In contrast, the problem of what

⁴⁹ Ibid., page 147.

⁵⁰ Ibid., page 150.

⁵¹ Soligo, Ronald, and Joseph J. Stern, "Tariff Protection, Import Substitution and Investment Efficiency," Pakistan Development Review, Vol. V, No. 2, Summer 1965.

the factors would be paid under free trade conditions presupposes complete free-trade -- that is the abolition of barriers to trade on all commodities, not just a single one.⁵²

Ellsworth's position is thus that the rate of effective protection (as the percentage increase in value added in an activity made possible by the tariff and tax structure) is only applicable in a partial equilibrium sense i.e. as applied to one activity under the assumption of fixed coefficients.

Corden, however, draws much broader conclusions from a more general application of measures of effective protection rates for a given country. The calculated rates of effective protection for each activity producing a tradable product are ordered on a continuous scale through zero.

According to Corden:

The scale summarizes the total protective-rate structure. Assuming normal non-zero substitution elasticities in production, it tells us the direction in which the structure causes resources to be pulled as between activities producing traded goods. Domestic production will shift from low to high effective-protective rates....if four activities producing traded goods can be ordered along a scale A, B, C, D in ascending order of effective rates, we can say that the output of A must fall and of D must rise and that resources will be pulled from A to B and from A and B to C; but without more precise information about production-substitution elasticities, we cannot say whether the outputs of B and C will rise or fall.⁵³

⁵² P. T. Ellsworth, "Import Substitution in Pakistan--Some Comments," Pakistan Development Review, vol. VI, no. 3, Autumn 1966, p. 405.

⁵³ Corden, "The Structure of a Tariff System," op.cit., p.224.

Thus the "production effect" (resource allocation effect) depends "on the scale of effective rates and on production-substitution elasticities." In Chapter III we shall critically analyse the validity of Corden's broad claims for the concept of effective protection.

Corden's general conclusion about the movement of resources between activities is based on the assumption that all inputs and outputs in activities A, B, C, and D are traded goods, i.e. "that there are no non-trade inputs (for example, electricity or services) in traded goods." We now introduce non-traded goods into the analysis and assume further that non-traded goods are produced only in activities where all inputs are non-traded. The effective rate of protection in the latter activities will (like the nominal tariff rate) be zero if the prices of non-traded goods are not changed by the protective structure. Then

Some resources would move from N (non-traded activities) into activities which obtain positive effective rates and towards N from activities with negative effective rates. Similarly, some consumption would be diverted toward N from products with positive nominal rates and in the reverse direction where nominal rates are negative (for example, export taxes).⁵⁴

But there is no reason why, even under the restrictive assumptions of the previous paragraph the prices of non-

⁵⁴ Ibid., pp.224-225.

traded goods should remain unchanged. For the effect of the protective structure on the demand for a particular non-tradable is not likely to exactly offset its effect on the supply of the same non-tradable. Positive nominal tariff rates or export subsidies on finished traded goods will divert demand from the goods to substitute non-traded goods. On the other hand "...primary factors will move from the non-traded sector in general into protected traded-goods industries (and also into industries producing those non-traded inputs which are indirectly protected)."⁵⁵ If full employment of all domestic factors is to be maintained (assumption (4) on page 99 above), either prices of non-traded goods will have to be changed relative to prices of traded goods or the exchange rate will have to be altered in order for the supply of and demand for non-tradables to remain in equilibrium.

If we remove the assumption that (i) all inputs on activities producing tradables are themselves tradables and that (ii) in activities producing non-tradables, all inputs are non-traded goods, there is a further effect on the relative demand for different types of non-tradables.

"...positive total protection of traded goods leads to additional demand for non-traded inputs; those non-traded

⁵⁵ Ibid., page 226.

⁵⁶ Ibid., page 225.

inputs intensive in the protected industries will rise in price relatively to the general price level in the non-traded sector."⁵⁷

The fact that prices of non-traded commodities will be affected by the protective structure leads Corden to the view that non-traded inputs should be treated like primary domestic factors in the theory of effective protection and not like traded inputs. Balassa and others in their empirical studies on rates of effective protection have treated non-tradable inputs like tradable inputs i.e. the input coefficients for the former are additional a_{ij} 's in the term $\sum a_{ij}t_i$ in formula (22) with the associated $t_i = 0$. This is consistent with the idea that the effective protective rate means the percentage increase in value added (as conventionally defined) in a particular activity made possible by the protective structure of relevant tariffs and taxes. However, such an approach is incorrect, according to Corden if the purpose of calculating rates of effective protection is to "shed light on the direction of the resource allocation effects of a protective structure."

The crucial point here is that non-traded inputs, unlike traded commodities, are not in perfectly elastic supply if we assume full employment of all domestic resources in the economy under consideration. If a particular activity has

⁵⁷Ibid., page 226.

a relatively high rate of effective protection, resources will be attracted into this activity. If this activity is an intensive user of a non-traded input, the demand for that input will increase. Since the supply of this non-traded input is not perfectly elastic, the price of this input (e.g. electricity services) will rise relative to the general price level in the non-traded sector. (Unless, of course, as a consequence of the overall protective structure, the net demand for this input in all other activities falls more than the increase in demand for it in this particular activity.) Such a price rise is like a tariff on the input and thus reduces the effective protection enjoyed by the activity using this particular non-traded input. As Corden puts it:

The essence of the distinction between traded and non-traded inputs stems from our assumptions (2) and (3) (infinite foreign-trade elasticities; trade in tradable products remains after protection). Thus a tradable input is in infinite supply to an industry, and the price of each individual traded good is given (apart from the effects of taxes and subsidies). If non-traded inputs were also in infinitely elastic supply, they could indeed be treated like traded inputs. But in the absence of unemployment and excess capacity a user industry can obtain extra non-traded inputs only at increased cost, and some part of the increment in the price of the final good on account of the tariff will not increase value added per unit but will raise the price of the input. The tariff protects not only those primary factors but also those non-traded inputs (and hence their factors) which are intensive in the using industries. But the effects on the primary factors and the non-traded inputs cannot be separated out. Unless there are two inputs

only and one is in infinitely elastic supply so that its price does not rise when the price of the output rises, it is impossible to distinguish the effective protective rate for different inputs. For each product one can talk only about a single effective rate for all those inputs combined which are not in infinitely elastic supply to the industry. If there are traded inputs in those non-traded goods which are themselves inputs in traded goods industries, the matter becomes more complicated. Only that part of the value of the input which is value added by primary factors directly and indirectly that is, via non-traded inputs into these non-traded inputs and so on should be treated.⁵⁸

However, this latter approach, which Corden favors, is not necessarily a reliable guide for determining how the tariff structure affects the flow of resources. In Chapter III we shall discuss some of the weaknesses of the theory of effective protection. In particular, we shall show (see pages 135-142) that further assumptions are necessary if Corden's general claims about the structure of rates of effective protection determining the flow of resources are to be unambiguously valid. As Corden himself points out (in the sentence we have emphasized in the above quote) we cannot separate out the effects on the primary factors from those on the non-traded inputs. If we agree that what is crucial for resource movements is what happens to the rate of profit (i.e. the return to capital) in different activities, then we need to be able to separate out the effects

⁵⁸ Ibid., page 228.

on the different primary factors as well as to distinguish the effect on primary inputs from that on non-traded inputs. More specifically we need to know what happens to the rate of return on capital if we are to reach any definite conclusions about the effects of the tariff structure on resource allocation.

In practice it is much simpler to assume that all inputs (including non-traded goods) are in perfectly elastic supply. Then the rate of effective protection, as the percentage increase in value added, measures the protection given to domestic primary factors directly employed in the activity concerned.

One of the consequences of any protective structure may be external imbalance i.e. surplus or deficit in a country's balance of payments. Such an external imbalance (which could, of course, result from other causes) could be tackled through a change in the exchange rate. As Balassa points out, changes in the foreign exchange rate are usually only considered in terms of their effects on the balance of payments.⁵⁹ But devaluation or appreciation of a country's currency in terms of other currencies alters the price relationship between non-tradable and traded goods and this

⁵⁹ Bela Balassa, "Intégration and Resource Allocation in Latin America," in T. Davis (ed.) The Next Decade of Latin American Development, Cambridge University Press (forthcoming).

affects the degree of protection offered to activities producing or using tradable goods. For example, a 20 percent devaluation of a country's currency is the equivalent of a 20 percent subsidy on all tradable inputs and products, i.e. the equivalent of a 20 percent tariff on all imports and a 20 percent subsidy on all exports. On the other hand, in relation to non-traded goods an exchange rate appreciation is the equivalent of a uniform ad valorem import subsidy (negative tariff) on all importables and the equivalent of an export tax on all exportables. Corden goes on to assert that an exchange-rate appreciation

...provides a uniform rate of negative effective protection for all tradables.../and/...must be regarded as an integral part of the effect of a protective structure. If the appreciation were, for example, 20 percent, all tradables with an effective rate of less than 20 percent will, in a sense have been taxed in relation to non-tradables. If we subtract 20 percent from all effective protective rates as previously calculated, we obtain a scale of net effective protective rates.⁶⁰

The correctness of Corden's assertion here depends on two other assumptions, namely that all inputs are non-traded and that we are measuring the effective protection given to domestic primary factors and non-traded inputs taken together as Corden himself indicates. If these two conditions hold effective rates become identical to nominal rates. However,

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Corden, "The Structure of a Tariff System and the Effective Protective Rate," op. cit., page 225.

if all inputs are not non-traded and if we are measuring the effective protection given to domestic primary factors alone, then an exchange rate appreciation of 20 percent will not necessarily lead to effective protective rates in each activity being reduced by 20 percent. The precise change in the rate of effective protection for a given activity brought about by an appreciation (or devaluation) now depends on (a) the relative tariff rates on the output and input(s) of each activity and on (b) the size of the value added coefficient as well as on the extent of the appreciation (or devaluation).

The rate of effective protection on value added measures the protection offered to all primary factors taken together. It is the percentage increase in the earnings of the primary factors directly employed in the activity concerned if we go against Corden's advice and treat all non-primary inputs as a_{ij} 's in formula (2.2) whether the inputs are traded or not. If, however, following Corden, we treat non-traded inputs like primary factors and obtain value added by summing all indirect contributions by primary factors through non-traded inputs,⁶¹ the rate of effective protection measures

⁶¹ "If there are traded inputs in these non-traded goods which are themselves inputs in traded goods industries, the matter becomes more complicated. Only that part of the value of the input which is value added by primary factors directly and indirectly (that is, via non-traded inputs into these non-traded inputs, and so on) should be treated like a primary factor and so included in value added in the protected industry. In other words, ideally we should go down the input-output structure until one reaches a traded input, and to obtain value added for our formula, all direct contributions by primary factors should be summed with all indirect contributions by primary factors through non-traded inputs. In the summation process, tradable inputs (even though they may be produced domestically) should be treated as leakages." *Ibid.*, p.228, ftnt. 5.

the percentage increase in payments to primary factors throughout the economy.

Now the general concept of effective protection can be modified in order to measure separately the protection given to two primary factors taken together, or even, under certain assumptions, to one primary factor alone. Thus, if we assume that one primary factor is in perfectly elastic supply we can calculate the effective protection given to the other two primary factors. For the price of the primary factor which is in perfectly elastic supply can be taken as given and this factor can be treated like any (tradable) material input i.e. its input coefficient becomes another a_{ij} in formula (2.2). Then the rate of effective protection will measure the increase in the returns to the other two primary factors. Thus, if we assume capital is in perfectly elastic supply, we can calculate the effective protection given to land and labor. If we assume that there are only two primary factors and that one is in perfectly elastic supply (or that two out of three of the primary factors are in perfectly elastic supply), we can calculate the rate of effective protection given to one factor alone. Thus, if labor and capital are the only two primary factors and we assume that labor like all material inputs is in perfectly elastic supply (we can treat the labor input coefficient as another a_{ij}) i.e. its price is given, we can easily modify formula (2.2) in order to calculate the effective rate

of protection given to capital in different activities. Instead of v_j in formula (2.2) we now have k_j which represents the "free trade" monetary return to the primary factor capital in activity j for each unit of j produced, assuming the price of the final product of j to be unity. Then

$K_j = \frac{t_j - \sum a_{ij}t_i}{k_j}$ measures the effective rate of protection for capital in industry j , i.e. the percentage increase in the return to capital per unit of output as a result of the tariff and tax structure.

On the other hand, we can assume that capital is in perfectly elastic supply and then calculate the effective rate of protection of labor in alternative uses. Here the price of capital is given; more precisely the returns to capital per unit of output in each activity is fixed and capital can be treated as another (tradable) input, i.e. another a_{ij} the $L_j = \frac{t_j - \sum a_{ij}t_i}{l_j}$, (what Basevi calls the "labor-rate of protection"⁶²) measures the percentage increase in payments to labor made possible by the structure of relevant tariffs and taxes, where l_j is the 'free trade' labor input coefficient, i.e. the payment to labor per unit of output in activity j . in the absence of tariffs and taxes. As Corden points out,

⁶² Basevi, op. cit., page 150.

...fixed physical input coefficients must be assumed for all those factors in infinitely elastic supply which are to be grouped with the tradable materials. [Whereas] Our earlier assumption of fixed input coefficients was necessary only for the tradable materials and not for other inputs or each primary factor separately.⁶³

Thus, when calculating the effective protection of labor, we have to assume that the physical input coefficient for capital is fixed; and when calculating the effective protection of capital that the input coefficient of labor is fixed.

Basevi was the first to develop and use this modification of the general measure of rates of effective protection. He calculated effective rates of protection of labor in different industries in the United States on the assumption that "capital, as well as material inputs, is internationally mobile and that labor is the only immobile factor."⁶⁴ Basevi justifies this, quite reasonably in our view, as "being a good description of the United States situation..." He then goes on to claim that the assumption that capital is internationally mobile i.e. that capital is in perfectly elastic supply is "especially relevant to problems of economic development." However, for many underdeveloped countries and certainly for Tanzania, it is much rather a case of capital being a scarce factor. In such cases, it is more reasonable to assume that labor is in perfectly elastic supply.

⁶³ Corden, "The Structure of a Tariff System," op. cit., p. 231.

⁶⁴ Basevi, op. cit., p. 150.

As Corden puts it, "The case when labor, or some types of labor, are in infinitely elastic supply may be relevant for some underdeveloped countries."⁶⁵ In Tanzania there is a minimum wage for unskilled labor determine by law. If the legal minimum wage exceeds the "free market" price for unskilled labor then we have the equivalent of a tariff on labor, exactly analogous to a tariff on any input which is in perfectly elastic supply. Conceptually, it would seem to make sense then in the case of a country like Tanzania, to treat unskilled labor as an input in perfectly elastic supply, and to then calculate the effective protection given to capital in different industries by the existing structure of tariffs and taxes. In Chapter III we shall discuss some of the conceptual and practical difficulties involved in trying to calculate rates of effective protection of capital for different activities in an underdeveloped economy like Tanzania.

In the last part of this section we consider briefly the implications for the concept of effective protection (and its practical application) of relaxing some of the assumptions adopted thus far. One important assumption to our analysis thus far has been that the physical input coefficients for all material (non-primary) inputs are fixed

⁶⁵Corden, op. cit., pg.231.

i.e. these coefficients are not affected by the tariff structure, or to put it another way, these coefficients are the same in the free trade as in the post tariff situation. Now, in one sense this is a highly unrealistic assumption. For one of the major consequences of imposing tariffs is changes in the relative prices of various inputs (including primary inputs). If there is substitutability between inputs, these price changes should result in changes in the input coefficients, including the substitution of primary for material inputs (and vice versa), as well as substitution between non-primary inputs.

But, Corden argues

the calculation of effective rates is designed to indicate the direction in which resources will be pulled by the tariff structure. It should not incorporate the effects of these resource shifts. Therefore, the effective rate can no longer be the actual percentage rise in returns per unit to the primary factors (and non-traded inputs) resulting from the tariffs, since that depends partly on the substitution effects which have actually taken place. . . Rather we want to know what the rise in the rate of return to a factor is before any resources move in response to this rise. Hence, the effective rate should be the percentage rise on the return to the primary factor which would result if there were no substitution between inputs and hence, if there were no change in the input coefficient. It follows that the ideal calculation should use the input coefficient of the free-trade situation; the formula which we have been using remains the correct one...66

However in practice it is generally not possible to know the "free trade" coefficients. We either have to start with

⁶⁶ Ibid., page 234.

the observed post tariff coefficients and work backwards from these or 'borrow' coefficients from a country where tariffs, taxes and other restrictions on trade do not unduly affect the pattern of resource use. The first method we shall call the "derived" approach, the second the "direct" method. Some of the conceptual and practical difficulties encountered in either or both methods will be discussed at length in Chapter III. Here we are concerned only with the direct effect (bias) that these approaches have on our input coefficients and hence on measures of rates of effective protection. If we use the "derived" approach, i.e. use the physical input coefficients of the protection situation, there is no a priori reason why these coefficients should be equal to the "free trade" coefficients. For as we have stressed above, one of the likely consequences of protection is a change in the relative price of inputs and hence substitution between inputs. What then is the effect on measures of rates of effective protection of using this "derived" approach? Corden has proved the "surprising" result that

calculations of effective rates which use the data of the protection situation will always tend to overstate the effective rates if there is any substitution from primary inputs toward material inputs or vice versa, and, of course, unless other errors are offsetting.⁶⁷

This conclusion does not hold if $t_j = t_1$ (i.e. the tariff on the output is equal to (a) the tariff on the input where

⁶⁷ Ibid., page 235.

there is only one input, or (b) to a weighted average of the tariffs on the inputs where there is more than one tradable input in activity j). For where $t_j = t_1$ the rate of effective protection in activity j is equal to the nominal tariff on both the input and the output, i.e. it does not depend on the value of input coefficients.

In the case of the "direct" approach, i.e. where coefficients are borrowed from another country, it is not possible to predict a priori the effect on rates of effective protection of a bias in the "borrowed" coefficients. The direction of "error" in E_j (the effective protective rate in activity j) depends on whether t_j is greater or smaller than t_1 as well as on the direction of "bias" in the input coefficients.

Less can be said about the implications of relaxing the other assumptions which lie at the heart of the concept of effective protective rates. The assumption (assumption on page 98 above) that there should be no "water" in any tariffs i.e. that all tradable goods should continue to be traded even after tariffs and either taxes have been imposed (which implies that domestic prices are equal to world prices plus tariffs) is not crucial in theory. As long as we can measure that part of the tariff which is utilized we can find relevant values for the t_j 's and t_1 's in our formulae. For what we are interested in is the changes in domestic

prices of inputs and outputs caused by the tariff and tax system. In practice we need detailed price data in order to be able to compare the domestic prices with the "free trade" prices of comparable commodities. In this connection there is also the problem of the extent to which these differences between "post tariff" and "free trade" prices reflect tariff and tax rates. This leads to a consideration of another basic assumption. Namely that the export-demand and import-supply elasticities are all infinite. For if they are not prices will not vary according to the level of tariffs and taxes as we have been assuming. Rather part of the tariff and tax will be absorbed by the suppliers of imports and exports. As Corden stresses, removing this last assumption

presents considerable difficulties...[for]...when the inelasticities are less than infinite, the effective-protective-rate concept strictly interpreted appears to break down. But perhaps if the elasticities are generally close to infinite, the calculation of effective rates and the derivation of various conclusions from the calculations are justified as reasonable approximations.⁶⁸

This last point is particularly valid in the case of a small country like Tanzania whose imports of different commodities make up a tiny fraction of world sales and whose exports (largely primary products) are sold in highly competitive markets.

⁶⁸ Ibid., page 236.

IV

Does this relatively new concept of effective protection have any important implications for commercial policy?

According to Humphrey,

The principle [of effective protection] carries no implication as to whether protection is desirable or undesirable, except in the sense that some people may feel that low tariffs are more trouble than high tariffs.⁶⁹

At face value this statement appears perfectly valid. However it is necessary to bear in mind that the concept of effective protection has been developed entirely within the context of the orthodox Western theory of international trade. That is, the analysis is carried out in static terms with the explicit or implicit objective being the maximization of efficiency and welfare in the present time period. To put it another way, the existing production functions are taken as given, and it is assumed that international specialization should be guided by the present structure of comparative advantage. This is not the place to indulge in a debate on methodology; more specifically we are not concerned here with the question of whether the bias towards free trade is inherent in the assumptions and methods of orthodox Western international trade theory. Suffice it to point out that the theorists who have paved the way in the development of the theory and application of effective

⁶⁹Humphrey, op. cit., page 63.

protection (Johnson, Corden and Balassa) are all vigorous proponents of fewer rather than more restrictions to free trade. In Chapter V we shall discuss the possibility of using the concept of effective protection as a tool in a more dynamic analysis of the problem of industrialization and development strategy in underdeveloped countries.

The literature on effective protection has made much of the point that the existence of escalated (cascading) tariff structures in most countries leads to rates of effective protection being much higher than nominal tariff rates. A cascading tariff structure is one where nominal tariff rates tend to increase with the degree of processing.

Therefore for most activities, tariffs on outputs tend to be higher than tariffs on inputs (i.e. $t_j > \frac{\sum_1 a_{1j} t_1}{\sum_1 a_{1j}}$) and

consequently effective rates tend to be higher than nominal rates. The finding of high rates of effective protection in many countries (largely as a result of "cascading" tariff structures) provides powerful ammunition for those who argue that tariff and tax structures in these countries lead to a great distortion and waste in resource allocation. Thus Balassa found that for Argentina rates of effective protection for most manufactured goods exceeded 100 percent; "i.e. the remuneration of domestic factors is more than double of value added in a free trade situation."⁷⁰ Balassa then went

⁷⁰ Balassa, *Integration and Resource Allocation in Latin America*, op. cit., page 17.

on to point out,

This excess may be due to inefficiencies in domestic operations or to excessively high profits per unit of output. In the first case, the difference represents the cost of protection, in the second, it gives rise to a redistribution of incomes in favor of the entrepreneur. While there are indications that firms in Argentina follow a policy of low turnover and high profit margins, it can safely be said that, in manufacturing industries where effective tariffs exceed 100 percent, the cost of protection accounts for a substantial part of the excess of the remuneration of domestic factors over value added in the free trade situation. A further source of inefficiencies in resource allocation is found in the observed differences in effective tariffs in industries producing import-competing-goods.⁷¹

Balassa claims further that "there is some evidence that the present system of protection benefits industries producing non-traded goods (chiefly construction) in Argentina "and that there is consequently an incentive for luxury production, particularly in housing."⁷² He suggests therefore a reduction in tariffs together with a devaluation of the Argentina peso (which Balassa assumes to be overvalued anyway). Then there would follow:

a reallocation of resources from import competing to export industries. As a result, a larger amount of importables would be obtained for the same amount of exportables through foreign trade than through domestic transformation. Moreover, reduction in the implicit tax may permit in industries producing differentiated commodities to engage in exporting activities.⁷³

⁷¹Ibid., pages 18-19.

⁷²Ibid., page 20.

⁷³Ibid., page 19.

According to Corden, the fact that effective rates of protection tend to be higher than nominal rates "is the attraction of escalated structures to protectionists: the degree of protection provided to industries is not so obvious."⁷⁴ A good example of this is the high rate of effective protection provided to processors of raw materials in the Common Market countries. While nominal tariffs on the processed products of raw materials like sisal and various oil seeds are low, the absence of a tariff on the raw material itself together with a low value added coefficient result in high rates of effective protection on value added in the processing stage.⁷⁵

The concept of effective protection as a better measure of the protection afforded an activity, (particularly when we are considering relative protection by ranking activities according to rates of effective protection) enables theorists and policy makers to have a clearer picture of the protective effects of the tariff and tax structure. In most countries tariffs and taxes are imposed in an ad hoc fashion and policy makers have little idea of the overall structure as it may affect resource allocation. The position in many of the Latin American countries, which is not untypical of under-

⁷⁴Corden, "The Structure of a Tariff System and The Effective Protective Rate," op. cit., page 229.

⁷⁵See below, Chapter V for a more detailed discussion of this point.

developed as well as developed countries' structure, has been described very well by Santiago Macario; whom we quoted on the same point in our Introduction.

With very few exceptions, the Latin American countries cannot be said to apply a protectionist policy, if by this is to be understood a systematic body of measures deliberately designed to permit and encourage the development of certain industries rationally selected within an over-all framework of objectives established under a given economic development policy. What did and still does exist is protectionism, but as the largely indirect result of ad hoc measures, often adopted, at least initially or during a first stage, as emergency procedures, either in order to solve balance-of-payments problems, or under the pressure of other exogenous factors. Such measures, temporary to begin with, became permanent in most cases and more general in their scope, giving rise to a form of protectism which has been characterized by extemporaneousness, lack of autonomy (since it is primarily motivated by external causes), extremely high levels and indiscriminate application, and whose basic objective is import substitution at any cost, regardless of which industries it is most expedient to develop and how far the process should be carried.⁷⁶

In Chapter V below we shall discuss in detail alternative commercial policy possibilities which fit in with different types of industrialization strategies. One possible aim of commercial policy could be to attempt to equalize effective rates of protection in different activities, except where special reason dictated higher or lower rates for a given activity. Such a policy would answer the criticism of Balassa that widely divergent effective protective rates

⁷⁶Santiago Macario, "Protectionism and Industrialization in Latin America," op. cit.

lead to serious misallocations of resources. However the problem remains of what this "normal" target, equal rate of effective protection should be. Balassa in the case of Argentina argues for lower effective rates than those he found in his study. The question of how high to set tariffs and taxes belongs in a discussion of the more general problem of how much protection is needed at any particular time in a country's economic development. We shall turn to this question in Chapter V when we discuss alternative development strategies open to Tanzania.

Within the context of the broad aim of equalizing effective rates of protection it would still be possible to subsidize infant industries (or other specially selected industries) by setting tariffs and taxes so that these industries are protected by effective rates higher than the norm. Even the most ardent advocates of free-trade accept the idea that infant industries may need protection in the initial stages. For Balassa,

The learning process in new industries provides an argument for protection on infant industry grounds... However... in cases where the infant industry argument is applied, one should make clear the cost of this protection to the national economy.⁷⁷

Corden makes the interesting point that the historical development of tariff systems in many countries indicate

⁷⁷ Balassa, "Integration and Resource Allocation in Latin America," op. cit., page 20.

high initial rates of effective protection followed by a lowering over time of these rates. This is a different view from that of many historians who, looking at nominal rates only, have concluded that tariffs have actually increased over time. The usual historical pattern has been for a country in the early stages of industrial development to start by importing ready finished products free of duty and carrying out final processing or assembly behind a tariff wall. With the low value added in this situation finishing industries are afforded high rates of effective protection. As development proceeds and the country moves backward into earlier productive stages, tariffs tend to be extended backwards as well. The result is to lower the effective rates given to the earlier finishing industries at the same time as providing high effective rates to the newer industries. Thus at each stage infant industries have been protected. An interesting historical question is the extent to which such a pattern has occurred in different countries; and secondly the extent to which policy makers have been conscious of the "true" protection, as measured by effective protective rates, being given to different activities. Certainly one can hardly quarrel with Corden's suggestion "that historians of commercial policies and of industrialization should calculate effective rates."

Chapter III

There are a number of questions concerning the concept of effective protection and its application to real world situations which seem to throw doubt on the precise meaning that can be attached to effective rates of protection found for different industries in a given country. The advocates of the use of rates of effective protection as measures of the 'production' cost of tariffs have put forward two main propositions which we shall examine in detail. The first assertion is that the scaling (or ordering) of economic activities (industries) according to the effective rate at which the activity is protected "tells us the direction in which the structure [of tariffs and relevant taxes] causes resources to be pulled as between activities... Domestic production will shift from low to high effective protection rate activities."¹ That is, domestic production will shift in this manner if we are comparing the situation when the given structure of tariffs and taxes exists with the situation if there were no tariffs etc. and no change in the exchange rate, i.e. the "free-trade" situation, (given of course the original assumptions on which the

¹ Corden, "The Structure of a Tariff System and the Effective Protective Rate," op. cit., page 224.

theory is based). The second main proposition is that positive rates of effective protection indicate "the percentage excess of the remuneration of domestic factors over value added in the free trade situation. This excess may be due to inefficiencies in domestic operations or to excessively high profits per unit of output."²

There would appear to be important additional assumptions which are necessary for the unambiguous validity of the first proposition. In order for resources to move in the direction that Corden predicted, we would have to make the further basic assumption that in the "free-trade" situation the rates of return per unit of invested capital were the same in different activities. Consider a simple case where the pre-tariff rates of return on invested capital are not the same in two activities. Say in activity A the "free-trade" return per unit capital invested was 5 percent while in activity B it was 10 percent. If the structure of tariffs and relevant taxes was such as to provide effective protection of 100 percent to activity A and 50 percent to activity B Corden would predict that more resources would tend to be employed in activity A and less in activity B in the post-tariff situation than in the free-trade case. But is this necessarily so?

²Balassa, "Integration and Resource Allocation in Latin America," op. cit., page 18.

At first sight the answer seems to be clearly in the negative. For what is relevant to the direction of resource flow is the scale of absolute returns per unit of capital invested in the post-tariff situation, and not the scale of percentage increases in returns to capital made possible by the tariff structure.³ Let us assume for the moment that there is only one primary factor of production, capital, in both activities, A and B. Then it appears that as a result of the given tariff structure the rate of return on capital will have increased to 10 percent in activity A and to 15 percent in activity B. Clearly B is still to be preferred to A and there seems to be no reason why resources would move from B to A.⁴ But there is yet a further assumption which is hidden in the above reasoning. The rates of effective protection of 100 percent and 50 percent in activities A and B respectively will result in equivalent increases in the returns to capital invested only if we assume that there has been no increase in the use of capital per unit of output in both activities. This is not necessarily the case. Rates of effective protection measure the percentage increase in the remuneration of

³My attention was first drawn to this point by Ben Massell in an unpublished note on the concept of effective protection written while he was Director of Economic Research at The University College, Nairobi.

⁴Strictly speaking we would also need to know what caused the pre-tariff rate of return to be higher in activity B and whether this cause operates with the same, more or less force after protection.

domestic factors. This increase can reflect an increase in the rate at which factors are paid or an increase in the use of factors employed per unit of output. Thus in our simple case where capital is the only factor, an effective rate of protection of 100 percent does not necessarily mean that the rate of return per unit of capital invested has doubled as compared to the rate in the "free-trade" situation. Part of the increase in the returns to capital may be payments to extra capital employed per unit of output, thus reducing the increase in the rate of return per unit of capital invested (profit rate) to below 100 percent.

If we drop the assumption that there is only one primary factor used, the direction of resource flow as a result of the tariff structure would seem to be even more indeterminate. Let us assume that there are two primary factors, labor and capital. Now a given rate of effective protection can bring about a wide range of possibilities. Any combination of one or more of the following four effects might result: (a) an increase in the capital per unit of output used (the capital input coefficient), (b) an increase in the returns per unit of capital used (i.e. an increase in the profit rate), (c) an increase in the input of labor per unit of output (the labor input coefficient), (d) an increase in the payments to each unit of labor used (wage rate).

The rate of return on capital invested (the rate of profit) and not the profits per unit of output determines the direction in which investors will direct their capital, and hence the direction in which resources move. What happens to the profit rate (b) above as a result of the tariff structure depends on the extent (if any) to which the other three possibilities, (a), (c), and (d), result from the tariff structure. One situation in which the percentage increase in the profit rate would be unambiguously equal to the effective rate of protection is if (i) there is no increase in the amount of capital used per unit of output and if (ii) the share of value added going to capital (and hence the share going to labor) remains unchanged.

Thus it appears that there are at least two further assumptions necessary if Corden's conclusion about the direction in which resources move according to relative sizes of rates of effective protection in different activities is to be always valid. Firstly the rates of return to capital in the "free-trade" situation must be equal in all activities. Secondly percentage increases in the rates of profit in any activity as a result of positive rates of effective protection must be equal to the rate of effective protection in that activity, which is unambiguously the case only if conditions (i) and (ii) above are satisfied.

How reasonable are those additional assumptions? The

assumption of equal rates of return on capital in all activities in the "free-trade" situation implies that all activities would be equally efficient or equally inefficient if there were no protection at all. There is no reason why this should be the case. Neither of conditions (i) and (ii) stated above (both of which are necessary to the assumption that increases in profit rates be equal to rates of effective protection) appear to be in the spirit of the application of the theory of effective protection. From the manner in which Balassa states the second main assertion, it is clear that he considers an increase in the use of primary factors (in particular an increase in the use of capital) as a probable consequence of positive rate of effective protection in an activity; i.e. condition (i) is not regarded as likely. An increase in the remuneration of domestic factors may "be due to inefficiencies in domestic operations or to excessively high profits per unit of output." What is meant by inefficiencies here is clearly an increase in the input per unit of output of one or more of the primary factors. Parenthetically it should be pointed out that such inefficiencies and high profits per unit of output are not mutually exclusive. For an increase in the use of capital per unit of output which leads to higher returns to capital per unit of output is a case of both "inefficiencies" and "excessively high profits per unit of output." Though, quite clearly, part of the percentage increase in value

added made possible by the tariff structure will have to go towards an increase in the rate of profit if the activity is to remain more attractive to investors than it was in the "free trade" situation.

Corden himself anticipated any criticism about what actually happens to profit rates as a result of the tariff structure. We reproduce an important admission of his which we also quoted at length in the previous chapter.

....the calculation of effective rates is designed to indicate the direction in which resources will be pulled by the tariff structure. It should not incorporate the effects of these resource shifts. Therefore, the effective rate can no longer be the actual percentage rise in returns per unit to the primary factors (and non-traded inputs) resulting from the tariffs, since that depends partly on the substitution effects which have actually taken place....Rather we want to know what the rise in the rate of return to a factor is before any resources move in response to the rise. Hence, the effective rate should be the percentage rise in the return to the primary factor which would result if there were no substitution between inputs and hence, if there were change in the input coefficient.⁵

Thus we can conclude that the ranking of activities according to effective rates of protection will not tell us for certain, a priori, in which direction resources will

⁵Corden, op. cit., p. 228.

move as compared to the "free trade" situation. However, an increase in the rate of effective protection for an individual activity is likely, *ceteris paribus*, to make that activity relatively more attractive to capital. This is especially the case if we can assume that such an increase in the rate of effective protection will result in little or no increase in payments to labor. In the case of underdeveloped countries where the supply of unskilled labor tends to be highly elastic, wage rates are not likely to go up as a result of increased demand for labor in a particular activity. Moreover it is reasonable to assume from the experiences in many underdeveloped countries that the input of labor per unit of output will not rise when effective protection increases. In addition, if the proportionate increase in capital used per unit of output is less than the proportionate increase in the rate of effective protection, the rate of profit in the activity will be increased and hence the activity will become relatively more attractive to investors.

For economies which are largely centrally owned and/or directed what happens to profit rates is not directly relevant. The central authorities can redirect resources where they choose. However, explicitly or implicitly they are likely thereby to be changing rates of effective protection. If increased output for a given activity can only occur at

a loss (assuming fixed prices for final products and inputs) the central authorities will have to subsidize the activity and thereby increase the rate of effective protection for that activity. Or they may choose to increase the price of the output in order to cover costs of production and again they will be increasing the rate of effective protection.

The methods that have been used in practice for measuring effective protection for different industries in a given country raise further questions as to the exact meaning that can be attached to observed rates of effective protection. The difficulties arise largely from the problem of having to find suitable "free-trade" input coefficients. Thus far, two methods have been adopted, which can usefully be termed the "direct" and "derived" methods. Balassa, in his study of effective protection in six industrialized countries took the input coefficients largely from the input-output tables for Belgium and the Netherlands "because they had nil or low duties on most commodities... and hence the distortion in input-output relationships, due to the existence of duties, is relatively small".⁶ Rates of effective protection were then calculated directly from these coefficients. These rates of effective protection then measure the percentage increase in value added made possible by the tariff structure, if material input coefficients (in physical as well as in value terms) are the

⁶ Balassa, "Tariff Protection in Industrial Countries, An Evaluation," op. cit.

same in the post-tariff situation as they would be in an "efficient" unprotected activity. There appears to be a conceptual difficulty involved if we compare this first method with the method used in most of the studies on effective protection, such as Basevi's of the U.S.A.,⁷ Balassa's on Argentina,⁸ Soligo and Stern on Pakistan,⁹ and our own study of Tanzania. This second method involves deriving "free-trade" coefficients from the observed coefficients in the post-tariff situation. If we assume that (i) material input coefficients are the same in the "free-trade" as in the post-tariff situation, and (ii) that all goods continue to be traded in the post-tariff situation, (i.e. no "water" in the tariffs) so that the domestic prices of goods are equal to the c.i.f. price of the import plus the tariff, the derived "free-trade" input coefficients are given by

$$a_{ij} = \frac{a'_{ij}}{1 + t_j} \bigg/ \frac{1}{1 + \tau_j} \quad (3.1)$$

where a'_{ij} is the "observed" (post-tariff) input coefficient for input i in activity j in the country concerned. However,

⁷ Basevi, op. cit.

⁸ Balassa, "Integration and Resource Allocation in Latin America," op. cit.

⁹ Ronald Soligo and Joseph J. Stern, "Tariff Protection, Import Substitution and Investment Efficiency," The Pakistan Development Review, Vol. V, no. 2, Summer 1967, pp. 249-270.

we do not actually need to calculate these since we measure effective protection by means of the formula

$$E_j = \frac{v_j^i - v_j}{v_j} = \frac{v_j^i}{v_j} - 1$$

$$= \frac{1 - \sum_i a_{ij}^i}{1 + t_j - \sum_i \left(\frac{a_{ij}^i}{1 + t_i} \right)} - 1 \quad (3.2)^{10}$$

$$\frac{1}{1 + t_j}$$

where v_j^i is the "observed" value added coefficient in activity j ,

v_j is the "derived" free-trade value added coefficient,

t_j is the tariff on the final product of activity j ,

and t_i is the tariff on the input i , and the price of the final output of activity j is assumed to be unity.

Here the "derived" input coefficients (the a_{ij}^i 's) are conceptually quite distinct from those used by Balassa in his study on six industrial countries.¹¹ They are not "efficient" input coefficients but coefficients derived from the actual coefficients (the a_{ij}^i 's) observed in the post-

¹⁰Formula (3.2) is thus an alternative to formula (2.3) presented in Chapter II, the former being the formula to use when the "direct" approach to measuring rates of effective protection is used, the latter when the "derived" approach is used.

¹¹Balassa, "Tariff Protection in Industrial Countries, An Evaluation," op. cit.

tariff situation in the country being studied. What rates of effective protection measure if this approach is used is

the maximum proportion by which the value added per unit of output by primary resources employed in the domestic industry can exceed the value that they would add if all imports entered free of duty.¹²

Or as Ellsworth stresses,

The whole purpose of the computation is not to discover what the factors in the processing industry would be paid in the absence of tariffs, but what they could be paid. And this the procedure of division tells us, by converting domestic values with protection into what these values would be without protection....all the computation tells us is that if a particular set of duties on a single finished product and its inputs is removed, the sum available to remunerate the factors in the processing industry that accounts for the value added will be such and such an amount. In contrast, the problem of what the factors would be paid under free trade conditions presupposes complete free trade -- that is, the abolition of barriers to trade in all commodities, not just a single one.¹³

As Ellsworth points out, these "derived" input coefficients are likely to be higher than if we used "direct" ("efficient") coefficients from some other country as Balassa did. This is especially true in those activities where protection is greatest. For as a result of the subsidy provided to an industry by the tariff structure the domestic activity

¹²Basevi, op. cit.

¹³P. T. Ellsworth, "Import Substitution in Pakistan-- Some Comments," Pakistan Development Review, Volume VI, No. 3, Autumn, 1966, pp. 395-407.

can indulge in wasteful use of material inputs. This is a different kind of inefficiency from that meant by Balassa when he asserted that positive rates of effective protection "may be due to inefficiencies in domestic operation." What Balassa was referring to was the possible inefficient use of primary resources, labor and capital, as a result of the tariff structure.

A wasteful or inefficient use of material inputs means that the a_{ij} 's used in the "derived" approach will be higher than if the "direct" method were adopted. One consequence of higher a_{ij} 's is lower derived free-trade coefficients for if one or more a_{ij} 's are upward biased the second term in the denominator of the first term of the right hand side of equation (3.2) will then be higher. In some cases v_j (the denominator of the first term in equation (3.2)), may even turn out to be negative and the second term will be larger than the first. This is more likely in cases where the tariff on the final product t_j is high and therefore $\frac{1}{1+t_j}$ is low and where the observed value added $(1 - a_{ij})$ is low to begin with. A negative derived value added coefficient would imply that at world (free-trade) prices the cost of material inputs in domestic production is so great as to exceed the world price of the final product.

Ellsworth has argued that where negative or very low 'derived' value added coefficients are obtained for a particular activity, rates of effective protection have no

meaning. A negative value added coefficient (i.e. a negative denominator in the first term of formula (3.2) for rates of effective protection) will yield a negative rate of effective protection. But negative rates of effective protection are supposed to indicate a tax on domestic production for they reflect situations where the value added coefficient made possible by the tariff and tax structure is less than the value added coefficient in the free trade situation, i.e. v_j' is less than v_j and therefore, $E_j = \frac{v_j'}{v_j} - 1$ is less than 0. Thus, according to Ellsworth, negative rates of effective protection, which result from negative derived free-trade value added coefficients, are 'spurious' and should be discarded.¹⁴ Basevi, like Ellsworth, considers such negative derived free-trade value added coefficients as "absurd" and distinguishes

those cases in which the effective rate of protection... becomes negative because the denominator is negative (absurd result), from those in which it becomes negative because of the overwhelming tax-affect of the tariffs on inputs (true case of negative rates of protection).¹⁵

But are such "spurious" negative derived free-trade value added coefficients really absurd? They are the result of applying a certain formula and they indicate that if

¹⁴ Ibid., p. 401.

¹⁵ Basevi, op. cit., p. 150.

tariffs and relevant taxes were removed, the cost of non-primary inputs used in domestic production (assuming fixed input coefficients for these inputs) would be greater than the world price for the final output. The negative E_j 's that they yield show "one extreme of protection; the subsidy implicit in protection not only pays for primary factors of production in the industry but must pay for parts of its costs of inputs as well."¹⁶ We can also distinguish "genuine" cases of negative effective protection from those "spurious" cases which result from negative derived value added coefficients because of the different range of possible values for E_j in each case. In the case where there is genuine negative effective protection $-1 < E_j < 0$, since $v_j > v_j^f$ and therefore, $0 < \frac{v_j^f}{v_j} < 1$ and $-1 < E_j \left(= \frac{v_j^f}{v_j} - 1 \right) < 0$.

In the cases where there is a negative derived value added coefficient $v_j < 0$ and therefore $\frac{v_j^f}{v_j} < 0$ and $E_j < -1$.

Ellsworth claims that rates of effective protection, obtained where the derived free trade value added coefficient is very low but still positive are also absurd and should be discarded. "Wasteful" use of material inputs, i.e. higher a_{ij} 's will lead to lower value added coefficients.

¹⁶ Stephen R. Lewis, Jr. "Further Notes on the Notion of Implicit Protection and Its Measurement in Pakistan," Unpublished.

Then the derived free trade value added coefficient

$$v_j = \frac{1}{1 + t_j} - \sum \frac{a_{1j}}{1 + t_i}$$

will tend towards zero, i.e. the denominator of the first term in formula (3.2) for E_j will tend towards zero and E_j will be very high. It should be noted that higher a_{1j} 's also lower the numerator in the first term of the formula for E_j . If $t_j = t_i$ (or $t_j =$ a weighted average of t_i 's where there are tariffs on more than one input then any upward bias in a_{1j} will lead to the numerator and denominator falling by the same fraction and E_j will then be unchanged. It is simple to show that if t_j is greater than a weighted average of the t_i 's, E_j will be larger the larger are the a_{1j} 's.¹⁷

Another possible reason for low or negative derived value added coefficients is a high tariff on the final output resulting in a low derived world price for the final output given by the first term ($\frac{1}{1 + t_j}$) in the denominator of the first term of the formula for E_j , formula (3.2). This will be especially the case if there is "water" in the tariff on the final output of an activity (i.e. if the domestic price of the output is equal to less than the "world" price of the output plus the tariff). For then $\frac{1}{1 + t_j}$ will be less than the "free trade: price and

¹⁷ See Corden, "The Structure of a Tariff System," op. cit., p. 235 for a rigorous proof.

$\frac{1}{1+t_j} - \sum \frac{a_{ij}}{1+t_i}$ will again be downward biased and tend to be very low or negative. Here we have the strange situation that as t_j becomes larger and larger, a point will be reached where the denominator of the first term is < 0 in formula (3.2) and hence E_j will change from being large and positive to being negative. Basevi's view of this is that

A conspicuous consequence of this approximation [the derived approach] is that effective rates of protection...are not, as they should be, a continuously rising function of the tariff rate on output. On the contrary, at a critical point, when the denominator becomes zero, the function vanishes asymptotically and switches to negative values. This is clearly an absurd result.¹⁸

Soligo and Stern in their study of effective rates of protection in Pakistan¹⁹ use a slightly different formula which has some merit in dealing with the difficulties which Ellsworth and Basevi find with negative and low derived value added coefficients. In calculating rates of effective protection, instead of comparing the increase in value added to the free trade value added, they compared the increase to the observed value added. Thus, for them rates of effective protection were given by the equivalent of $E_j^1 = \frac{v_j^1 - v_j}{v_j^1}$ instead of by $E_j = \frac{v_j^1 - v_j}{v_j}$. Now $E_j^1 = 1 - \frac{v_j}{v_j^1}$ instead of

¹⁸Basevi, op. cit., p. 150.

¹⁹Soligo and Stern, op. cit.

$\frac{v_j'}{v_j} - 1$ and E_j' can only be < 0 if $v_j > v_j'$ which is the "genuine" case of negative effective protection. If "derived" v_j is very low, E_j' will tend towards 1 and if v_j is negative E_j' becomes 1.

But even with the Soligo-Stern variation of the formula the problem remains of how to rank rates of effective protection when derived value added is negative or very low. If we rank according to absolute values of E_j' an activity with a very low positive v_j which is heavily protected will be ranked lower than an activity with a negative v_j . Thus, for example, for activity A, v_j may be 0.05 and $v_j' = 0.6$ while for activity B, v_j may be -0.05 and $v_j' = 0.05$. Then for A, $E_j = \frac{v_j' - v_j}{v_j} = 1 - \frac{.05}{.4} = 0.875$, while for B it will be $1 + \frac{.05}{.05} = 2.0$. It is certainly not clear that the percentage increase in value added made possible by the tariff and tax structure is greater for B than it is for A. Perhaps all we can conclude is, that where "spuriously" negative or very high rates of effective protection are found, this is a sign of "probable" inefficiencies in the use of material inputs (Ellsworth type inefficiency). However, in activities where value added is in any case low (e.g. in assembling or "finishing" industries) rates of effective protection are likely to be high just because v_j' (and also v_j) is low to begin with. Thus where v_j is low or negative,

measured rates of effective protection whether measured by E_j or by E_j^* must be treated with extreme caution.

III

When discussing the relevance of measures of effective protection to underdeveloped economies one criticism which is frequently raised centres around the assumption of fixed input coefficients. It is argued that one of the main ingredients necessary to the process of economic growth is the introduction of more up-to-date techniques of production in different industries. This implies a change in the industry's production function and hence in its input coefficients. What then is the use of assuming fixed input coefficients if we expect these coefficients to change. There are two main lines of defense in answer to this criticism. The first, adopted by Corden, we have already referred to (see the long quote on pg. 140 of this chapter). Corden's position is that rates of effective protection only indicate the direction in which resources will tend to be pulled as compared with the free trade situation and that such rates do not and should not incorporate the effects of the resource allocation. But Basevi and Balassa²⁰ deduce welfare conclusions from observed rates of effective protection. Thus for Basevi the "relevant purpose for welfare analysis"

²⁰ Balassa, "Integration and Resource Allocation in Latin American," op. cit., p. 6.

of measuring rates of effective protection "is to calculate the difference between the returns to domestic-primary resources when protected and what they would get if tariffs were eliminated."²¹

The second defense of the assumption of fixed coefficients rests on the view that such an assumption is in fact not too unrealistic. In a comparative study of capital output ratios in eight different countries at different stages of development, Bhatt's provisional conclusion was that "contrary to theoretical expectations the capital intensity of the industries of an underdeveloped economy does not seem to be significantly lower than the capital intensity of the corresponding industries of at least some of the developed economies."²² It is more difficult to argue that labor productivity is the same in comparable industries in different countries. W. A. Lewis makes a good case for the view that labor productivity is generally lower in underdeveloped than in developed economies.²³ But

²¹Basevi, op. cit., p. 149, footnote 6.

²²Bhatt, V. V. "Capital-Output Ratios of Certain Industries: A Comparative Study of Certain Countries," Review of Economics & Statistics, 36, 1954, p. 311.

²³W. A. Lewis, Report on Industrialization in the Gold Coast, Government Printing Department, Accra, 1953, pp. 1-3.

we do not really have to prove that input coefficients are constant over national boundaries. Rather we are concerned with the constancy of these coefficients, especially for primary inputs, for a particular industry within one country, and this may not be such a highly unrealistic assumption. Even if we cannot accept the realism of the assumption of fixed coefficients we must agree with Johnson that this assumption is useful for bringing out the main points raised by the concept of effective protection.²⁴ In fact this assumption is indispensable to any attempts to measure effective protective rates in practice.

²⁴ Harry G. Johnson, "The Theory of Tariff Structure with Special Reference to World Trade and Development," op. cit.

Chapter IV

I

In this chapter we describe the methods used and results obtained in our attempt to measure rates of effective protection for different manufacturing activities in Tanzania for the year 1966. When this study was initially carried out in mid-1967 (for the Economic Research Bureau at The University College, Dar es Salaam¹) there were no statistics for industrial production in Tanzania which we considered both sufficiently reliable and up-to-date.² Thus it was

¹

The results of the initial research were first presented at a seminar of the University College, Dar es Salaam in July 1967; and also as one of the continuing series of research papers put out by the Economic Research Bureau, Effective Protection in Tanzania, ERB, Paper 67.8. A revised version of that paper under the same title is to be published in the June 1968 issue of The East African Economics Review. This chapter is a further revision and extension of those papers.

²The first survey of industrial production in establishments throughout Tanzania was carried out in 1958 (Tanganyika, Survey of Industrial Production, 1958, Dar es Salaam, East African Statistical Department, Tanganyika Unit, 1960) and covered all establishments employing five or more persons. The next survey was a census of industrial production relating to the year 1961 (Census of Industrial Production in Tanganyika 1961, Dar es Salaam, Central Statistics Bureau, 1964) and covered all industrial establishments in Tanzania irrespective of size. A further census was carried out in 1963 but the results were never published. The returns which were collected only by postal questionnaire turned out to be far too incomplete (especially among smaller establishments) and too unreliable (questions often were obviously misinterpreted).

decided to use Kenyan statistics (as explained below) as the basis for the study.

It has been suggested that we should carry out our analysis for the whole of East Africa rather than for Tanzania alone. There is much merit in this point of view. For, as we have seen, the East African economy is fairly well integrated. In spite of the restrictions on interterritorial trade in recent years it is still, by and large, a free trade area with a common external tariff. Moreover, as we have also seen, there have been, and still are (as provided for in the new Treaty for East Africa³), attempts to coordinate to a certain extent industrialization policies in the three countries. Nevertheless we felt that it makes more sense to consider protection and industrialization strategies for Tanzania alone. Firstly, even though external tariff rates for goods entering the three East African countries are, for the most part, identical, there are significant differences in excise taxes and more especially in export taxes. The latter are of particular relevance (as we shall see later in this Chapter) to estimates of rates of effective protection for processing industries. Secondly, and more importantly, the three East African countries are indepen-

³ See above, Chapter I, pages 42-45, for a description of the transfer tax and the East African Development Bank which are the two measures under the Treaty which aim to promote balanced industrial development.

dent sovereign states pursuing their own overall policies with diverse objectives which lead to different specific measures being needed and taken. Thus the nationalization of important parts of the Tanzanian industrial sector following the Arusha Declaration of February 1967 has not only made Tanzania a much less likely prospect for private foreign investment than Kenya. It has also opened up policy options to the Tanzanian Government which are not available to its counterpart in Kenya, where private enterprise dominates the industrial sector. Hence, to the extent that our purpose here is to recommend specific policies to be followed we would need to bear in mind the overall strategy being pursued by the Tanzanian Government as well as particular options open to it.

A question that arises in this connection and which we do not deal with in this dissertation concerns Tanzania's freedom of action in changing tariff rates. In Chapter V we shall be suggesting that certain changes in tariff rates are needed if certain policy objectives are to be realized. Now as the customs union works in East Africa it is conventional for the governments of the three countries to agree on tariff changes before they are effected. This, of course, limits the freedom of the Tanzanian Government to pursue its own independent tariff policy.

Towards the end of 1967 the results of the latest survey of industries in Tanzania were published.⁴ This survey was based on production in 1965 and was carried out under the direction of a United Nations expert. There appears to be no major reason why the results of this last survey should not be considered reasonably accurate, given the usual difficulties of obtaining reliable statistics of industrial production in underdeveloped countries. However the published results are not sufficiently detailed to enable us to compute a further set of estimates of rates of effective protection for different manufacturing activities in Tanzania; a set which would be directly comparable to the results obtained in our original study. But in the latter part of this chapter we shall use the statistics published in this latest survey of industrial production in Tanzania⁵ to aid in the analysis of our original results. Because of the lack of adequate production statistics for Tanzania the results published in the 1963 Kenya Census

⁴The United Republic of Tanzania, Survey of Industries 1965, Dar es Salaam, Central Statistical Bureau, Ministry of Economic Affairs and Development Planning, 1967.

⁵See particularly table 4.3.

of Industrial Production were used as the basis for estimating "free trade" input and value added coefficients. The first assumption here is that production functions as well as the earnings of primary factors for different industries are similar for the two countries. Furthermore with Kenya and Tanzania having very similar tariff structures for goods entering the East African Common Market from outside (as well as similar excise and other sales taxes for most industries) it seems reasonable to assume that any changes in the input-output structure caused by the tariff and tax structure would also be similar in the two countries. Thus the "derived" free trade input and value added coefficients obtained from the Kenyan Industrial Census⁶ are taken as the relevant coefficients for most industries in the basic formula for calculating rates of effective protection.

The results obtained in the Kenya Census of Industrial Production, while subject to the usual weaknesses associated with statistics of industrial production in underdeveloped countries, seem reasonably reliable. Response from firms was considered "very good" and non-response was thought not to have seriously affected the reliability of the results. For 25 of the 32 industries covered in this study the statistics on purchases, production, and sales published

⁶ Republic of Kenya, Kenya Census of Industrial Production 1963, Nairobi, Ministry of Economic Planning and Development, Statistics Division, 1965.

in the Kenya Census were the starting point for the calculation of rates of effective protection. For the other seven industries (all processing industries, not directly covered in the Kenya Census) alternative sources were used as indicated in the notes to table.4.1.

The method used for calculating rates of effective protection in the 25 cases mentioned above is a more complicated version of the derived approach described in Chapter III (page 114) where effective protective rates are given by

$$E_j = \frac{1 - \sum_i a_{ij}}{1 + t_j} - \frac{\sum_i a_{ij}}{1 + t_i} - 1$$

which was formula (3.2) in the previous chapter.⁷ One reason for adopting a more complicated version is that we are deriving our coefficients from 1963 input-output data while we wish to calculate rates of effective protection for 1966. In addition relevant tax rates for Kenya and Tanzania are not identical for all industries. As a result of these two factors the t_i 's and

⁷If we use aggregate data instead of taking the price of the output as unity as in formula (3.2) above, we obtain the formula used by Basevi (op. cit., page) i.e.

$$E_j = \frac{V_j}{\frac{S_j}{1 + t_j} - \frac{M_{ij}}{1 + t_i}} \quad (2.6)$$

See chapter II, page 109, for an explanation of the symbols.

t_j 's which go to change the value added coefficient in Tanzania in 1966, i.e. which affect the rate of effective protection. In other words the numerator in the formula above no longer represents the actual value added coefficient in Tanzania in 1966. The required formula is given by

$$E_j = \frac{t_j^{66} - \sum_i a_{ij} t_i^{66}}{V_j} \quad (4.1)^8$$

where t_j^{66} is the 1966 Tanzania tariff rate (net of excise duty)⁹ on the output of industry j in ad valorem terms.

t_i^{66} is the 1966 Tanzania ad valorem tariff rate on input i ¹⁰

and a_{ij} is the "free trade" input coefficient for input i into industry j and is given by

$$a_{ij} = \frac{\frac{a_{ij}^{63}}{1 + t_i^{63}}}{\frac{1}{1 + t_j^{63}}} \quad (4.2)^{11}$$

where t_j^{63} is the 1963 Kenya tariff rate (in ad valorem terms) on the output of industry j (again net of excise duty)

and t_i^{63} is the 1963 Kenya tariff rate (in ad valorem terms) on input i

⁸ This formula is identical to the general formula, (2.3), derived in Chapter II, except that here we have specified the dating of the tariff rates.

⁹ An excise duty is a tax paid by domestic producers and is not levied on imports. For a discussion of the treatment of indirect taxes in estimating rates of effective protection see Chapter II, pages 103-104.

¹⁰ For inputs we do not subtract the excise duty from the tariff rate since the domestic producer (i.e., the purchaser of the input) has to pay a price equal to the c.i.f. price plus the tariff rate.

¹¹ Again, with the exception of date specification, this is identical to a formula already used i.e. formula (3.1); see Chapter III.

V_j is the "free trade" value added coefficient for industry j derived from the formula

$$V_j = \frac{\frac{1}{1+t_j^{63}} - \sum_{i=1}^n \frac{a_{ij}^{63}}{1+t_i^{63}}}{\frac{1}{1+t_j^{63}}} \quad (4.3)$$

$$\text{Thus } E_j = \frac{t_i^{66} - \sum_{i=1}^n \frac{a_{ij}^{63}}{1+t_i^{63}} \cdot t_i^{66}}{\frac{1}{1+t_j^{63}}} \quad (4.4)$$

In practice the computations are simpler if we multiply the numerator and denominator by $\frac{1}{1+t_j^{63}}$

$$\text{Then } E_j = \frac{t_j^{66} \cdot \frac{1}{1+t_j^{63}} - \sum_{i=1}^n \frac{a_{ij}^{63}}{1+t_i^{63}} \cdot t_i^{66}}{\frac{1}{1+t_j^{63}} - \sum_{i=1}^n \frac{a_{ij}^{63}}{1+t_i^{63}}} \quad (4.5)$$

This formula was used to estimate the rates of effective protection in the 25 industries already mentioned. For these industries value added coefficients are given by the ratio of value added to gross production, the relevant figures being obtained from Appendix Table I of the Kenya Census of Industrial Production.¹² In some cases the industry

¹² Op. cit., page 102.

classification used here (see Table 4.1) does not correspond exactly to that used in the census. Where a particular product in an industry is of special interest in Tanzania (e.g. where production of this product as an import substitute has been begun in recent years or where this product makes up an important part of the overall industry production) the industry has been reclassified under the product name. Thus we have "matches" instead of "other wood products", "biscuits" instead of "bakery", "radio and TV assembly" instead of "electrical machinery", "insecticides and pharmaceutical products" instead of "miscellaneous chemicals".

Input coefficients for the major inputs in different industries (i.e. those inputs for which the input coefficient was larger than 0.01) were obtained from the ratio of purchases of the input by the industry (given in the Kenya Census of Industrial Production) to the gross output of the industry. Tariff and excise rates for Kenya in 1963 and for Tanzania in 1966 were taken from the 1963 and 1966 Customs and Excise Tariff Handbooks.¹³ Where the tariff is specific, the unit cost of the import was calculated by dividing the value of imports by the volume of

¹³ East African Customs and Excise, Customs and Excise Tariff Handbook, August 1963; East African Common Services Organization, East African Customs and Excise, Customs and Excise Tariff Handbook, September 1966.

imports from figures in the Annual Trade Reports of Tanganyika, Kenya and Uganda.¹⁴ The tariff rate was then calculated by dividing the specific tariff by the unit cost of the import. The tariff rates for different industries in Tanzania in 1966 are shown in column 4 of Table 4.1 under the heading "nominal external tariff."

In the cases of a few industries which include the production of a number of distinct products, tariff rates for the different products had to be averaged to give an industry tariff rate. Most important among these were the textile and clothing industries where tariffs are specified in detail for different types of textiles and clothing. The difficulty with using own imports of specific products as weights, in order to obtain a weighted average of tariffs for the industry as a whole, is well known. Such a weighted average is likely to be downward biased since the production of commodities for which tariff rates are high is often being protected and therefore imports of the commodities are reduced, while imports of the commodities on which there are low or no duties, are likely to form a higher percentage of total imports (by value) than the percentage of domestic consumption they constitute. Therefore where we needed a

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East African Customs and Excise, Annual Trade Report of Tanganyika, Uganda and Kenya, Commissioner of Customs and Excise, East Africa, Mombasa.

weighted average for any t_j^{63} or t_i^{63} we used as weights estimates of domestic consumption = value of sales from domestic production plus imports; the figures for these latter two terms were taken from the statistics given in the text of the Kenya Census of Industrial Production. For our t_j^{66} 's and t_i^{66} 's we had no detailed figures of Tanzanian domestic production; the statistics now available in the 1965 Survey of Industries are not sufficiently detailed for the purpose of weighting. Thus we resorted to using the value of net imports as our weights for t_j^{66} 's and t_x^{66} 's in order to get a weighted average.

For a few processing industries producing primarily for export a different procedure was used for estimating rates of effective protection. These industries are marked by footnotes in Table 4.1. Here the domestic producer is "effectively" protected through an export tax on the main input, i.e. the raw material being processed. Such export taxes are a form of protection to domestic producers if they allow domestic producers to obtain domestically produced inputs at a lower price than their foreign competitors have to pay (ignoring of course transport costs). This would be the case given our basic assumption that the demand for the country's exports is perfectly elastic. For then the producer bears the full burden of the export tax and we assume that he accepts the world price less the export tax from

domestic buyers (processors).¹⁵ For Tanzania, whose exports of primary products (with the exception of sisal, where Tanzania's exports account for roughly 30 percent of world demand) constitute such a small part of the world market that it is reasonable to assume that demand for these exports is perfectly elastic. For these processing industries the rate of effective protection is then given by

$$E_j = \frac{x_r a_{rj} - \sum_{i=1}^{n-1} a_{rj} t_i}{V_j} \quad (4.6)$$

where x_r is the export tax as a percentage of the f.o.b. value of the input of the raw material being processed

and a_{rj} is the input coefficient for the raw material.

The sources for the "free trade" input and value added coefficients for the six processing industries indicated by footnote j are given in the footnotes to Table 4.1. Rates of effective protection for these industries were then calculated from formula (4.6), and are given together with the effective protective rates for the other 25 industries in column (6) of Table 4.1. In Table 4.1 and all subsequent tables rates of effective protection are given as percentages i.e. as $E_j \times 100$.

¹⁵In the case of most of Tanzania's major exports there is a marketing board which buys up the crop, sells most on export markets and a small amount in certain cases on the domestic market.

The estimates of "free trade" input and value added coefficients (the latter are given in column (2) of Table 4.1) obtained from the derived approach must be treated with considerable caution. Firstly, the original input coefficients calculated from the Kenya Census of Industrial Production are liable to error. Even though the response from firms was considered "very good" this does not mean the statistics reported were very reliable. Secondly, if there is "water" in any of the 1963 Kenya tariffs then the derived coefficient for "free trade" value added will be subject to error because the t_j^{63} 's and t_1^{63} 's used in formulae (4.3) through (4.6) will be too high. Because of these difficulties an alternative figure for the observed value added coefficient was assumed for a number of industries; in some cases alternative input coefficients (a_{ij}^1 's) were also assumed. Thus a second set of estimates of rates of effective protection was obtained.¹⁶ The results from plugging these alternative figures into formulae (4.3) and (4.6) are given in column (7) of Table(4.1).

Clearly the two sets of figures obtained for rates of effective protection in Tanzania must be regarded as subject to a wide margin of error. The difficulties in obtaining accurate estimates of rates of effective protection reinforce

¹⁶ The alternative "free trade" value added coefficients obtained from plugging the alternative coefficients into formula (3.4) are shown in column (3) of Table 4.1. The sources of the alternative coefficients used are indicated in the footnotes to Table 4.1.

the view (discussed in Chapter III) that little meaning can be attached to the precise measures of effective protection shown in columns (6) and (7) of Table 4.1. Nevertheless the ranking of the industries according to the rates of effective protection (as shown in Table 4.2), as well as the rough order of the rate for each industry provide the basis for some useful comments on the present protective structure in Tanzania.

TABLE 4.1

	Value Added Coefficient Kenya, 1963 (1)	Derived Free Trade Value Added Co-efficient (2)	Alternative Free Trade Value Added Co-efficient (3)	Nominal External Tariff (%) (4)	Nominal Tax Protection (%) (5)	Rate of Effective Protection from 'derived' Coefficients (6)	Rate of Effective Protection from 'alternatives' Coefficients (7)
1. Tobacco	0.40	0.37	0.23 b	314	234 n	528	751
2. Matches	0.43	0.17	0.3 e	174	87 n	395	207
3. Paints	0.31	0.09	0.225 c	37.5	37.5	394	123
4. Bicycles tyres & tubes	0.35	0.13	0.33 c	36	36	270	108
5. Textiles	0.35	0.19	0.35 c	73	73	269	151
6. Cosmetics	0.28	0.28	- a	75	75	265	265
7. Dairy Products	0.23	0.12	0.25 c	37.5	37.5	216	108
8. Sugar Refining	0.42	0.42	0.3 c	84	84 o	193	272
9. Beer	0.66	0.46	0.3 d	159	103	187	236
10. Canned fruit & vegetables	0.30	0.15	0.2 c	37.5	37.5 n	184	136
11. Biscuits	0.30	0.13	0.16 t	37.5	28 n	166	54
12. Soap	0.34	0.18	0.2 c	37.5	27.5 n	151	138
13. Clothing	0.30	0.20	0.25	60	60	144	107
14. Tanning and Leather	0.38	0.23	- a	30	30	130	130
15. Footwear	0.40	0.29	- a	43	43	123	123
16. Metal Products	0.34	0.22	- a	25	25	95	95
17. Radio Assembly	0.55	0.47	0.3 b	50	50	95 s	212 s
18. Furniture and Fixtures	0.45	0.37	- a	30	30	58	58
19. Glass Products	0.62	0.54	0.4 f	30	30	51	51
20. Grownnuts (crushed)	-	-	0.12 g	0	7.5 j	47 pr	47
21. Cotton Seed Oil	-	-	0.3 g	0	17 j	34 pr	34
22. Paper, Paper Products	0.42	0.40	0.29 b	12.5	12.5	26	34
23. Insecticides	0.28	0.28	0.25 b	0	1.7 j	24 p	40
24. Coffee Processing	-	-	0.4 h	30	10 k	12.5 pr	12.5
25. Cashew nut Processing	-	0.30	0.2 b	0	10 j	20 p	35
26. Cement	0.61	0.60	0.25 b	7.5	7.5	12.1	26.2
27. Grownnuts (edible)	-	0.12 s	0.2 i	0	1.5 j	9.4 p	5.6
28. Castor Seed Oil	-	-	0.1 h	0	0.9 j	7.2 pr	7.2
29. Sisal Cordage and Hope	0.49	0.42	0.2 b	15	1.5 jk	1 p	6
30. Sisal and Jute Bags	0.49	0.42	0.2 b	0	1.5 j	1 p	5
31. Pharmaceutical Products	0.28	0.28	- a	0	0	0	0
32. Printing and Publishing	0.54	0.55	- a	1	1	-1	-1
33. Wattle Bark Extract	0.60	0.50	0.2 d	37.5	0 k	-2	-5
34. Meat Products	0.19	0.22	- a	37.5	-3 km	-14	-14
35. Soft Drinks	0.40	0.33	0.21 b	34	16 n	-23	-4

FOOTNOTES TO TABLE 4.1

- a. No alternative was used because the derived figure was considered satisfactory.
- b. Lower value added and higher input coefficients were assumed based on guesses.
- c. Higher value added based on unpublished 1966 estimates.
- d. Lower value added based on unpublished 1966 estimates.
- e. Higher value added based on guess.
- f. Lower value added based on Uganda Government, Survey of Industrial Production, 1963, Statistics Division, Ministry of Planning and Community Development, October, 1965.
- g. Value added taken from H. G. Johnson, U. S. Economic Policy Towards the Less Developed Countries: a Survey of Major Issues, Washington, Brookings's, 1966.
- h. Outright guesses.
- i. From Nicholas G. Carter, An Input-Output Analysis of the Nigerian Economy, 1959-1960, a working paper for the School of Industrial Management, Massachusetts Institute of Technology, August, 1963.
- j. Protection on major input as measured by export tax as a percentage of f.o.b. price of the primary product which is the major input.
- k. The nominal external tariff is taken as zero here because production is largely for export and therefore import duties offer no tax protection.
- m. Export tax of 3% on product of industry.
- n. Import duty less excise tax.
- o. Although there is an excise duty on sugar this is not deducted from import duty because price of sugar is government controlled.
- p. From formula $E_j = \frac{x_j a_{1j}}{v_j}$ (see note on column (6).)

- r. Based on value added figure in column (3).
- s. The tariff on the main input, radio spares and parts, has been taken as $12\frac{1}{2}\%$, not the nominal rate of 30%, because a refund of any duty exceeding $12\frac{1}{2}\%$ was allowed by the Ministry of Industries according to the provisions of Local Industries (Refund of Customs Duties) Ordinance, (Cap. 289).
- t. Higher coefficients for the major inputs were used, based on the estimates of the 1966 World Bank Mission to Tanzania.

EXPLANATORY NOTES TO TABLE 4.1

How column figures were obtained:

- (1) Kenya value added coefficients for 1963 were obtained from the Kenya Census of Industrial Production, 1963, Nairobi, Ministry of Economic Planning and Development, 1965. In some cases industry classification here does not correspond to that used in the census. Where a particular product in an industry is of special interest in Tanzania it has been presented on its own, e.g. matches from "other wood products" industry, biscuits from "bakery" industry, radio assembly from "electrical machinery" industry, insecticides, pharmaceutical products and cosmetics from "chemical" industry.
- (2) In order to derive "free trade" value added figures (as well as "free trade" input coefficients) the following formula was used:

$$\text{Free trade value added coefficient } V_j^f = \frac{1}{1+t_j^{63}} - \frac{\sum a_{ij}}{1+t_j^{63}} \frac{1}{1+t_j^{63}}$$

where t_j^{63} represents 1963 Kenya tariff on products of industry j ,
 t_f^{63} represents 1963 Kenya tariff on input f in industry j , and
 a_{ij} represents the input coefficient of f in industry j in Kenya in 1963.

Tariffs on inputs were considered only when the input coefficient was greater than 0.01. In the case of certain processing industries not specified in the Kenyan census free trade value figures were taken from alternate sources as indicated in footnotes g., h., and i. above.

- (3) Alternative free trade value figures were used where it appeared that the figures derived from the Kenya census were not very reliable. The footnotes indicate the source (if any) of the alternative value added figures used - one major source used was the unpublished report of the World Bank Mission which visited Tanzania towards the end of 1966.
- (4) Nominal external tariffs for Tanzania in 1966 were taken from the Customs and Excise Tariff Handbook for 1966, published by East African Customs and Excise. When the tariff is specific, the unit cost of the import was calculated by dividing the value of imports by the volume of imports from figures in the Annual Trade Report of Tanganyika, Uganda and Kenya for the Year ended 31st December, 1966, published by the Commissioner of Customs and Excise in Mombasa. The tariff rate was then calculated by dividing specific tariff by the unit c.i.f. cost of the import. Where there is more than one tariff in an industry, an average tariff rate was calculated, as described in Section III.
- (5) Nominal Tax Protection is the nominal protection given to the domestic producer from import duties, excise duties and export taxation on the final product. An excise tax paid by the domestic producer has the opposite effect of an import duty since it reduces the price received by the domestic producer. Where there is both an import duty and an excise tax the nominal tax protection is given by the import duty less the excise duty. Export taxes on final products lower the price received by the producer and therefore have negative protection, i.e. they are a tax on the domestic producer. Export taxes on inputs, however, are a form of protection to domestic producers if we assume that they allow domestic producers to obtain domestically produced inputs at a lower price than foreign competitors. This applies particularly to industries processing primary products and the nominal protection is shown here as the percentage reduction in the price of the primary product (which accounts for a large share of the total inputs in most processing industries) as a result of the export tax. The use of this measure is indicated by footnote j.
- (6) Effective protection which takes into account taxes on inputs as well as those on final products is measured by the following formula:

$$E_j = \frac{t_j^{66} - \sum_i a_{ij} t_i^{66}}{v_j}$$

where E_j is the effective rate of protection industry j

where t_j^{66} is the 1966 Tanzania tariff rate (net of excise duty) on the final product of activity j

t_i^{66} is the 1966 Tanzanian tariff rate on input i

a'_{ij} is the "free trade" input coefficient of input i in industry j derived as follows:

$$a'_{ij} = \frac{a_{ij}}{1 + t_j^{66}} \bigg/ \frac{1}{1 + t_i^{66}}$$

and v'_j = "free trade" value added coefficient in industry j as obtained for column (2), from

$$v'_j = \frac{1}{1 + t_j^{66}} - \sum_i \frac{a_{ij}}{1 + t_i^{66}}$$

In the case of industries (mainly processing of primary products) where the main input is a primary product which is subject to export tax effective protection is given by:

$$E_j = \frac{x_j a'_{rj}}{v'_j}$$

where x_j is the figure in column (5) i.e. the 1966 Tanzanian export tax as a percentage of the f.o.b. value of the input

a'_{rj} s here are based on the assumption that primary input makes up from 70-90 percent of total inputs, and that there are no other important inputs.

- (7) Effective protection here is obtained using the same formula as for column (6) except that alternative figures for free trade value added and free trade input coefficients have been used as indicated in the footnotes to the figures in column (3).

II

The following points emerge from an examination of the results obtained from effective protection rates in the 35 industries as shown in Tables 4.1 and 4.2.

1. From Table 4.2 it is fairly clear that the ranking of effective protective rates obtained from the "derived" method (column 1) does not differ much from the ranking obtained when alternative coefficients were used for some industries (column 2). The rank correlation coefficient between these two sets of rankings is 0.92. For only six industries (paints, bicycle tyres and tubes, dairy products, sugar refining, biscuits and radio assembly) does the ranking differ by more than 5 as between column 1 and column 2. Five of these six industries have a ranking of 17 or higher in both sets of effective protection rates, the exception being biscuits with a ranking of 19 in column (2). (See also point 5). It thus appears that the accuracy of the figures used for input-output and value-added coefficients is not crucial in this case in determining the ranking of effective protection rates for different industries.

2. The rank correlation coefficient for column (1) with column (3) (nominal tariff rates) and for column (2) with column (3) are 0.70 and 0.75 respectively.¹⁷ Thus it

¹⁷For Pakistan, Lewis and Guisberger cite a rank correlation coefficient of 0.78 between nominal tax protection and rates of effective protection. Stephen R. Lewis, Jr. and Stephen E. Guisberger, "Measuring Protection in a Developing Country: The Case of Pakistan," The Journal of Political Economy (forthcoming).

appears that taking effective rates of protection rather than nominal tariff rates yields a somewhat different picture of the structure of protection of industry in Tanzania. But there are only a few industries which show a markedly different ranking for nominal tariff rates from the ranking of both measures of effective protection rates. Thus clothing, wattle bark extract, meat products and soft drinks are much lower on the effective protection rate scale than on the nominal tariff rate scale. The tariffs on imports of wattle bark extract and meat products are not relevant as measures of protection because the bulk of production in these industries is for export. Therefore the relevant "nominal" external tariff is zero. Inputs in the production of soft drinks are subject to high duties. This, together with the negative effect on effective protective rates of the excise duty on mineral waters, results in a negative rate of effective protection. The effective protective rate for the clothing industry is considerably higher than the nominal tariff rate. But the difference is not as great as in the case of most other industries high up on the scale because of the high tariff rate (73 percent) on textiles, the main input in the clothing industry. Tanning and leather, and metal products rank significantly higher in the effective protective rate scale than they do on the nominal tariff rate scale. This is mainly due to the low or zero tariffs on major inputs used in these industries. In addition, the

export tax on hides and skins of nearly 3 percent offers additional effective protection to the tanning and leather goods industry.¹⁸

The rank correlation coefficients between columns (1) and (4) and between columns (2) and (4) are 0.88 and 0.92 respectively, i.e. higher than those between nominal tariff rates and effective protection rates, which is to be expected since the figures in column (4) (called here "nominal tax protection") take into account other relevant taxes on final products as well as the nominal tariff rate on the final products. In the case of processing industries the nominal tax protection, for purposes of rough comparison is taken as the export tax on the main input, which usually makes up a considerable part of the value of production.

3. In all but four industries effective protective rates are higher than or roughly equal to the nominal tariff rates. Of the four exceptions, three (wattle bark extract, meat products and soft drinks) were discussed above (see point 2). In the fourth, the manufacture of sisal cordage and rope, production is mainly for export and therefore the relevant rate of import duty is zero. In most industries the effective protective rates are considerably greater than the

¹⁸ We are assuming here the domestic user has to pay the world price less the export tax - see above, page 165 for the assumption underlying this assumption - also footnote 15.

TABLE 4.2

RANKING OF NOMINAL AND EFFECTIVE TARIFF RATES

	"Derived" Effective Protection Rates (1)	"Alternative" Effective Protection Rates (2)	Nominal External Tariff (3)	Nominal Tax Protection (4)
Tobacco	1	1	1	1
Matches	2	6	2	3
Paints	3	11.5	13.5	11
Bicycle Tyres & Tubes	4	13.5	17	14
Textiles	5	7	6	6
Cosmetics	6	3	5	5
Dairy Products	7	13.5	13.5	11
Sugar Refining	8	2	4	4
Beer	9	4	3	2
Canned Fruit & Vegetable	10	9	13.5	11
Biscuits	11	18	13.5	18.5
Soap	12	8	10	18.5
Clothing	13	15	7	7
Tanning & Leather	14	10	20.5	16
Footwear	15	11.5	9	9
Metal Products	16.5	16	23	21
Radio Assembly	16.5	5	8	8
Furniture and Fixtures	18	17	20.5	16
Glass Products	19	19	20.5	16
Groundnuts (crushed)	20	20	31.5	27
Cotton Seed Oil	21	24	31.5	22
Paper & Paper Products	22	25	25	24
Insecticides	23	21	31.5	30
Coffee Processing	24	22.5	20.5	25.5
Cashew Nut Processing	25	22.5	31.5	25.5
Cement	26	26	26	28
Groundnuts (edible)	27	27	31.5	23
Castor Seed Oil	28	29	31.5	31.5
Sisal Cordage & Ropes	29	28	24	30
Sisal & Jute Bags	30	30	31.5	30
Pharmaceutical Products	31	31	31.5	34.5
Printing & Publishing	32	32	27	31.5
Wattle Bark Extract	33	33	13.5	34.5
Meat Products	34	35	13.5	33
Soft Drinks	35	34	18	22

nominal rates. For the non-processing industries this is mainly because in East Africa duties on most raw materials and other inputs are either zero or very low. In recent years ad valorem tariffs on most finished goods entering Tanzania from outside East Africa have been around 40 percent with lower rates on intermediate goods and generally free rates on capital equipment. For S.I.T.C. Sections 2 (Crude Materials), 5 (Chemicals) and 7 (Machinery and Transport Equipment) the ratios of customs duties paid to the c.i.f. value of imports have been between 10 and 25 percent. The same ratio for S.I.T.C. Section 6 (Manufactured Goods - classified -) and 8 (Miscellaneous Manufactured Goods) fluctuated between 25 to 50 percent from 1962 to 1966.¹⁹

Thus the level of protection of capital and labor used in Tanzanian industry is much higher than indicated by nominal tariff rates, which exceed 100 percent in only two industries, tobacco and beer. However, compared with most Latin American countries nominal tariff rates in Tanzania are low. In Argentina, for example, of twenty-four industries listed by Balassa²⁰ nine had nominal tariff rates greater than 100 percent. However, the difference in effective protection rates between the two countries is not so

¹⁹ See Chapter I, pages 72-76, for more details on recent changes in tariff rates.

²⁰ Balassa, *Integration and Resource Allocation in Latin America*, *op. cit.*, Table 2.

striking. In both countries about half the listed industries were estimated to have protection rates greater than 100 percent.²¹

4. Effective protective rates in Tanzania are generally highest for import substitute industries producing non-durable consumer goods though paints (ranked 3) and bicycle tyres and tubes (ranked 4) are two industries high up which do not fall under such a classification. The protection offered to "import substitute" industries is generally much greater than that given to processing industries using domestically produced primary products. Notable exceptions are the canned fruit and vegetable industry and textile industry. The latter is a potentially important user of Tanzanian cotton, but production of textiles will in the foreseeable future be almost entirely for the domestic market, unlike processing industries such as sisal rope, sisal bags, cashew nut processing and wattle bark extract where production is or will be largely for export. In the Argentinian case the ranking of industries by effective rates of protection, was found to be textile, clothing and shoes, foods and beverages, metals, rubber, chemicals, other industries, electrical machinery and appliances, paper and paper board, vehicles and non-electrical machinery.²² An interesting

²¹ Ibid.

²² Ibid., page 17.

comparison with Tanzania is provided by the tobacco industry in Argentina, for which the effective protective rate was estimated to be negative. By contrast, the effective protection rate for textile production was found to be greater than 1,000 percent.²³

The estimates for effective protective rates in the processing industries in Tanzania given in Table 4.1 may be too low. The calculations were based on the assumption that the domestic producers received the primary product import at the f.o.b. export price less the export tax. However, domestic prices of these products, as set by the National Agricultural Products Board (N.A.P.B.) may in fact be lower than indicated by the above method of estimation. In addition, certain domestic processors may be further subsidized through getting the primary product at special prices below the domestic price set by the N.A.P.B.

Effective protective rates for import substitute industries, given in Table 4.1, may also be understated, for with the exception of the radio assembly industry (see footnote (s) to table 4.1) no account has been taken of the use of the provision which allows certain industries to apply for rebates on duties paid on imports of inputs. Firms in "approved industries" can apply for refunds of import duty under Local

²³

Ibid., Table 2.

Industries (Refund of Customs Duties) Ordinance (Cap. 289). In 1966 firms which were granted refunds included those manufacturing textiles, chemicals, paper, metal products, enamelware, fishnets and blankets as well as the firm assembling radios.

On the other hand it may be argued that the effective protective rates given in Table 4.1 are too high for a number of import substitute industries, because the prices of domestically produced goods such as beer, cigarettes, matches, fruit juices, shoes, etc., are considerably lower than the prices of similar imported goods. However a significant part of the price difference may reflect quality differences. Even where this is not so and therefore our original third assumption (that domestic prices equal import prices plus the tariff)²⁴ does not strictly hold, effective protective rates would still be high enough to enable efficient firms to earn high profits or inefficient firms to survive.

For sixteen of the first seventeen industries in Table 4.1 effective protective rates are 95 percent or higher in both columns (6) and (7). (The only exception is "biscuits" for which the effective protective rate is 54 percent using "alternative" coefficients whereas it is 166 percent using the "original" coefficients (see footnote (t) to Table 4.1). In these industries therefore labor and/or capital are re-

²⁴ See above Chapter II, page 98.

ceiving considerably more than they would have under "free trade" conditions, assuming of course that the input coefficients (as measured in value terms) for all non-primary inputs remain the same in the post-tariff situation as they were in the pre-tariff situation. In any event firms in these industries should either be earning substantial profits or else they are operating inefficiently or at well below full capacity.

Systematic statistics on profit rates in Tanzania are not available. Therefore what we have done is to estimate profit rates for different industries on the basis of data in the Tanzanian Survey of Industries for 1965. Table 4.3 shows the rankings of those industries for which statistics were available, firstly according to profits per shilling of output (column 1), and secondly according to profits per shilling of depreciation (column 2).²⁵ The industries are listed in order of their ranking according to estimates of rates of effective protection given in Table 4.1. From the figures in Table 4.3 there clearly appears to be no close correlation between rates of effective protection and profit rates.

Since the statistics on which our profit rates are based are somewhat unreliable (statistics on depreciation are unreliable even in the most developed economies) the best we

²⁵ See the footnotes to Table 4.3 for the exact sources of the data on which these rankings were based.

can do here is supplement these rankings with impressions and facts about individual industries.

Before looking at the figures in the 1965 Survey of Industries, and then estimating the profit rates, we were under the impression that profit rates were high in the beer, tobacco products, footwear and meat processing industries.²⁶ Yet according to Table 4.3 profits were negative in the tobacco products industry.²⁷ And the rankings of the other three industries are not strikingly high although beer is ranked fourth and footwear eighth according to the profits/output ratio. One reason for believing profit rates in these industries were high is that each of them was dominated by one or more firms with large modern factories until the Government takeover in 1967. Of the four industries, three (beer, tobacco and footwear) enjoy high rates of effective protection. On the other hand, for the fourth, the meat processing industry, the rate of effective protection is estimated to be negative. Yet from published data in 1966,

26

In an article which covers roughly the same ground as this Chapter and which was submitted prior to the publication of the 1965 Survey results we wrote "It is well known that the major producers of beer, tobacco products, footwear and meat products earn high profit rates on invested funds." See Dudley Kessel, "Effective Protection of Industry in Tanzania," The East African Economic Review, Volume 4 (New Series) no. 1, June 1968, page 11.

27 We might attribute this strange statistic to the unreliability of production statistics in Tanzania.

TABLE 4.3

RANKING OF INDUSTRIES BY DIFFERENT MEASURES OF PROFIT RATES

Industry	Rate of Effective Protection	Profits Output	Profits Depreciation
Tobacco	1	25	25
Matches ^a	2	13	17
Paints	3	1	1
Bicycle Tyres & Tubes ^b	4	3	14
Textiles	5	10	3
Cosmetics ^c	6	16	5
Dairy Products	7	23	23
Sugar Refining	8	9	20
Beer	9	4	19
Canned Fruit & Veg. ^d	10	14	9
Biscuits	11	21	18
Soap	12	19	12
Clothing	13	7	4
Tanning & Leather	14	22	2
Footwear	15	8	16
Metal Products	16	5	15
Furniture & Fixtures	17	6	3
Paper & Paper Products ^e	18	11	20
Insecticides ^c	19	17	6
Cement	20	20	11
Sisal Products	21	24	24
Pharmaceutical Products ^c	22	18	7
Printing & Publishing ^e	23	12	21
Meat Products ^d	24	15	10
Soft Drinks	25	2	8

- Notes:
- Based on statistics for "wood products" industry
 - Based on statistics for "rubber products" industry
 - Based on statistics for "miscellaneous chemicals" industry
 - Based on statistics for "food products" industry

Source: The United Republic of Tanzania, Survey of Industries 1965, Dar es Salaam, Central Statistical Bureau, Ministry of Economic Affairs and Development Planning, 1967.

the firm of Tanganyika Packers (which is in effect the meat processing industry of Tanzania) earned profits, before taxation, equal to $33 \frac{1}{3}$ percent of net assets.²⁸ We have no idea of the profitability of the one match factory in Tanzania but the frequent complaints about the quality of domestically produced matches seems to indicate that the high level of effective protection (over 200 percent by both estimates in Table 4.1) is cushioning inefficiency, if not profits as well. In Table 4.3 "matches" is ranked 17th and 13th according to the two measures of profit rates. But these rankings are really not relevant because the figures are for the "other wood products" industry as a whole and the match factory was not yet in full operation in 1965.

By contrast with the firms supposed to be earning high profits, discussed above, there are other firms in industries with high rates of effective protection, which are not doing well profitwise, some even incurring losses. One of the two large sugar refineries in Tanzania received a subsidy from the Government. Profits earned by the other firm are estimated to be low despite an estimated rate of effective protection of about 200 percent as a result of a high Government controlled price for sugar.²⁹ The factory producing aluminum

²⁸

A plausible explanation here could be the monopsonist power that Tanganyika Packers obviously has in the purchasing of cattle from farmers in Tanzania.

²⁹ Here the firm's "rigging" of income figures in order to avoid tax is a possibility.

products in Dar es Salaam has been running at a loss even though the effective protection rate is estimated at 95 percent for the metal products industry. This may well be a case of teething problems in the initial stages of production.

While effective protection rates should be a good guide to the possibilities for high profits and/or inefficiency in an industry, clearly a more detailed study of individual industries is necessary. Such factors as the size of the market and the availability of raw materials, to mention just two, are important in determining potential profit rates. For example, the recently opened cashew nut processing firm in Dar es Salaam encountered a number of difficulties in the early stages of operations. As pointed out above it was helped by the N.A.P.B. reducing the price of nuts bought by the firm. Consequently, of course, the rate of effective protection enjoyed by the firm was thereby increased. However, there remains a problem undetected by our somewhat mechanistic approach here. The quality of the nuts bought by the firm is not as good as expected because of an inefficient system of buying cashew nuts presently operating in the south of Tanzania. Instead of 40 percent of the nuts being used by the firm being of the highest quality the percentage has turned out to be considerably lower.

III

Lower.

We have already referred to the difficulty of obtaining accurate estimates of rates of effective protection for Tanzania given the unreliability and paucity of industrial statistics in East Africa. But there is a further problem we have not yet considered. How reasonable are the basic assumptions (necessary to estimating E_j from formula 4.1) in the Tanzanian case? These assumptions were listed in section III of Chapter II (see page 98). The first assumption, that the physical input-output coefficients are fixed for all non-primary inputs, is crucial to the whole effective protection approach and we cannot question it here. The second assumption (that the elasticities of demand for all exports and supply of all imports are infinite) is reasonable enough in our study given the fact that Tanzania is such a poor country and that her major exports (with the exception of sisal) make up a very small part of total world supply.

With respect to the third assumption (i.e. that there be no "water" in the Tanzanian tariff so that domestic prices are equal to world prices plus the tariff) there is more room for doubt. In some cases the price of an import substitute produced in East Africa is considerably lower than that of the equivalent import. Thus, as pointed out earlier, our estimates of effective rates of protection for the activities producing these goods would be too high. But, as was also mentioned earlier, part of the price differential could

be due to quality differences. Fortunately, for our purposes, outright quotas on imports are few and far between in East Africa.³⁰ For the existence of quotas might lead to domestic prices of importables being higher than the world price plus the tariff, thus raising "true" effective protection above the estimate we would obtain from plugging the tariff rate on the final product into t_j in formula 4. What is needed here is a detailed study comparing the domestic prices of import substitutes with the world ("free trade") price of the equivalent good. However very little along those lines has been done thus far in East Africa.

The fourth basic assumption is that "the government pursues appropriate fiscal and monetary policies so that full employment is maintained." The problem of unemployment in a dualistic economy like Tanzania is not really susceptible to the appropriate "fiscal and monetary policies" normally envisaged for developed countries. However the question of undervaluation or over-valuation of a country's currency can be considered to fall under the heading of monetary policy. The currency of many countries is overvalued at the official exchange rate and a substantial part of the tariff level in such countries becomes a substitute for official

³⁰ Though in April 1965 the Tanzanian Government did impose quotas on imports from Japan in an attempt to reduce the large and growing trade deficit which Tanzania had with Japan. (Smith, op. cit., p. 63).

devaluation of the currency. In such cases,

We should try to correct measured levels of protection.... Since a failure to do so greatly overstates the level of protection the industry is receiving relative to what it might receive under "free trade" or some approximation thereof.³¹

This problem does not seem to be particularly relevant to our Tanzanian study. At least until the recent British devaluation of the pound the Tanzanian shilling did not appear to be significantly overvalued. Although Britain is one of her most important trading partners, Tanzania did not follow the British devaluation.

The fifth basic assumption is that "all tariffs and other trade taxes are non-discriminating between countries of supply and demand." For Tanzania this is valid only if we assume that Kenyan and Uganda exports to Tanzania are being produced in the same domestic market as equivalent Tanzanian products. Given the basically common external tariff structure this condition will obtain if (i) we assume further that there are no trade barriers within East Africa, and (ii) if the third basic assumption is broadly true for the prices of manufactured goods produced in Kenya and Uganda, i.e. the prices of these goods are equal to the world price of comparable imports plus the external tariff. As we have seen, neither (i) nor (ii) strictly holds in the Tanzanian

³¹Lewis and Guisberger, op. cit., page 28.

case. We shall be dealing with the latest type of barrier to interterritorial trade in Chapter VI when we discuss the transfer tax and its potential implications for rates of effective protection and industrialization possibilities of Tanzania.

In their interesting study on measuring protection in Pakistan, Lewis and Guisberger have attempted to adjust their estimates of rates of effective protection where they consider the basic assumption to be not strictly applicable. Thus they made use of facts on direct price comparisons for various goods in Pakistan and in international trade in order to correct levels of protection where (i) tariffs are redundant and overstate the level of protection implied by the tariff structure and (ii) "quantitative restrictions, not tariffs, are the effective determinants of domestic prices of some goods, so that tariffs understate the level of protection afforded to the industry."³² On the assumption that the official exchange rate was eroded they have assumed that it "would have to be raised by at least 50 percent in order to come close to an appropriate exchange rate, if one simultaneously lowered tariffs by a considerable amount."³³ They then go on to attempt an answer to the question "At the more appropriate exchange rate, what rate of tariff or subsidy

³²Ibid., page 2.

³³Ibid., page 29.

would be required to keep domestic prices as they are now?"³⁴
 Their finding was that after allowance for currency over-valuation the average rate of effective protection for Pakistan industries was 25 percent rather than 85 percent as implied by the original study of Soligo and Stern.

Perhaps the most interesting section of the Lewis-Guisberger paper is that which deals with the "special problem of non-traded inputs."³⁵ In chapter II we discussed Corden's objection to the treatment of non-traded inputs simply as inputs with zero tariff rates. Lewis and Guisberger accept this as well as Corden's view that it is more logical

that non-traded inputs should be included in value added and the implicit rate of protection to the two combined should be calculated: [since] higher returns permitted by tariffs on output would be shared by primary factors and by producers of those inputs not subject to international price competition, i.e. non-traded goods.³⁶

In the Appendix to their paper Lewis and Guisberger use four different methods in order to estimate adjusted rates of effective protection along the lines suggested by Corden. Each of these methods involves a different way of deflating the value of non-traded inputs ("all other services"³⁷ in the Pakistan input-output matrix) while only the last two combine deflated values of non-traded inputs with value added.³⁸ The rates of effective protection obtained using

³⁴Ibid., page 33.

³⁵Ibid., pp. 22-27 and Appendix pp. 10-13.

³⁶Ibid., page 23.

³⁷Ibid., Appendix pp. 10-12.

³⁸ See above, Chapter II, pp. 111-116.

these adjustments are considerably lower than the unadjusted rates for Pakistan; the average given by these methods being between 40 and 60 in each case, as opposed to the unadjusted average of 89.³⁹ However, the rankings hardly change at all. This fall is only to be expected since we are no longer assuming that there are no tariffs on these non-traded inputs, i.e. the extent of cascading implicit in the tariff structure has been reduced. To put it another way, the cost of these non-traded inputs has gone up as a result of the tariff structure and therefore, the increase in value added is lower since the implied "free trade" value added is now higher.⁴⁰ Once again because of the lack of adequate data we have not found it possible to try these adjustments in the Tanzanian case.

³⁹Lewis and Guisberger, op. cit., Table 3.

⁴⁰

Another reason for deflating non-traded inputs in the Pakistan case is that the input-output table is made up at market prices i.e. it includes trade and transport mark-ups which "are lumped into the deliveries to the producing sector from "all other services," and "since we wish to compare the value of domestic output with c.i.f. or f.o.b. values of comparable products, the domestic trade and transport margins should be removed from the inputs and from the value of output", (Lewis and Guisberger, op. cit., p. 24). However, Lewis and Guisberger do not explain whether they remove these margins (estimated at 2/3 of the value of the input of "all other services") from the value of output in all four methods used in the Appendix. They do in the first method which is described in the text.

Chapter V

I

Can the results for rates of effective protection obtained in the previous chapter be of any assistance in formulating rational commercial policy in Tanzania? More generally, can the concept of effective protection be of use in discussing the kinds of tariff and tax policies that should or could be employed by underdeveloped countries? To the extent that we agree that rates of effective protection provide a better measure of the protection offered to different activities than do nominal tariff rates,¹ the answer to both questions is yes. The question that we then turn to is how can we use the concept of effective protection in deciding what tax and tariff policies should be used by underdeveloped countries in general, and by Tanzania in particular? The answer, in simplistic terms, is that the tariff and tax policies should be such as to result in relative rates of effective protection which are in accord with the relative levels of protection desired for different activities. This is of course true only if we assume that the sole aim of tariff policy is the protection of different industries to varying degrees. In many underdeveloped countries import

¹ For a discussion of the relative merit of nominal and effective rates as measures of the cost of protection, see Chapters II and III.

duties are the single most important source of government revenue and hence revenue requirements are frequently the most important objective of tariff policy. In what follows we shall, for the most part, ignore the revenue objective and concentrate on the aim of protection. However, we shall from time to time examine the possibility of a tariff structure which attempts to satisfy both objectives.²

Thus, the rate of effective protection is only a tool (a measuring rod) for the rational implementation of certain desired policies. What we shall be concerned with in this chapter are different possible policy strategies open to underdeveloped countries; their relative merits in general and more especially in the Tanzanian case. Moreover, what is most relevant here are the implications of these different policies for rational tariff and tax policy. In terms of specific recommendations on possible tariff and tax changes it may not appear to be directly of much use to discuss alternative "ideal type" development strategies. For in practice there is already a given tariff structure and a given level and distribution of industrial development. Nevertheless, the general strategies may act as guides to the kinds of changes in tariffs and taxes needed to help move towards the desired pattern of development.

²See especially pp. 4-5, 9-10.

II

The "Efficiency Now" Criterion:³ One widely held view amongst Western economists today is that attempts by underdeveloped countries to speed up economic development through policies which place most emphasis, growth in the industrial sector have largely failed. One strand to the general position of this school of thought (which has been gaining an increasing number of adherents in recent years) is that the use of high tariffs on manufactured goods in many underdeveloped countries (particularly those in Latin America) has resulted in gross misallocation of resources. Plagued by small domestic markets and inefficiencies in production in new industries, these countries' growth rates have been seriously impaired. And the tool of effective protective rates provides further ammunition for this argument. For if Balassa's study of Argentina⁴ can be taken as representative of the general situation in underdeveloped countries, then mainly because of escalated tariff structures, rates of effective protection tend to be much higher than nominal tariff rates.⁵ Thus Balassa argues that the misallocation of resources as compared to an hypothetical free-trade

³In the Introduction to this dissertation we briefly give our reasons for emphasizing this criterion so strongly in this section.

⁴Balassa, "Integration and Resource Allocation in Latin America," op. cit.

⁵Although Pakistan is an example where escalation does not appear to be so widespread. See Lewis and Guisberger, op. cit.

situation is much greater than appears to be the case from an examination of nominal tariff rates alone. Moreover, for a specific activity nominal tariff rates may be an erroneous indicator of the real protection which the activity receives.

There is another important implication of the effect of escalated tariff structures on rates of effective protection. Most developed countries have low, if any, tariffs on unprocessed primary products imported from underdeveloped countries. But they do have tariffs on processed primary products. While the nominal tariff rates on these processed products are relatively low, because there is no tariff on the unprocessed product, the "true protection" given to the processors of these raw materials as measured by the rate of effective protection is considerably higher.⁶ Thus these relatively low tariffs provide the domestic producers in the developed world with a significant competitive advantage over processors in the underdeveloped country which produces the primary product.⁷ It is difficult for processors in underdeveloped countries to get started and/or expand their activities. Lately there has been a good deal of support among economists and policy makers for the lowering

⁶ See Balassa, "Tariff Protection in Industrial Countries," op. cit., and Basevi, op. cit., for estimates of the differences between nominal and effective tariff rates for a number of processed products entering various industrialized countries.

⁷ To the extent that the product becomes lighter as a result of processing and to the extent that this loss in weight is reflected in lower transport costs for the processed product, the processors in the country where the primary product originates have an offsetting advantage.

or eliminating of these tariffs. An alternative approach is for the underdeveloped countries to subsidize their own processing industries in order to offset the tariff protection enjoyed by processors in the countries with the largest markets for these primary products. We shall return to this point below in connection with our discussion of possible changes in the present tariff and tax structure in Tanzania.

One logical starting point for a tariff and tax policy based on the "efficiency now" criterion is a system with no tariffs or taxes which subsidize or discriminate against domestic producers vis-a-vis foreign competition. But even the most ardent "free traders" would admit the need for some modification of this ideal. Firstly using the infant industry argument, temporary tariffs for certain newly beginning industries may be advisable. Moreover, as we have already pointed out, for most underdeveloped countries import duties are the major source of government revenue. Since for administrative and other reasons it is difficult if not impossible to increase revenue significantly from other taxes, import duties in the short run will have to remain an important source of revenue.

A more practical way of attempting to satisfy both the revenue and the "efficiency now" criteria might be as follows:

Find a level of effective protection for all activities such that a certain amount of revenue from import duties is assured. In other words, given a certain level of revenue that has to be raised from import duties, the objective would be to set tariffs and taxes so that (a) the effective rate of protection is equalized for all activities and (b) the given level of revenue from import duties and other relevant taxes is attained.

The equalizing of the effective protective rates at some level greater than zero in different activities is not as "efficient"⁸ as having no tariffs at all. But this method will still lead to resources being directed to the most efficient activities if we can assume that

- (i) relative efficiency is reflected in profit rates;
- (ii) profit rates determine allocation of resources;
- (iii) profit rates in different industries are the same when there are no tariffs.⁹

The kind of tariff structure we are talking about here would then result in the country specializing in those activities which reflected its present comparative advantage. A policy which calls for no tariffs or low tariffs on industrial products has frequently been criticized on the grounds that it condemns the underdeveloped countries to their present "inferior" position as peasant producers. However, a priori,

⁸ As the term is generally used in micro- and international trade theory.

⁹ See Chapter III, pp.135-4 for a critical discussion of the importance of these assumptions to the theory of effective protection.

we cannot know what precise structure of tariffs the criterion suggested here would lead to. One likely result is that tariffs on inputs in import substitute industries would be higher while tariffs on the outputs of these industries would be lower. For the elasticities of supply and demand for imported inputs are likely to be very low especially in the short run. This is because of the unavailability of substitutes either in the form of other inputs (where we assume fixed input coefficients such substitution is impossible) or in the form of increasing domestic production of these inputs. What we are saying here is that more revenue from import duties can thus be raised from higher tariffs on intermediate and capital goods. And thus less revenue will have to be raised from import duties on final goods, especially consumer goods. What this implies for the level of tariffs on these consumer goods will depend on the domestic elasticities of demand for and supply of these goods.

The "efficiency now" criterion seems particularly relevant to the present Tanzanian context. For Tanzania, as we have seen in Chapter I, is a classic example of a poor underdeveloped country with a small domestic market whose major resources are its land and people. Admittedly, prospects in the near future for favorable trends in the world market prices for Tanzania's major exports are not bright. Nevertheless, Tanzania's best hope for successful development

lies in rising money incomes in the rural sector where the bulk of the population lives and works. Such rising incomes can only be achieved through increases in production, given the poor prospects for price increases.¹⁰

The implications of this view for tariff and tax policy relating to industrialization strategy are clear. Firstly, unduly high protection for import substitute industries should be avoided. For such protection leads to resources being attracted into these industries which will then be characterized by high profits and/or inefficiency. Moreover, such protection leads to high domestic prices. Where this means higher prices for consumer goods, there is a consequent lowering of real incomes in the rural sector and probably a lowering of incentives to increase output among peasant producers. In the second place those industries which use as important inputs the products of Tanzania's rural sector should be encouraged especially where they are or will be producing largely for export. The most significant of these industries in this latter category include various food processing industries and the sisal rope, cordage and twine industry.

The results obtained in our study of effective protective rates in Tanzania would seem to indicate that the present

¹⁰ For a well argued and documented statement of this view, see G. K. Helleiner, "Trade, Aid and Development," The East African Journal, May 1967.

tariff structure does not systematically pay attention to the "efficiency now" criterion. Firstly, there is a wide range of rates of effective protection (from over 500 for tobacco to negative rates for four industries).¹¹ This probably results in a good deal of inefficiency and misallocation of resources. Does it make sense to subsidize inefficient manufacturers (e.g., of matches and metal products) producing for a small domestic market and at the same time enable efficient enterprises in heavily protected industries to make large profits?

With respect to import-substitute versus export-oriented industries, the present Tanzanian tariff structure is heavily biased in favor of the former. Of the ten industries with the highest estimated rates of effective protection¹¹ only one, canned fruit and vegetables, can be considered a potential export-oriented industry. Certainly a number of these industries use Tanzanian products as major inputs, most notably the rapidly growing textile industry. But a number of industries lower in the rankings are more obviously geared to production for export.

It has been argued that the development of import substitute industries provides a better strategy for industrialization in East Africa than the promotion of export industries.¹²

¹¹ See Table 4.1.

¹² See, for example, Brian van Arkadie, "Import Substitution and Export Promotion as Aids to Industrialization in East Africa," The East African Economic Review, Vol. 1, New Series, 1964.

TABLE 5.1

NOMINAL AND EFFECTIVE PROTECTION IN SELECTED PROCESSING
ACTIVITIES IN THE EEC AND UK

<u>Commodity</u>	<u>Nominal Protection</u>		<u>Effective Protection</u>	
	<u>EEC %</u>	<u>U.K. %</u>	<u>EEC %</u>	<u>U.K. %</u>
Rope, Cordage, Twine	16.0	15.0	40.0	37.3
Processed Coffee	25.0	3.5	45.0	3.0
Leather	7.3	14.9	18.3	34.3
Leather goods, other than shoes	14.7	18.7	24.3	26.4
Shoes	19.9	24.0	33.0	36.2
Plywood	15.0	17.5	32.5	38.7
Meat Preparations	23.8	11.1	46.1	15.2
Fishery Products	22.0	12.7	35.8	21.4
Tinned Fruit and Fruit Juices	21.0-42.0	0.3	20.0-100.0	0
Groundnut Oil	17.0	15.0	140.0	80.0
Cottonseed Oil	10.0	10.0	34.0	34.0
Soybean Oil	10.0	10.0	160.0	88.0
Coconut Oil	15.0	15.0	150.0	66.7

Source: G. K. Helleiner, "Approaching the EEC," Africa Report, April 1968, Table 3, page 40.

The establishing of domestic manufacturers of beer, cigarettes, low-priced shoes and textiles, all products for which there is a substantial domestic market, constituted the "early" and "easy" stage of import substitution. The newer import substitute industries include the manufacture of cement, aluminum products, biscuits; the refining of oil; the assembling of vehicles and radios. The wisdom of concentrating on these industries may well depend on a number of factors we have not yet discussed; e.g., the availability of foreign capital and enterprise for a particular industry, the importance of skilled labor, the minimum size plant that is economic, the importance of location, etc. Some of these factors will be considered later in this chapter.

However, the point that needs stressing here is that the Tanzanian government should be giving more consideration to the encouragement and promotion of industries processing primary products for export where the limits of the market are not so obviously a factor. What is relevant here is a factor already discussed on pages 195-196 above; that is, the high rates of effective protection given to processing industries in those countries which are the chief markets for Tanzania's major products. Table 5.1 shows the effective protective rates for selected processing activities in the EEC and the U.K. Helleiner has estimated that the following export duties for primary products are necessary if Tanzania's

processing industries are to be able to compete with processors in EEC countries:¹³

sisal	21 percent
processed coffee	30 percent
groundnut oil	19 percent
castor oil	9 percent
cotton seed oil	15 percent

From column (5) of Table 4.1 we find that in 1966 the export duties in Tanzania for these five products were 1.5, 10, 7.5, 1 and 17 percent respectively. Thus, in four of the five industries the existing export duties were well below the level needed to put Tanzanian processors in a competitive position, ceteris paribus, with their European counterparts.¹⁴ The subsidy given to these industries need not take the form of increased export taxes on raw materials which might result in lower prices for the farmers. Instead it would probably be preferable for the subsidy to be "hidden" through the NAPB and other marketing boards which could sell the primary products to the processing firms at much lower prices than these products fetch on the world market.

¹³Helleiner, "Trade, Aid and Development," op. cit. Helleiner is making the same assumption we made earlier i.e. such export taxes will result in the price paid by the domestic user of the raw material being less than the price on the world market by an amount equal to the export tax.

¹⁴For a discussion of some other factors which make it difficult for processors in an underdeveloped country like Tanzania to compete with their counterparts in more industrialized countries see W. Arthur Lewis, Report on Industrialization in the Gold Coast, Government Printing Department, Accra, Gold Coast, 1953, reprinted in Gerald M. Meier (ed.) Leading Issues in Development Economics, New York, Oxford University Press, 1964, pp. 322-325.

Where would the government raise the extra revenue to subsidize export processing industries? One possibility might be the lowering of import duties and the raising of excise taxes on heavily consumed items like beer, cigarettes, textiles, sugar, etc. These measures would be consistent with a policy more closely geared to the "efficiency now" criterion since the result would be a reduction in the existing high rates of effective protection given to the activities manufacturing these products. Whether such tax changes would result in increased revenue would depend (if we analyze it in purely static terms) (a) in the case of lower import duties, on the domestic elasticities of supply for these products, together with the elasticity of demand for imports, as well as for the domestically produced equivalent; and (b) in the case of higher excise duties increased revenue would depend only on the domestic elasticity of supply, if we continue to assume that domestic prices are equal to "free trade" world prices plus the import duty, i.e. that the supply of Tanzania's imports is perfectly elastic.¹⁵ If we consider the situation in more dynamic terms, we would expect the raising of excise taxes to lead to a greater increase in revenue than the lowering of import duties. For the process of import substitution in many industries is

¹⁵See Chapter II, page 126 for a discussion of the necessity of this assumption, to the theory of effective protection; and Chapter II, page 126 for the validity of this assumption in the Tanzanian case.

already well under way and domestic production will expand even if domestic producers find themselves receiving lower prices for their products.¹⁶ The use of higher excise taxes can be seen as a method of siphoning off excessive profits which efficient firms can earn as a result of the high rates of effective protection which their activities enjoy. In any event these types of change in tax rates would be expected to lead, ceteris paribus, to a reduction in resources being invested in import-competing industries and to more resources being available for export-oriented industries as well as for agriculture.

A less radical policy which could be implemented immediately would be for the government not to encourage further import substitution through import duty rebates for tariffs on inputs, other fiscal concessions and ready licensing of new factories. Now that the government has acquired a share in many of the most profitable manufacturing enterprises in Tanzania, the profits from these enterprises could be used (probably by the National Development Corporation - NDC) to promote a strategy of more reliance on export processing industries. Given a change in the policy of the developed countries towards preferential treatment of imports of manufactured

¹⁶ On the basis of our assumption, the price received by the producer is equal to the "free trade" world price plus the import duty less the excise tax.

and processed primary products from underdeveloped countries, Tanzania might be able to develop more export-oriented industries like the important meat products exports of Tanganyika Packers. However as Helleiner pointed out when commenting on the high rates of effective protection given to domestic producers in the Common Market area and the U.K. on the processed products listed in Table 5.1,

In the immediate future, the most important items in this category for East Africa are probably sisal rope, cordage, and twine; leather and leather products; and fruit juices and tinned fruit, particularly pineapples. East Africa's ability to increase exports of these items is not very great in the short run, but the effects on investment in processing facilities could begin to be felt fairly quickly. The potential for sisal processing activities is of particular interest. Free entry to a major market like the EEC could well provide a substantial boost to the severely depressed East African sisal industry, enabling it to compete more effectively with the new synthetic substitutes.¹⁷

Paul Clark has suggested that:¹⁸

a. Industrialization [in East Africa] should proceed in a sequential pattern, from 'early' industries, which are comparatively economical with the present income level and complexity of the economy, to 'later' industries, which become economical only over time as the present situation changes.

b. Public tariff, tax or service subsidies which are provided to stimulate initial investment in 'early' industries should become unnecessary as these industries become established, and attention shifts to 'later' industries.

¹⁷ G.K. Helleiner, "Approaching the EEC," Africa Report, April 1968, page 38.

¹⁸ Paul Clark, "Some Reflections on Planning Import Substitution in East Africa," a paper presented to the annual meeting of the African Studies Association; Bloomington, Indiana, November 1966.

c. Some 'early' industries should over time become sufficiently efficient to penetrate export markets, so that export expansion can complement import substitution as the basis for continuing industrialization.

Realizing the importance of tariffs for revenue purposes, Clark comes up with the interesting idea that there should be a "basic revenue" tariff rate applied to all imports, including capital equipment. In addition he suggests the possibility of supplementary protective rates which would be based on "estimates of the effective protection on value added afforded by the standard nominal rates." Initially, such supplementary rates would not be levied on intermediate goods, "but the clear policy should be to offer supplementary protection in the future, as 'later' industries producing these goods become more economical and as 'early' industries using them become established sufficiently to stand the reduction of their tariff subsidy."¹⁹

The neatness of Clark's logical schema has great appeal. Moreover, as it would be applied initially, his schema would take into account the need to maintain or increase revenue from tariffs and other relevant taxes as well as paying attention to effective rather than nominal rates. The idea of having a revenue tariff for all intermediate goods would, ceteris paribus, reduce the existing rates of effective protection for most, if not all, activities producing

¹⁹ Ibid.

consumer goods. This is because present tariffs on intermediate goods are low or zero. There would now be more revenue raised from duties on intermediate goods since the price elasticities of demand and supply for most capital goods in Tanzania are very low, if not zero. To raise the same total revenue from import duties, less revenue will now be needed from duties on consumer goods. This does not necessarily imply a lowering of duties on consumer goods for such a lowering might result in a greater than proportional increase in imports and hence an increase in revenue from import duties on these goods. The overall effect would depend on what was happening to domestic production of the same commodity and hence to receipts from excise taxes, assuming of course that there is an excise tax on this particular commodity. In general the decreased reliance which would be placed on revenue from duties on consumer goods under Clark's schema would give more flexibility to the kinds of tariffs and other taxes that could be placed on consumer goods. It seems reasonably certain that policy makers would then be able to concentrate more fully on one important goal of rational tariff policy; i.e., a tariff structure which yields a desired structure of effective rates of protection. This would be especially true if one of the goals of policy in Tanzania today was less diversity in

rates of effective protection, in particular lower rates of effective protection for many import substitute industries.

On the other hand, on two major counts, Clark's schema appears to be less relevant to the present Tanzania context than the kinds of policy changes recommended in our discussion above of the "efficiency now" criterion. Firstly, the idea of protecting "later" industries is not likely to be "economic" in general as long as Tanzania remains a predominantly poor agrarian economy, though there might be special situations, where, for example, foreign capital is readily available -- the TIPER oil refinery in Dar es Salaam being a case in point. Secondly, as already mentioned, the types of export industries for which Tanzania can expect to find a ready market are more likely to be processing industries than the "early" import substitute industries which Clark appears to have in mind in section c of his schema reproduced above.

III

The Labor Intensive and Related Criteria

As we have repeatedly stressed, in Tanzania as in many other countries, capital (including human capital in the form of skilled labor) is in short supply while unskilled labor is relatively plentiful. A sensible strategy for industrialization policy would thus seem to aim (i) at maximizing employment for unskilled labor and/or (ii) at utilizing the scarce resources of capital and skilled labor where they are most productive. In theory there are various ways in which we might use the concept of effective protective rates in an attempt to formulate tariff and tax policies which would aim at satisfying either or both of the above criteria.

In order to direct (or attract) capital (and skilled labor) to the most labor intensive industries we could aim at a tariff structure which resulted in the effective rate of protection of capital (and skilled labor) for a particular activity being positively correlated with the degree of labor intensity in that activity. However, such a tariff structure will not necessarily at the same time satisfy the criterion of maximizing the productivity of capital and skilled labor. For the moment we shall concentrate on the first criterion, i.e., labor intensity. More specifically we shall examine the extent to which the present Tanzanian tariff and

tax structure satisfies this criterion in the manner suggested in this paragraph. Then we shall look at the feasibility and desirability of introducing into the present tariff and tax structure changes which would make this structure adhere more closely to the criterion of labor intensiveness.

As we have shown in Chapter II²⁰ there is no problem in theory with calculating rates of effective protection for one primary factor only, so long as we assume the other primary factors are in perfectly elastic supply. Basevi estimated rates of effective protection for labor in different activities in the U.S.A. on the assumption that capital was in perfectly elastic supply and could therefore be treated as another input for which there were no tariffs, quotas or taxes which led to its domestic price differing from the world price. But there are problems when we try to put the theory into practice.

The first difficulty stems from the use of the "derived" methods to estimate "free trade" capital input coefficients. The rate of effective protection of capital in any activity is the percentage increase in the returns to the primary factor capital made possible by the tariff and tax structure.

It is measured by:
$$K_j = \left(\frac{k_j^t - k_j}{k_j} \right) \times 100 = \left(\frac{k_j^t}{k_j} - 1 \right) \times 100$$

where $k_j^t (= 1 - \sum a_{1j} - j)$ ²¹ is the observed capital

²⁰ See especially pages 119-122.

²¹ See Chapter II, page 120 for an explanation of the notation.

input coefficient in value terms in activity j , and k_j is the "free trade" capital input for activity j . We need, therefore, to have an estimate of the "free trade" capital input. Since we have no direct estimate of k_j we have to resort to the "derived" method described in detail in Chapter III. Using this method, K_j is given by

$$K_j = \frac{1}{1 + t_j} - \sum_i \frac{a_{ij}^f}{1 + t_i} - l_j.$$

The problem here is that in practice k_j may often turn out to be very small (or even negative). This leads to very high or negative rates of effective protection of capital. The problem of interpreting these estimates is akin to the problems discussed in Chapter III in connection with very high or negative rates derived for the effective protection of value added as a whole. In the case of the effective protection of capital we are even more likely to get high or negative estimates because in estimating k we have to subtract the labor input coefficient from the value of output as well as the other inputs subtracted in order to estimate "free trade" value added. In the Tanzanian case (i.e., using the statistics of the 1963 Kenya Census of Industrial Production) k_j estimated by the derived approach, turned out to be negative in 8 out of 28 activities.

The second difficulty has to do with the assumption that labor is in perfectly elastic supply and that its price (i.e., the wage rate) is equivalent to its "free trade" price; i.e., that the wage rate would be the same if there were no

tariffs or relevant taxes. This is clearly not realistic. Kenya has had a minimum wage law since 1964²² which has undoubtedly maintained wage rates above the supply price of unskilled labor. More importantly, as discussed at length in Chapter III, increases in value added coefficients made possible by positive rates of effective protection are likely to result in higher returns paid to each unit of labor. For these two reasons it seems that we should consider the "free trade" wages for different types of labor to be lower than the observed wages and therefore the "free trade" labor input coefficient to be lower than the observed labor input coefficient. We decided to assume that wages in Kenya in 1963 were on the average 25 percent above this free market level. That is, there is the equivalent of a 25 percent tariff on the input labor. Consequently, when we are estimating the free trade capital inputs coefficient for activity j , we have to subtract $\frac{l_j}{1.25}$ from V_j and not l_j . The result is a higher "free trade" capital input coefficient than if we had not made this adjustment to wage rates. Paradoxically then, applying this kind of an adjustment to the wage rate lessens the first difficulty arising from low or negative "derived" free-trade capital inputs. However, even after

²² Republic of Kenya, Economic Survey 1965, Nairobi, Ministry of Economic Planning and Development, May 1965, page 53.

making this adjustment the "derived" free trade capital input coefficients for seven of the eight activities mentioned above were still estimated to be negative. For the eighth activity, bakery products, the capital input coefficient, after the adjustment, was estimated to be .004, which resulted in an estimate of 3500 for the rate of effective protection of capital for that activity!

Another difficulty follows from our assumption that it is capital and skilled labor which are the scarce factors. Therefore we should be maximizing the effective protection of capital and skilled labor, taken together, in those industries which use skilled labor most intensively. But the statistics on industrial production and industrial employment in Kenya and Tanzania do not satisfactorily break down labor inputs between skilled and unskilled labor. As will be explained below we did try to distinguish between skilled and unskilled labor on the basis of the distinction between salaried and wage employees used in the Tanzanian Survey of Industries²³ as well as the distinction between "administrative" and "operative" used in the 1963 Kenya Census of Industrial Production.²⁴ This is not satisfactory however since many skilled workers (for example, mechanics) may work

²³The United Republic of Tanzania, Survey of Industries 1965, op. cit., Table 16.

²⁴Kenya Census of Industrial Production 1963, op. cit., Appendix Tables 8 and 9.

for wages or be classified as operatives while unskilled white collar workers may be classified as salaried or administrative employees.

Because of these difficulties we decided not to concentrate on estimating effective rates of protection of capital (and unskilled labor) for different activities but instead to compare labor intensity with overall rates of effective protection, i.e., effective protection of total value added. We did make rough estimates of the effective protective rates of capital (using the adjustment for wage rates described above) for those activities for which the derived capital coefficients were not negative or very small. The ranking of these activities according to the effective protection of capital was on the whole not very different from the ranking according to rates of effective protection of total value added as shown in Table 4.2 in Chapter IV.²⁵

The other major empirical problem associated with the labor intensive alternative concerns the choice of a measure for labor intensity. A number of alternatives were considered; the most important among these being the ratios:

total employment, total employment and total employment where
 capital input value of output value added

²⁵ Such differences in ranking are largely accounted for by the fact that the effective rates for capital alone that are estimated were based only on 1963 Kenyan data using Basevi's formula (see Chapter II, page 108) whereas our estimates for effective protection of value added as a whole depended on 1966 Tanzanian tariffs as well as the Kenyan industrial statistics for 1963.

total employment would most suitably be measured by manhours per year where the denominator was measured by the annual value of capital input, total output and value added respectively.²⁶ One variation on the above three ratios would be the use of the annual labor bill instead of total employment as the numerator. Since we are really concerned with the maximizing of the "economic" employment of unskilled labor we could use a measure of unskilled employment rather than total employment in the numerator. Moreover, since we are interested in the economizing of skilled labor as well as capital a relevant ratio here would be
$$\frac{\text{unskilled employment}}{\text{cost of capital and skilled labor input}}$$

We used the statistics from the surveys of industrial production in Kenya in 1963 and in Tanzania in 1966 in order to rank different activities by labor intensity according to these various ratios. Because of the difficulties of obtaining meaningful breakdown of the extent and cost of employment according to skilled vs. unskilled labor, we concentrated on figures for total employment for our numerator.²

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If we assume a linear homogeneous production-function then these three ratios will move together and there will be no differences in the ranking of industries by these ratios. Primarily as a statistical check we used all three ratios in our analysis as can be seen from Table 5.2.

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The figures for employment in the Kenyan Census refer to numbers employed on 31 December 1963 and are not therefore necessarily proportional to total manhours per year. Although it is not explained, the figures for employment in the Tanzanian Survey probably also refer to numbers employed on a specific date in 1965.

This is more suitable than the value of labor input (as measured by total labor costs) since what we are concerned with here is maximizing employment.

One question worth considering is whether ideally we wish to maximize employment per unit of output, employment per unit of capital or employment per unit of value added. If we accept labor intensity as the most important criterion, i.e., if we wish to maximize employment rather than output or value added we should concentrate on the employment/capital ratio since capital is the scarce factor and we wish to direct it to those uses where it will create most employment. Since we continue to assume constant physical capital and labor input coefficients, this means capital should be directed to those activities where the employment/capital ratio is highest. The implication for tariff and tax policy is that effective rates of protection should tend to be highest in those activities where the employment/capital ratio is highest.

In column (2) of Table 5.2 we have ranked 25 activities according to the size of the employment/capital ratio for Kenya in 1963; the activity with the highest value of the ratio being ranked first and the activity with the lowest value being ranked last. In column (3) we have carried out the same procedure based on the statistics from the 1965 Tanzanian Survey of Industries. The rankings in column (4), which are also according to the size of employment/capital

TABLE 5.2
RANKINGS OF INDUSTRIES BY DIFFERENT MEASURES OF LABOR INTENSITY

Industry	Effective	Employment/Capital	Employment/Out-	Employment/
	Protective Rates (1)	Ratios Kenya Tanzania Leontieff (2) (3) (4)	put Ratios Kenya Leontieff (5) (6)	Value Added Ratio (7)
Textiles	5	5	7	1
Cordage, Rope & Twine	22	1	1	2
Canned Fruit & Veg.	9	13	12	4
Other Wood Products	2	3	4	3
Furniture & Fixtures	16	8	3	8
Tanning & Leather Goods	13	16	5	5
Printing & Publishing	23	6	10	12
Bakery Products	10	4	8	7
Sugar	7	11	13	6
Meat Products	24	14	25	9
Metal Products	15	15	21	6
Rubber Products	4	18	11	9
Paityts	3	22	15	10
Soft Drinks	25	19	20	11
Glass Products	17	---	14	14
Footwear	14	12	12	15
Paper Products	19	7	10	18
Misc. Foods	20	---	18	16
Clothing	12	9	7	13
Beer & Malt	8	21	11	17
Soap	11	17	17	19
Tobacco	1	---	23	21
Dairy Products	6	2	6	24
Misc. Chemicals	18	20	16	23
Cement	21	10	24	20
			19	22
			11	25

Sources for Table 5.2:

Column (1): Table 4.2
 Columns (2), (5), (7): Republic of Kenya, Kenya Census of Industrial Production 1963, Nairobi, Ministry of Economic Planning and Development, Statistics Division, 1965.
 Column (3): The United Republic of Tanzania, Survey of Industries 1965, Dar es Salaam, Central Statistical Bureau, Ministry of Economic Affairs, and Development Planning, 1967, Tables 8 and 30.
 Column (4): Wassily Leontieff, "Factor Proportions and the Structure of American Trade: Further Theoretical and Empirical Analysis," Review of Economics and Statistics, Vol. XXXIII, No. 4, November 1956, Appendix III.

cost ratios, are based on statistics for the U.S.A. used by Leontieff in his well known article on "Factor Proportions and the Structure of American Trade."²⁸ Here employment is measured by man years and capital cost by the "direct capital coefficient." We thus have three independent measures of labor/capital ratios for most activities. There is a good deal of similarity in the rankings of particular activities by these three different measures. Spearman's rank correlation coefficient for the rankings based on the Kenyan and Leontieff statistics, i.e. between columns 1 and 3, is 0.313. The rankings for these columns differed by nine or more for only six of the twenty-five activities. In Table 5.2 we also have rankings of the 25 activities according to the employment/output and employment/value added ratios for

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Wassily Leontieff, "Factor Proportions and the Structure of American Trade: Further Theoretical and Empirical Analysis," Review of Economics and Statistics, Vol. XXXVIII, No. 4, November 1956, pp. 386-408.

Kenya in 1963 (columns (5) and (7) respectively) and for the employment/output ratio based on Leontieff statistics (column (6)). We again concentrated on Kenya rather than Tanzanian statistics because the breakdown by activity is more detailed for Kenya and corresponds to the activity breakdown for rates of effective protection used in Chapter IV.

We have consolidated these various sets of rankings in a manner which is intended to make interpretation and application simpler. The results are shown in the columns on measures of labor intensity in Table 5.3 i.e. columns (2), (3) and (4). What we have done here is to give a single classification to each activity for each of the three countries according to the relevant different rankings of labor intensity in Table 5.2. Thus, for the textile industry we have one classification for Kenya, one for Tanzania and one based on the Leontieff statistics for the U.S.A. Instead of using a numerical ranking we have chosen a three way lettered system of classification. Thus, the labor intensity for a particular activity in one country was classified A if the industry tended to be in the top third of the activities as ranked by labor intensity; a classification of B indicates that the activity is in the middle third according to labor intensity, and a C classification indicates the activity is among the least labor intensive activities in that country. When the different measures of labor intensity in a given country resulted in markedly different rankings for a particular activity this

activity is classified in Table 5.3 by a combination of letters e.g. BC for dairy products, metal products and cement in the U.S.A. Thus, according to the labor/capital ratio, these activities are classified as B; while according to the labor/output ratio these activities are classified as C.

In Table 5.3 column (1) we have also classified the different activities according to their estimated rates of effective protection as found in Chapter IV and as shown in Table 4.1. Here a classification of A indicates a rate of effective protection greater than 100 percent; a B classification effective protective rates of 20 to 100 percent; and a C classification rate of less than 20 percent. We have chosen this less exact type classification in Table 5.3 because (a) the precise rankings are based on such shaky statistics and (b) in the case of one indicator based on more than a single numerical ranking, it seemed more appropriate to use a broad representative classification rather than a precise average which could be misleading and cover up differences between individual rankings for a single activity in a given country.

The question we now turn to is how the labor intensities in various activities compare with the rates of effective protection in those activities. On examining Table 5.3 we find that the 11 most labor intensive activities (i.e. those

with at least one A and two B's)²⁹ have effective rates of protection which are greater than 100 percent. Of the other four, two (furniture and fixtures and paper products) have effective protective rates of 58 and 26 percent respectively. The remaining two are the cord, rope and twine industry, with an effective rate of 1 percent and the printing and publishing industry with an effective rate of -1 percent.

If we apply the labor intensity criterion alone, the rate of effective protection in these last two industries should clearly be increased. We have already seen that if Tanzania is to develop a sisal processing industry which can compete efficiently with producers in the developed economies of Western Europe, it will need a higher degree of effective protection. The printing and publishing industry on the other hand provides a good example of why we should not mechanically apply the labor intensity criterion without regard for other factors. For even though it is labor intensive, the printing and publishing industry may well not be an industry to which additional resources in Tanzania should be directed. The market for its product is extremely limited in a country like Tanzania where illiteracy abounds. Moreover the need for skilled labor may be high in the printing and publishing industry,³⁰ and too much

²⁹ These industries are indicated by a single asterisk in column (9) of Table 5.3.

³⁰ See pages 230-31 below and column (7) of Table 5.3 for more details on skilled labor requirements in different industries.

emphasis on such an industry would be undesirable in Tanzania where skilled labor is scarce. We shall discuss below some of these other factors which need to be taken into account.

Of the eight least labor intensive industries listed in Table 5.3,³¹ five (tobacco, paints, rubber products, beer and soap) enjoy rates of effective protection greater than 100 percent. According to the labor intensity criterion these industries should be enjoying little or no protection rather than such significant protection. But in three of these industries (tobacco, beer and soap) at least 75 percent of the raw materials they use are products of Tanzania. (And the greater the degree of labor intensity in the production of the major raw materials used in these industries the less crucial is the labor intensity in these industries.) In the other two at least 40 percent of the raw materials used in the manufacture of each of the products of these industries are indigeneous.³² Moreover, these are obvious import substitute industries since their products are important items in the budgets of poor people; items for which the income elasticity of demand tends to be high. Even where the aim of tariff policy may not be to give these industries significant protection, high tariffs on their products will, of course, have large revenue

³¹ That is those industries which have at least one C and two B's in columns (2), (3) and (4) of Table 5.3 and which are indicated by a double asterisk in column (9).

³² From data in an unpublished Exercise on Import Substitution, Dar es Salaam, 1967, The Industrial Studies and Development Centre of the Ministry of Industries, Natural Resources and Power.

bearing effects where they do not result in much import-substitution.

Where there is no disparity between an industry's ranking according to labor intensity and that according to its rate of effective protection, our policy recommendations based on the labor intensity criterion are similar to those based on the "efficiency now" criterion. For according to both criteria the effective protection of an industry should be reduced if it is not labor intensive but enjoys a higher than average rate of effective protection. On the other hand, where an activity is labor intensive, but has a low rate of effective protection, the call in both cases is for a higher rate of effective protection. However, the objective of labor intensity requires a more drastic change in tariff rates for these activities than does the "efficiency now" criterion. For, in the latter case, the desired rate of effective protection for each activity is some "average" or "agreed" rate. But according to the labor intensity criterion, activities which now have lower than average rates of effective protection, should now have higher than average rates of effective protection; and vice versa in the case of activities which are not labor intensive but have higher than average rates of effective protection. Where there is no significant disparity between ranking according to labor intensity and ranking according to the rate of effective protection (as

in the case of the wood products and cement industries) the tariff rates for the industries in question would appear to be appropriate especially if change in other tariffs do not markedly affect these rankings.

In terms of the labor intensity criterion the present tariff and tax structure in Tanzania is not very satisfactory. The rank correlation coefficient between column 1 and column 2 of Table 5.2 (i.e. between rates of effective protection and labor intensity based on the employment/capital ratio from the Kenyan data) is .047. For nine of the twenty-five activities the absolute size of the difference in rankings between those two columns is larger than ten. If we consider also the export potential of different labor intensive³³ activities the tariff and tax structure appears even less satisfactory. Of the ten most labor intensive industries (i.e. the first ten industries in column (2) of Table 5.2) the four with the most potential for expanding sales in export markets are probably cordage, rope and twine, canned fruit and vegetables, tanning and leather goods.³⁴ Yet, these rank 22, 9, 13 and 24 in terms of rates of effective protection. Unfortunately we do not

³³The importance of this in the Tanzanian case was stressed in our discussion of the "efficiency now" criterion, see above, pp.194-209.

³⁴Helleiner, "Approaching the EEC," op. cit., page 38.

have estimates of labor intensity for a number of processing industries which were included in our study in Chapter IV of rates of effective protection in Tanzania. As we have already pointed out, in terms of export potential, these industries have promising possibilities.

The labor intensity criterion has much appeal and seems to be relevant to Tanzania today. Like the "efficiency now" criterion it is in accord with an "economic" or "efficient" use of Tanzania's resources on the basis of the present endowment of these resources and the present structure of production. But, as has already been mentioned, to mechanically apply the labor intensity criterion would be to ignore other important factors. Thus, for example, according to the labor intensity criterion, the furniture and fixtures industry should have a higher degree of effective protection than it does in Tanzania today; for it is clearly among the most labor intensive industries and yet it ranks only sixteenth in terms of rates of effective protection.³⁵ But is there any point in directing more resources to this industry if the market for its products is limited both at home and abroad or if the industry's demand for skilled labor is relatively higher than that of other industries?³⁶

³⁵See Tables 5.2 and 5.3.

³⁶Column (7) of Table 5:3 indicates that the skilled labor requirements of the furniture industry are above average.

Obviously then there are a number of other factors (criteria) which must be taken into account in any discussion of alternative industrialization strategy options. We shall devote the rest of this section to a brief examination of the more important of these criteria, focusing on their relevance to the present Tanzanian content.

On criterion which is really a variation of the "efficiency now" criterion and which we would expect to yield similar policy suggestions as the labor intensity criterion is the marginal productivity of capital criterion. In the literature on investment criteria in the underdeveloped countries, this criterion has received much attention.³⁷ The objective here

³⁷J.J. Polak, "Balance of Payments Problems of Countries Reconstructing with the Aid of Foreign Loans," Quarterly Journal of Economics, February 1943, pp. 208-240.

A.E.Kahn, "Investment Criteria in Development Programs," Quarterly Journal of Economics, February 1951, pp. 38-61.

H. B. Chenery, "The Application of Investment Criteria," Quarterly Journal of Economics, August 1953, pp. 76-96.

W. Galenson and H. Leibenstein, "Investment Criteria, Productivity, and Economic Development," Quarterly Journal of Economics, February 1957, pp. 343-370.

O. Eckstein, "Investment Criteria for Economic Development and the Theory of Intertemporal Welfare Economics," Quarterly Journal of Economics, February 1957, pp. 50-85.

is to maximize gross output (or value added) through investing capital where it is most productive. In terms of the kind of approach we have been using in this chapter, the aim would be to give the greatest effective protection to those activities where the ratio of output/capital or value added/ capital was highest. In columns (5) and (6) of Table 5.3, we have classified our 25 industries according to two measures of the value added/capital ratio. The classification in column (5) is based on data from the 1963 Kenyan Industrial Census and that in column (6) on the total fixed capital requirements given by Bohr, who was using 1946-47 data from Australia and 1939 data from the U.S.A.³⁸ In these two columns a classification of A indicates low capital requirements, i.e. a high value added/capital ratio, and a classification of C high capital requirements.

As we might expect, there is an extremely close correspondence between the degree of labor intensity and the capital requirements in a given industry, the correspondence being in the form of negative correlation, i.e. the amount of capital needed per unit of value added tends to be low in those industries where labor intensity is high. This is the equivalent of positive correlation between the value added/capital and employment/capital ratios. The great

³⁸K.A.Bohr, "Investment Criteria for Manufacturing Industries in Underdeveloped Countries," Review of Economics and Statistics, Vol. XXXVI, no. 2 (May 1954), 157-166.

similarity between the classifications in Table 5.3 of columns (2), (3) and (4) on the one hand and (5) and (6) on the other are evidence of this correspondence. The only exceptions to this close correspondence are on the one hand the textile, wood products, and cordage, rope and twine industries where the capital requirements per unit of value added are greater than would be indicated by the degree of labor intensity, and on the other hand the soap and paints industries where the capital requirements are less than their relatively low degree of labor intensity would seem to indicate.

Another criterion which is definitely relevant in the Tanzanian case is the skilled labor requirement for different industries. We have already stressed that skilled labor is one of the factors of production which is in short supply in Tanzania. Column (7) of Table 5.3 classifies the 25 industries according to skilled labor requirements. Following our usual three divisional convention, those industries which need skilled labor least (and are therefore most "efficient" in the Tanzanian context) are classified A, those which need skilled labor most being classified C. The classification here is also taken from Bohr who based his classification on the ratio of professional persons, skilled workers and foremen to total employees for the U.S. in 1930.³⁹ In terms


³⁹Ibid.

of our analysis thus far, the interesting cases that emerge from the classification in column (7) of Table 5.3 are (a) the tobacco, beer and dairy industries,⁴⁰ which are not labor intensive at all, yet have low skilled labor requirements and at present enjoy high rates of effective protection; (b) the furniture and fixtures, and printing and publishing industries which are highly labor intensive, have a high demand for skilled labor and have low rates of effective protection and (c) the wood products and textile industries which are also amongst the most labor intensive but are classified as B in terms of skilled labor requirements and enjoy high rates of effective protection.

Yet another criterion which is usually considered relevant in the case of underdeveloped countries is the balance of payments effect. Here we are concerned with the impact on the country's balance of payments of expansion in different industries. One way of comparing the balance of payments effect between different industries would be to try to measure the impact of a unit of capital investment in each industry.⁴¹ We can usefully differentiate between the direct

⁴⁰ Particularly the first two which were among the earliest import substitute industries in Tanzania.

⁴¹ We are again working on the assumption that capital is the key scarce factor and that therefore, we wish to allocate capital in such a way that our criterion is best satisfied.



and indirect effects of such investment and expansion of output on the balance of payments. By the "direct" effects we mean the consequences for the balance of payments that are traceable to what is happening within the industry itself. Firstly there is the possible "positive" effect on the balance of payments which occurs if output in the industry concerned replaces imports in the domestic market (i.e. if there is import substitution); or if output in the industry is exported. This positive effect may be offset by a second direct effect which results when the industry concerned uses imported inputs. In a country like Tanzania which does not produce much in the way of capital goods, this is an important factor. By "indirect" effects we mean the consequences to the balance of payments of any multiplier effects following on the investment and expansion in the industry concerned. Where this investment results in increased income and employment, these indirect effects are likely to be significantly negative especially in a country like Tanzania where imports constitute a large share of the supply of many consumer goods.

In practice when comparing balance of payments effects between different industries, it would be simpler to assume that the indirect (multiplier) effects do not vary much from industry to industry⁴² and then compare industries on the

⁴²Clearly this is not a realistic assumption since the indirect effects will depend on the employment/capital ratio, the types of workers employed and the relative share of labor in the value added as well as on the domestic inputs used by the industry.

basis of the direct effects on the balance of payments. In terms of this criterion the most favored industries would be those which had the greatest positive (or least negative) effect on the balance of payments per unit of capital invested. Thus, our aim would be to give the highest effective protection to those industries which had the greatest positive (or least negative) effect on the balance of payments. We have not attempted to measure the balance of payments effects for different activities in the Tanzanian case because the industrial production statistics do not indicate in sufficient detail the import content of different inputs. And secondly, Tanzania at present⁴³ does not appear to have any balance of payments problems. ⁴³ Though a continued rapid growth of the industrial sector may result in a continued expansion in the import of capital goods which together with unfavorable world prices for Tanzania's exports could lead to a substantial balance of trade deficit and possibly a balance of payments deficit in the years ahead.

Another criterion which is usually considered to be particularly important in underdeveloped countries revolves around the relationship between the size of the domestic

⁴³In 1966 Tanzania was estimated to have a favorable overall balance of Shs 192 million in her balance of payments; furthermore "the balance of payments continued favourable through the first half of 1967" (Background to the Budget 1967-68, op. cit., pp. 70-71).

market for a particular product and the minimum plant size for which production of that commodity can be economically carried out. In Chapter VI, where we are mainly concerned with the possibilities of Tanzanian production substituting for imports from Kenya and Uganda, we shall look at this question of the relationship between the size of the Tanzanian market and the minimum economic size of plants in different activities.

As we have stressed repeatedly, any practical consideration of this question of what type of industrialization strategy is best suited to a particular country at a particular time must take into account a number of different criteria. One study done recently by the Ministry of Industries in Tanzania under the direction of a U.N. expert provides an example of a 'multifactored' approach with one factor being singled out for special consideration. In what was called an "Exercise on Import Substitution" the first step taken was to divide items (commodities in the Annual Trade Report) into three categories according to the extent to which the raw materials used in production were indigenous. Column (8) in Table 5.3 is based on the results given in the Ministry's study. A classification of A in column (8) indicates that 75 percent of the total raw materials used in the manufacture of the products of that activity were of indigenous origin, a B classification indicates that the share is at least 40 percent and a classification of C that less than 40 percent of raw materials are

of indigenous material. In the C type industries the additional stipulation was made that these must be labor intensive industries.

The author of the Ministry study then listed eight additional criteria which were termed "important requisites .../[which]/...should be borne in mind" in the exercise on import substitution. There were ⁴⁴

1. There should be maximum use of national resources by way of raw materials, intermediate products and labor.
2. Products required in large and continuously increasing quantity or value, so as to make the industrial undertaking an economic unit, should only be considered. In doing so, the projected demands in the future and the possible changes in the pattern and structure of the economy should be kept in view.
3. Agriculture input industries, agricultural support industries, and agricultural processing industries should be very carefully considered for import substitution.
4. Industries which may lead to the creation of other ancillary and feeder industries may be encouraged particularly in the field of agriculture, building materials and selected fields of consumer goods.
5. The limited availability of technical know-how, trained labor and management in the country should be treated as a limiting factor and in suggesting the use of foreign technical know-how and personnel, the effect on foreign exchange resources of the country, the viability of the enterprise and the finished cost of the product will need consideration.
6. Industries and products selected for manufacture in the country should as far as possible be export earning, while accelerating the process of growth at the same time.

⁴⁴ Op. cit.

7. The important role that small scale industry can play in the dynamic process of industrialization, particularly in the field of consumer goods should not be overlooked.
8. Notwithstanding the above, industries and products based almost totally on imported raw materials but which have large value added in fabrication and production and constitute items of essential consumer goods may also be classified under groups A, B, or C.

This list of criteria is an excellent summary of many of the important factors which must be considered when looking at the question of alternative industrialization strategies in a country like Tanzania. Of these eight additional criteria we have already in this chapter discussed or mentioned at least five, i.e. (1), (2), (3), (5) and (6). Numbers (4) and (8) will be referred to in the next section. While this list is reasonably comprehensive, the Ministry's study makes no attempt to go into the relative importance of the different criteria for Tanzania nor does it offer any guidelines as to how these criteria may be used in a more precise way to choose between alternative industries. One of the major purposes of this chapter is to tackle these two questions in a more rigorous fashion though clearly we are not able to come up with very precise answers.

IV

The main criticism that can and has been levelled at most of the criteria we have discussed thus far is that they are related to a static analysis of the economy. The "efficiency now", the "labor intensity", the "productivity of capital", the "skilled labor" criteria (to mention the most important), are all based on the assumption that the present endowment of resources and the structure of production are given and unchanging. To put it another way, none of the approaches used when following these criteria comes to grips with the heart of the problem they are supposed to be tackling, namely, the question of how to transform an underdeveloped economy from stagnation into sustained and modernizing growth. We have already referred to this alleged weakness in connection with the assumption of fixed input coefficients (i.e. a given production function) in the theory of effective protection,⁴⁵ as well as at different points earlier in this chapter. In a recent article Timothy King has concluded that the approach based on "investment criteria" has less relevance to the problems of underdevelopment than an approach based on "development strategy".⁴⁶ As King admits this last

⁴⁵See Chapter III, pp.

⁴⁶Timothy King, "Development Strategy and Investment Criteria: Complementary or Competitive," Quarterly Journal of Economics, Vol. LXXX, no. 1, February 1966, pp. 108-120.

term is derived from the title of Hirschman's book, The Strategy of Economic Development.⁴⁷ In this work Hirschman provides a highly persuasive, provocative and productive statement of a position which is critical of the "investment criteria" and other "static" approaches to economic development.

Drawing heavily on psychological thought, Hirschman's analysis of the development problem leads in places to very different policy suggestions from those we have arrived at thus far. Hirschman argues that we should not be concentrating on the so-called obstacles to development such as scarce factors like capital or entrepreneurship. Rather we should be concerned with "the nature of the development process...[and]...the pressures and tensions it creates [which] do not necessarily frustrate it, but can be made to help it along."⁴⁸ What is important then is the way in which factors of production are combined and used and not how much of each is available and therefore can and will be combined in given ways. For example, it is the ability to invest rather than the availability of capital which is one key to the development process.⁴⁹ In The Strategy of Economic Development Hirschman comes up with a

⁴⁷ Albert O. Hirschman, The Strategy of Economic Development, New Haven: Yale University Press, 1958.

⁴⁸ Ibid., page 210.

⁴⁹ See particularly Ibid., pp. 35-40.

number of conclusions which are directly relevant to our study of investment strategy.

Hirschman is a strong advocate of underdeveloped countries concentrating on capital-intensive methods of production in certain industries. Given the premise that labor productivity is generally lower in underdeveloped countries than in more developed countries it is wiser to concentrate more on machine-paced and "process-centered" industries than on operator controlled and "output-centered" industries.⁵⁰ This is because labor productivity is then more a function of the efficiency of the machines than of the quality and discipline of the work force. Another reason for favoring capital-intensive industries according to Hirschman lies paradoxically enough in the greater need for maintenance in these industries.

...underdeveloped countries may well make a surprising success of ventures with a complicated technology which must be maintained in top working order. It is in these industries that the maintenance habit can be acquired and from there spread to the rest of the economy. On the other hand, the "simple" industries which the poorer countries are often admonished to set up first may be precisely those that will exhibit a strong tendency to deterioration. For while here lack of maintenance does not have immediate drastic consequences (and is therefore likely to be indulged in), it does in the longer run have a serious adverse impact on efficiency and morale.⁵¹

⁵⁰Ibid., pp. 145-149.

⁵¹Ibid., page 142.

However, Hirschman is not in favor of capital-intensive methods of production being introduced in all growing industries. In industries where there is already a flourishing handicrafts (small scale) sector,

It would probably be wasteful for such an economy to invest its scarce capital resources in duplicating lines of production that are already being carried on, even though inefficiently. A better use for capital would almost certainly be in the establishment of new-product industries. But in such industries capital-output ratios are likely to be typically high whereas they tend to be comparatively low in industries that would produce goods and services similar to those turned out by existing small-scale operators.

In other words, the most efficient use of capital in underdeveloped countries is not in capital-intensive industries qua capital-intensive; it is in industries that open new products horizons for the economy and these industries are likely to be more capital-intensive than others with which the country can dispense for the time being because the needs served by them are satisfied by existing handicraft and cottage industries.⁵²

Examples of the latter are the furniture, shoes, apparel, bricks, basket, some metal-working as well as parts of the food processing and construction industries. On the other hand, industrial processes which are bound to be capital intensive include chemicals, petroleum refining, basic iron and steel, cement, pulp and paper, "but also...many modern consumer goods, from radios and light bulbs to toothpaste and aspirin." Then there are some industries where capital-intensive methods of production prevail even though there

⁵² Ibid., page 131.

exists a flourishing "primitive" sector. "The classic example here is, of course, the textile industry, particularly spinning."⁵³

It is interesting that the pattern of industrialization in Tanzania has tended to follow the prediction and preference of Hirschman. Thus, recent years have seen the establishment of the Tiper oil refinery and the cement factory in Dar es Salaam, the radio assembly plant in Arusha and a number of integrated textile mills.⁵⁴ These capital-intensive factories have been largely financed by foreign firms who are familiar with these modes of production. Of course, following Hirschman's advice leads to rather different policy suggestions from those arrived at in section III of this chapter where the emphasis was on labor intensity and low capital output ratios.

Hirschman makes much of the importance of linkage effects in the development process. The two basic types of linkage effect are:⁵⁵

1. The input-provision, derived demand, or backward linkage effects, i.e., every non-primary economic activity, will induce attempts to supply through domestic production the inputs needed in that activity.
2. The output-utilization or forward linkage effects, i.e., every activity that does not by its nature cater exclusively to final demands, will induce attempts to utilize its outputs as inputs in some new activities.

⁵³ Ibid., pg.129.

⁵⁴ See above, pp. 51-52, for details.

⁵⁵ Op. cit., p. 100.

Underdeveloped economies generally have weak linkage effects because of the overall lack of integration and interdependence between different sectors of the economy. Thus, Hirschman argues, it makes sense for such countries to concentrate on industries with high linkage effects since these industries will induce production in these industries which supply them with inputs and/or in those industries which they supply.

Hirschman accepts the scheme followed by Chenery and Watanabe⁵⁶ who classify industries by their extent of backward and forward linkage. Thus, "intermediate manufacture" contains those industries for which both backward and forward linkage is high⁵⁷; "final manufacture" those industries with backward linkage high and forward linkage low; "intermediate primary production" includes those sectors with high forward linkage and low backward linkage; and "final primary production" those sectors where backward and forward linkage are both low. Hirschman then ranks the industries within these four classifications according to their degree of backward linkage,⁵⁸ for as we shall see shortly Hirschman makes a good case for backward linkage being more important than forward linkage for underdeveloped countries in the early

⁵⁶ Hollis B. Chenery and Tsunehiko Watanabe, "International Comparisons of the Structure of Production," Econometrica, Vol. 26, no. 4, October 1958, pp. 492-493.

⁵⁷ "high" being defined as above average and "low" below average.

⁵⁸ Op. cit., pp. 106-107.

stages of industrialization. The measures of linkage effects are taken directly from the results for interdependence in production given by Chenery and Watanabe.⁵⁹ Backward linkage is measured by the average of the ratios of inter-industry purchases to total production for Italy, Japan and the United States, and forward linkage by the average of the ratios of interindustry sales to final demand in the same three countries. The results for the first two classes of industry (intermediate and final manufacturers) are given in Table 5.4.

As Hirschman points out the above ratios are only "very rough indexes of the potential linkage effects that might be introduced into non-industrial economies by specific industrial sectors."⁶⁰ A more comprehensive measure which takes into account the indirect effects of an increase in final demand (i.e. the repercussion on all sectors as a result of this increase) can be found from the inverse of the input-output matrix. This approach was developed and used by a Danish economist, P.N. Rasmussen, who called the measure "power of dispersion."⁶¹

Now, as Hirschman stresses, the greater importance of backward linkage in underdeveloped countries follows from

⁵⁹ Op. cit., p. 493.

⁶⁰ Op. cit., p. 108.

⁶¹ P.N. Rasmussen, Studies in Inter-Sectoral Relations Copenhagen, Einar Harcks, 1956. p. 141. "Unfortunately the empirical studies included in the book do not do justice to Rasmussen's very interesting analytical tools because of excessive aggregation. Thus, all manufacturing is brought together in a single sector." (Hirschman, p. 108).

the fact that

Industrialization can of course start only with industries that deliver to final demand, since ex hypothesi no market exists as yet for intermediate goods. This means that it will be possible to set up only two kinds of industries:

1. Those that transform domestic or imported primary products into goods needed by final demands;
2. Those that transform imported semi-manufactures into goods needed by final demands.⁶²

The first of these two types, the processing industries (textiles, iron and steel and pottery) are always important in the industrialization process. During the Industrial Revolution they were the only option open since there were no 'earlier' developed countries from which manufactured goods could be imported. It is this second type, the finishing industries (such as "converting, assembly and mixing plants, the pharmaceutical laboratories, the metal-fabricating industries," etc.) which are today often significant in underdeveloped countries.⁶³ These industries are attractive because they only require a small amount of capital investment and their main inputs are imported parts whose supply is guaranteed. The recently opened radio assembly plant in Tanzania provides a good example of such an industry. While singing the praises of these "enclave import industries" Hirschman argues that they are less desirable than the "intermediate" or "basic" industries

⁶² Op. cit., p. 111.

⁶³ Ibid.

whose products are distributed as inputs through many other industrial sectors besides also going directly to final demand."⁶⁴

In any event Hirschman suggests as a hypothetical strategy for capital formation (and thus for the pattern of industrialization) in underdeveloped countries, the maximization of backward linkage effects and the concomitant capital formation through the manipulation of final demands. This will necessitate some interference with the growth pattern of consumption through tariffs, excise taxes and subsidies.⁶⁵ Hirschman's emphasis on manipulating final demand appears to be different from our use of effective rates to influence the pattern of industrialization. But the major objective is to influence production. And the pattern of final demand is a key element in shaping the pattern of production.

In more specific terms Hirschman is advocating emphasis on those industries which have the greatest backward linkage effects, especially those with large forward linkage effects as well.

Thus those industries high up on the list of intermediate manufactures in Table 5.4 would be the most favorable according to Hirschman's criterion. The ranking of these intermediate manufactures happens to be highly correlated

⁶⁴ Ibid., p. 118.

⁶⁵ Ibid., p. 115.

TABLE 5.4

RANKING OF LINKAGE EFFECTS FOR "INTERMEDIATE" AND "FINAL"
MANUFACTURES

<u>Intermediate Manufacture</u>	<u>Backward Linkage^a</u>	<u>Forward Linkage^b</u>
Iron and Steel	1	2
Nonferrous Metals	2	1
Paper and Products	3	3
Petroleum Products	4	5
Coal Products	5	6
Chemicals	6	4
Textiles	7	7
Rubber Products	8	8
Printing & Publishing	9	9
<u>Final Manufacture</u>		
Grain Mill Products	1	1
Leather and Products	2	3
Lumber and Wood Products	3	2
Apparel	4	10
Transport Equipment	5	6
Machinery	6	5
Nonmetallic Mineral Products	7	4
Processed Foods	8	8
Shipbuilding	9	9
Miscellaneous Industries	10	7

Source: A. Hirschman, The Strategy of Economic Development,
New Haven, Yale University Press, 1958, pp. 106-107.

with their capital intensity and so Hirschman is again arguing for capital intensive methods of production. However, if we look at the ranking of the "final manufacture" industries the correlation with capital intensity does not appear to be as great -- the leather products, wood products and apparel industries have relatively low capital requirements and relatively high labor intensity according to Table 5.3.

Hirschman's emphasis on linkage effects provides us with yet another criterion for attempting to choose an industrialization strategy. How much weight should we give to this criterion in the Tanzanian case? Linkage effects are always important, yet we do not believe that further expansion of capital intensive industries is the correct path to pursue at this point. It is true as we pointed out earlier that a number of capital-intensive industries have been started in recent years. For the most part these have been established with the aid of foreign capital and foreign management. To the extent that the Arusha Declaration and the policy of self reliance discourage private foreign capital, there will be less opportunity for further expansion along these lines. Furthermore, the shift to more emphasis on agriculture which is implied by the Arusha Declaration and self reliance adds weight to our earlier argument that Tanzania should place emphasis on processing industries which use as inputs the outputs of Tanzanian agriculture and then export their own products. These industries may frequently

employ fairly capital intensive methods and they could be good examples of backward linkage at work if their development acts as a spur to increased production in the agricultural sector.

Hirschman's criterion based on linkage effects taken by itself is just another criterion which can be put into the "investment criteria" bag. In this sense Hirschman's approach does not appear to be any more dynamic than our other criteria. But the concept of linkages by tracing through interindustry effects does broaden the approach. Moreover, if we consider Hirschman's book as a whole with its emphasis on the dynamics of the development process rather than on the static mechanics of efficiency now or labor intensity, we might agree with King's conclusion that if we had more accurate predictions about the nature of the development process, the development strategy approach would in general be more relevant than the older investment criteria approach because "it quite deliberately intends, by altering the values of some variables, to lead to change in the values of a great many more."⁶⁶

⁶⁶ King., op. cit., p. 120.

Chapter VI

I

As we pointed out in Chapter I, there has been growing concern in Tanzania in recent years about the imbalance in industrial development within East Africa. Much of the growth of industry has taken place in Kenya and this has been reflected in a widening trade imbalance (particularly in manufactured goods) between Kenya and Tanzania.¹ We also described some of the measures which have been introduced in an attempt to correct this imbalance (i.e. to promote more industrial development in Tanzania and Uganda) - notably, the abortive Kampala Agreement, then the quotas imposed unilaterally by Tanzania on imports from the other two countries, and most recently (under the new Treaty for East African Co-operation), the transfer tax and the East African Development Bank.²

What we shall be concerned with in this chapter is the transfer tax. As we have seen,³ the transfer tax is essentially a tariff which can be levied on a wide range of manufactured goods being imported by one East African country from another. More specifically we shall be looking

¹ See Chapter I, page 26.

² See Chapter I, pages 42-46.

³ See Chapter I, page 43.

at various criteria which could be used in deciding which industries Tanzania should try to protect from Kenyan competition through the imposition of a transfer tax. A priori we could view the transfer tax as an attempt to fulfill one or more of the following objectives:

- 1) the raising of revenue for the Tanzanian Government
- 2) promoting industrial development in Tanzania
- 3) increasing Tanzania's national income.

Given that the transfer tax can only be levied at one half the rate of the external tariff (i.e. the tariff on goods entering East Africa from outside the Common Market), and only on interterritorial imports whose value does not exceed Tanzania's trade deficit with Kenya and Uganda, the transfer tax is clearly not a potentially large source of revenue for the Tanzanian Government. (Assuming Tanzania could levy transfer taxes at an average rate of 20% against the full value of its trade deficit with Kenya and Uganda - 150 million shillings in 1966 - the annual revenue would be of the order of only 30 million shillings, i.e. less than 5 percent of the Tanzanian Government's regular recurrent revenue in fiscal year 1965/66.⁴ To the extent that the imposition of the tax permits the expansion of Tanzanian industry at the expense of Kenyan and Ugandan

⁴Background to the Budget, 1967-68, op. cit., page 88.

industry, revenue from the transfer tax will of course fall, both because the duty collections from smaller imports will fall and because resulting reductions in the trade deficit will lower the aggregate value of permissible transfer tax applications.

The possible impact of a transfer tax on the level of real national income in Tanzania can take place in two ways; firstly through what may be called the "price" or consumption effects; secondly, through production effects which result when Tanzanian production replaces Kenyan imports. Price effects are taken to occur where there is no substitution of Tanzanian production for Kenyan imports. Here the impact on Tanzania's national income depends upon whether the transfer tax results in an increase in the prices paid by Tanzanian consumers on goods subject to the transfer tax.⁵

⁵ We shall assume throughout that there is no increase in Tanzania's imports from outside of East Africa at the expense of imports from her East African Partners as a result of the imposition of a transfer tax, i.e., we are assuming that Tanzania in cooperation with Kenya and Uganda is successful in carrying out the provision of the Treaty which stipulates that measures must be taken to prevent a "significant deviation of trade away from goods coming from and manufactured in the Partner State whose goods are subject to the transfer tax, to goods imported from a foreign country." (Treaty for East African Cooperation, op. cit., Article 20, Section 17).

Assume first that prior to the imposition of a transfer tax the price in Tanzania of an import from East Africa was less than the price of the corresponding import from outside East Africa by at least the equivalent of the transfer tax measured in "specific" value terms⁶ (the domestic Tanzanian price of the import from outside East Africa being assumed to be equal to the c.i.f. price plus the external tariff). In this case it would appear that the transfer tax would be borne by the Tanzanian consumer since it would be reasonable to assume that the price of the interterritorial import (or its equivalent produced domestically in Tanzania) will be raised by the full amount of the transfer tax. In this case the imposition of the transfer tax does not affect the level of real national income in Tanzania through "price" effects. With respect to the Kenyan (and Ugandan) imports what is involved is a transfer of income (and hence the command over resources) from the private to the public sector; with respect to any price increases on products manufactured in Tanzania the transfer of income is from the consumer to the producer. It should be borne in mind that at this point we are not considering the effects on Tanzanian national income of

⁶ We are ignoring here the "tricky" problem of any significant quality differences between imports from outside East Africa and "corresponding" goods produced in East Africa. We may well ask why there would be any such price differences if there were no quality differences.

any possible increase in production in Tanzania as a result of the transfer tax. (See below, pages 257-261, for a discussion of such "production" effects.)

Let us now assume, by contrast, that prior to the imposition of the transfer tax the price of an import from East Africa into Tanzania is already equal to the domestic price of the equivalent import from outside East Africa. Then it would appear that the transfer tax will have to be borne by the East African (i.e. Kenyan or Ugandan) producer who will be able to maintain his sales in the Tanzanian market only if he accepts a price equal to the domestic price reigning in Tanzania less the transfer tax. There is however a problem associated with this possibility. According to the Treaty, manufactured goods produced in one Partner State cannot be transferred to another Partner State "at a price lower than their true value if such transfer is likely to prejudice the production of similar goods by that other Partner State or retard or prevent the establishment of an industry to produce such goods in that State."⁷

⁷ Treaty for East African Cooperation, Article 20, Section 23. The Treaty then goes on to specify that a price lower than the "true value" would be one which is less than:
 "(i) the comparable price, in ordinary trading conditions, of similar goods destined for domestic consumption in the State in which they were produced; or
 (ii) the comparable price of similar goods on their export to a foreign country in ordinary trading conditions; or
 (iii) the cost of production of the goods in the Partner State where they are produced, together with reasonable addition in respect of distribution and sales costs and profit."(Sec.24).

But, as we have seen, the Treaty also does not permit a "deviation" of trade, i.e., a shift in Tanzanian imports from within East Africa to the rest of the world. This would surely result if the price of an East African import in Tanzania was raised above the price of an equivalent external import. Thus we shall assume in our analysis that the Kenyan or Ugandan producer bears the burden of the transfer tax in this case. Therefore we are implicitly considering this case as one not "prejudicing" the production of similar goods in Tanzania. Even if our assumption does not hold, production in Tanzania is not likely to be "prejudiced." For, in order to correct any "deviation" in trade, the Tanzanian Government might resort to raising the external tariff thereby raising the domestic price of the external imports and in practice further favoring the Tanzanian producer.

In this second case (i.e. where the transfer tax results in no increase in the price of imports from East Africa after the imposition of a transfer tax) the real income of Tanzania can be considered to have increased by the value of the transfer tax for each unit imported. The consumer in Tanzania pays the same price as before but part of the price (equal to the transfer tax) is now payment to the Tanzanian Government instead of to the East African producer. There is thus a transfer of income from the

Kenyan or Ugandan producer to the Tanzanian Government which now has a greater command over both domestic resources (which should be reflected, *ceteris paribus*, in increased output in Tanzania if there are unutilized domestic resources which can be brought into production) and foreign resources (since, *ceteris paribus*, there will be an improvement in Tanzania's balance of payments equal to the revenue collected from the relevant transfer tax).

In practice the "price" effects from a transfer tax on a particular commodity may be a combination of the two situations analyzed above. This would follow if, prior to the imposition of the transfer tax the price of the import from the rest of East Africa is less than the price of the equivalent import from outside East Africa by an amount less than the equivalent "specific" value of the transfer tax imposed. Then the burden of the transfer tax will be shared by the Tanzanian consumer and the East African producer. The closer the pre-transfer tax price of the East African product is to the price in Tanzania of the "outside" import, the greater will be the share of the burden of the transfer tax falling on the East African producer and the greater the increase in Tanzania's national income which results from the "price" effects of the transfer tax.

Thus far in the present study we have made the assumption

that the prices of all goods produced in East Africa (and also imported into East Africa) were equal to the c.i.f. price of the equivalent outside import plus the external tariff.⁸ In a detailed empirical study of commodities traded interterritorially Roe found that this assumption is not valid for a significant number of such commodities. In the case of more than 40% of commodities for which price comparisons were made, he found that the prices of Kenyan exports to Tanzania were actually lower than the c.i.f. price of the equivalent imports into Tanzania from outside East Africa.⁹ (We should bear in mind, however, that no account was taken of possible significant differences in quality, which could be important, as already pointed out in Chapter IV).¹⁰ Thus if we accept Roe's findings, it would appear that for the majority of the commodities imported from Kenya into Tanzania the burden of any transfer tax from price effects will fall largely on the Tanzanian consumer. Thus the increase in Tanzania's

⁸ See above chapter II, pages 98-99.

⁹ Alan Roe, "Terms of Trade and Transfer Tax Effects in the East African Common Market: An Empirical Study," op.cit., p. 8. The main implication which Roe draws from this result is that the burden of the Common Market on Tanzania in terms of lost national income is less than indicated by Ndegwa and Ghai who measured the loss by multiplying the external tariff rate by the value of interterritorial imports (See above, Ch. I, footnote 54). Roe's study gives support to Hazelwood's critique of the Ndegwa-Ghai assumption; see Arthur Hazelwood, "The East African Common Market: Importance and Effects," Bulletin of the Oxford University Institute of Economics and Statistics, August, 1965.

¹⁰ See above, page 181.

real income which results from these "price" effects of the transfer tax will be less than the product of the average transfer tax and the value of her imports from the rest of East Africa. That is, less than the estimated potential increase in annual revenue of 30 million shillings from the transfer tax (see above, page 250).

But the main purpose of the transfer tax, as the Treaty makes clear, is not to raise income in this sense, but rather to bring about a more rapid rate of industrial growth. The first paragraph of the Article in the Treaty dealing with the transfer tax reads:

As a measure to promote new industrial development in those Partner States which are less developed industrially transfer taxes may, with the aim of promoting industrial balance between the Partner States, be imposed,... in accordance with and subject to the conditions and limitations imposed by this Treaty.¹¹

The questions most relevant to the effects of the introduction of a transfer tax are therefore (a) whether it will lead to more industries being set up in Tanzania and/or more rapid expansion in already existing industries; and (b) whether any such increase in the industrial growth rate will help promote the rate of economic growth in Tanzania in the long run. A priori it seems probable that increases in prices of Kenyan and Ugandan exports to Tanzania (resulting

¹¹Treaty for East African Cooperation, op. cit., Article 20, page 12.

from the imposition of the transfer tax) will stimulate expansion of production in Tanzania in those industries already in existence, and also speed up the beginning of production in some industries where production does not yet exist; especially if we assume little "deviation" to imports from outside East Africa. In this connection it is interesting that the Tanzanian Government has been exerting strong moral suasion, apparently with some success, on its producers not to raise prices on goods subject to transfer taxes. Their aim here is, of course, to raise Tanzanian output at unchanged prices to replace production from the Kenyan source.¹²

Resnick, with the aid of a study done by the Continental Allied Corporation on the possibilities for import substitution in Tanzania, concluded that in 39 out of 52 industries (for which Tanzania's interterritorial exports in 1966 exceeded 600 million shillings) production was already in existence or "the market is known to be large enough to justify their establishment."¹³ If the Tanzanian Government wishes to stimulate industrial development itself it could use the revenues from the transfer tax to that very end. However, it is paradoxical, if not ironic, that the Tanzanian

¹²I am indebted to G. K. Helleiner who raised this point in private correspondence.

¹³I. Resnick, Foreign Trade and Payments in Tanzania, op. cit., page 85.

Government has chosen to resort to the widespread use of the transfer tax¹⁴ only a year after the introduction of the Arusha Declaration which implied a shift in emphasis from the industrial to the agricultural sector in economic policy objectives in Tanzania.¹⁵

Whether the promotion of industrialization through import substitution with respect to Tanzania's interterritorial imports will stimulate Tanzania's economic growth in the longer run depends on a number of factors. One important consideration, especially in static or short-run terms, is the immediate opportunity cost of employing more resources in the industrial sector. If the factors used to increase industrial output are relatively scarce (if their market prices tend to reflect their marginal productivity in alternate uses) then any shifting of these factors from alternate uses would involve a reduction in Tanzania's real national income in the short run; we are here following the conventional static efficiency arguments for free trade. This is especially the case where the transfer tax results in higher prices paid by Tanzanian consumers for the products being protected. In the case (discussed earlier) where the Kenyan or Ugandan producer

¹⁴ See below, footnote 17, for more details.

¹⁵ The Arusha Declaration and TANU's Policy on Socialism and Self Reliance, op. cit.

bears the full burden of the transfer tax (and thus the prices paid by Tanzanian consumers do not rise), there is no reason why more resources would be shifted to industrial production unless the Government used the revenues from the transfer tax to subsidize particular industries. Here, however, successful subsidization would lead to a fall in Tanzania's interterritorial imports and thus to a fall of revenue and must be justified therefore in terms of possible beneficial dynamic effects which will be discussed below. Earlier we stressed the scarcity of capital and skilled labor in Tanzania.¹⁶ Any shifting of these factors (consequent upon the imposition of a transfer tax) from an activity which could compete with East African rivals under free interterritorial trade would involve a reduction in real income. To be justified in static efficiency terms this loss in real income would have to be offset by any gain from employing previously idle resources (such as unskilled labor) whose opportunity cost would be much below the market rate.

The possible dynamic effects on production and real income from the imposition of a transfer tax are more varied and less predictable. To the extent that scarce resources such as capital and skilled labor are attracted from Kenya (as a result of more opportunities behind a transfer tax "wall") Tanzanian growth should benefit. Against such a

¹⁶ See particularly Chapter V, pages 210-214.

potential gain must, of course, be weighed the disincentive to foreign capital coming into East Africa, as a whole, now that the common market is split into smaller parts.

The familiar dynamic arguments for protection rest on the possibilities for economies of scale, external economies and the learning process over time. The last two of these could be significant in the present Tanzanian context and their realization would go to reinforce and increase any incentives for outside capital and skilled manpower to flow to Tanzania. But in a country as poor as Tanzania, with its relatively small population, the possibilities for economies of scale are not likely to be great in most activities. Rather, the duplication of industries in East Africa is more likely to prevent the benefits of economies of scale which would follow from specialization within the whole common market. Thus the imposition of transfer taxes could lead to higher prices (and/or lower profits), with detrimental effects on efficiency and growth in each of the East African countries. The Tanzanian Government's recent decision to levy transfer taxes on a wide range of imports from Kenya and Uganda¹⁷ will certainly not aid any trends

¹⁷On December 1, 1967, Tanzania levied transfer taxes on 45 categories of interterritorial imports. All these taxes were made to apply to imports from Kenya; fifteen of them being applicable to imports from Uganda. (Roe, op. cit. page 11).

towards specialization of industrial production within East Africa.

The transfer tax may result in some speeding up of Tanzania's industrialization, as well as in an increase in her exports to her neighbors and a reduction in her East African trade deficit. Nevertheless, a good case can be made that alternative arrangements to modify the workings of the common market would have been more in Tanzania's interest. This point of view has been very well expounded by Helleiner who wrote¹⁸

.. .whereas an arrangement which freed Tanzania to use its external tariff independently and permitted it to redirect its imports from Kenya to other sources could have immediately raised Tanzanian income, the provisions of the present Treaty will serve immediately to lower it.¹⁹ While the maturation of infant industries, the exploitation of external economies, and perhaps other "dynamic" factors associated with the new industries may eventually produce higher Tanzanian incomes than would have been possible under previous arrangements, these gains could as well have been obtained through the use of direct subsidies or the erection of an independent tariff. The potential gains accruing from economies of scale could have been preserved even under the latter system through limited commodity free trade arrangements. Alternatively, if a freer flow of intra-East African trade was desired, a free trade area agreement would have preserved these gains from scale economies and at the same time provided Tanzania with the income gains arising from the redirection of its imports.

¹⁸ G.K.Helleiner, "Some Hasty Thoughts on the Transfer Tax," unpublished paper, Dar es Salaam, 1967, pp. 6-7.

¹⁹ Helleiner here appears to be assuming that the imposition of a transfer tax will result in an increase in prices paid by Tanzanian consumers-the first case we discussed above-see page

II

However, arguments about the pros and cons of the transfer tax as a measure for promoting industrial development are academic at this stage, for the transfer tax has already been implemented. We therefore confine ourselves in the remainder of this chapter to the narrower question of which industries should be most protected through the transfer tax, i.e. what criteria should we use in choosing the industries to protect through the transfer tax. As in Chapter V we take the general position that the transfer tax should provide the greatest effective protection (vis-a-vis Kenyan and Ugandan producers) for those activities in Tanzania which best fit the criterion or criteria being discussed.²⁰ Before going on to consider the types of criteria which might be applied in choosing and/or evaluating the present structure of transfer taxes in Tanzania we shall look first at (a) the problem of how to measure rates of effective protection afforded by a given transfer tax and (b) estimate rates of effective protection afforded to Tanzanian industries from the present structure.

How do we measure the rate of effective protection enjoyed by a Tanzanian producer (vis-a-vis his Kenyan and/

²⁰ As in much of our treatment of effective protection with respect to tariffs and taxes affecting Tanzania's trade outside East Africa we are ignoring the potential effect of different tax policies on Government revenues.

or Ugandan rivals) from a given transfer tax, bearing in mind that prior to the imposition of the transfer tax these rivals were producing inside a common market area? As before, the rate of effective protection measures the percentage increases in value added made possible by the tariff and tax structure. A transfer tax imposed by Tanzania allows the value added coefficient for a certain activity in Tanzania to exceed the equivalent value added coefficient in Kenya and Uganda if we make certain assumptions which we shall specify shortly.²¹ Thus the rate of effective protection resulting from a transfer tax measures the percentage by which the value added coefficient in Tanzania exceeds the value added coefficient in the same activity in Kenya and/or Uganda after the imposition of a transfer tax by Tanzania.

More precisely, if we assume (a) production conditions in the three countries prior to the transfer tax were identical²² i.e. all input coefficients, all input costs and all final prices were identical, and (b) the input coefficients for all non-primary inputs are fixed i.e. the same in both the pre- and post-transfer tax situations, then

²¹ These assumptions are similar to those made when measuring effective protective rates which result from external tariffs. See above, Chapter II, pages 98-99.

²² In order to estimate rates of effective protection in our study of Tanzania's tariff and tax structure we made the assumption that production conditions in Kenya and Tanzania were the same. See above, Chapter IV, pages 159-160.

the rate of effective protection enjoyed by activity j in Tanzania vis-a-vis comparable activities in Kenya and/or Uganda is given by $E'_j = \frac{Vt_j - Vk_j}{Vk_j} \times 100$ where Vt_j represents the value added coefficient in Tanzania after the imposition of the transfer tax, Vk_j represents the value added coefficient in activity j in Kenya (or Uganda) after the imposition of the transfer tax.

In the situation where the transfer tax results in Tanzanian prices going up by an amount equal to the "specific" equivalent of the transfer tax (the first case discussed above on page 252), it is easy to show that the rate of effective protection for activity j is given by

$$E'_j = \frac{t'_j - \sum a'_{ij} t'_i}{Vk_j} \times 100 \quad (6.1)$$

where t'_j is the ad valorem rate of the transfer tax on the product of activity j , t'_i is the ad valorem transfer tax on input i , a'_{ij} is the input coefficient for input i used in activity j and the pre-transfer tax price of the product of activity j is assumed to be unity.²³ t'_j represents the increase in price which can be received by the Tanzanian producer and still enable him to compete with his Kenyan and Ugandan rivals; $\sum a'_{ij} t'_i$ represents the increase in the cost of inputs used by the Tanzanian producer as a result of any transfer taxes on his inputs. Therefore $t'_j - \sum a'_{ij} t'_i$

²³ This is the identical approach used above in Chapter III; see formula (3.2), page 144.

represents the increase in the value added coefficient made possible by the structure of transfer taxes. Now in this case, where the transfer taxes are borne fully by the Tanzanian consumers of products on which the transfer tax is levied, it is reasonable to assume that the value added coefficient in activity j in Kenya (or Uganda) is not affected by any transfer tax imposed by Tanzania. The V_{kj} will be the value added coefficient in Kenya (and Uganda) both before and after the imposition of any transfer taxes. Hence E_j in this case measures the percentage by which value added in Tanzania is greater than value added in the same activity in Kenya and/or Uganda.

In this case E_j also measures the percentage increase in value added in activity j in Tanzania as a result of the transfer tax if we maintain our earlier assumption that production conditions in Tanzania prior to the imposition of the transfer tax were identical to those in Kenya and Uganda. For then V_{kj} represents the pre-transfer tax value added coefficient in activity j in Tanzania. If we assume further that the transfer tax structure and consequent positive E_j 's do not result in inefficient use of non-primary inputs of the Ellsworth type²⁴ (i.e. the input coefficients

²⁴ See Chapter III, page 145 for a discussion of this possible type of inefficiency.

for non-primary inputs in Tanzania are not affected by transfer taxes), then the higher prices in Tanzania made possible by the transfer tax structure must result in higher profits and/or inefficient use of capital and/or labor in Tanzania - i.e. in greater payments to labor and/or capital per unit of output.²⁵

Since most of the manufactured goods imported by Tanzania from her East African neighbors are final consumer products (i.e. very few of them are inputs), it is reasonable to assume that in most activities there will be no transfer taxes on inputs.²⁶ In such cases the rate of effective protection from a transfer tax imposed on the final product of activity j reduces to

$$E'_j = \frac{t'_j}{V_{kj}} \quad (6.2)$$

In the case where the Kenyan or Ugandan producer bears the burden of the transfer tax in having to accept a lower price for his product if he wants to sell it in Tanzania (the second case discussed earlier on pages 253-255 above), the measurement and interpretation of E'_j is not so simple. The reduction in the price received by the Kenyan (or Ugandan) producer in activity j will lead to an equivalent reduction in value added in Kenya (or Uganda) if we

²⁵ See Chapter III, pgs. 138-140, for a detailed discussion of this point.

²⁶ One notable exception here would be the clothing industry, for a transfer tax has been levied on one of its major inputs, textiles.

continue to assume that input coefficients for all non-primary inputs are fixed (in value as well as in physical terms). According to the terms of the Treaty the transfer tax is calculated on the basis of the price asked by the Kenyan or Ugandan exporter.²⁷ Thus if the price of the final product of activity j is to remain at unity in Tanzania after the imposition of a transfer tax of t_j then the Kenyan (or Ugandan) seller will now receive $\frac{1}{1+t_j}$ for his product instead of 1 as in the pre-transfer tax situation. The reduction in value added in Kenya will then be equal to the reduction in the final price, i.e. $1 - \frac{1}{1+t_j} = \frac{t_j}{1+t_j}$. The post-transfer tax value added coefficient in activity j in Kenya which we denote by V_{kj}' will then be equal to $V_{kj} - \frac{t_j}{1+t_j}$. Now the percentage by which the value added coefficient in activity j in Tanzania exceeds that in Kenya (or Uganda) is

$$E_j' = \frac{t_j}{1+t_j} \times 100$$

$$V_{kj} - \frac{t_j}{1+t_j}$$

if we assume that there are no transfer taxes on inputs. E_j is a measure of the improvement of the competitive position of the Tanzanian producer vis-a-vis his Kenyan (and/or Ugandan) counterparts, but it no longer measures the

²⁷Treaty for East African Cooperation, op. cit.

percentage increase in value added in activity j made possible by a transfer tax. For, in this latter case there will be no change in the price of the final product in Tanzania (and also in the prices of inputs, given our assumptions). Thus there will be no change in the value added coefficient in industry j in Tanzania. However, to the extent that the Tanzanian Government uses any revenue from transfer taxes to subsidize this industry, there will be an improvement in the prospective size of profits and/or labor returns per unit of its output.

$E_j^!$ is comparable to E_j^j in that both are a measure of the improvement in the competitive position of production in activity j in Tanzania vis-a-vis competing production in Kenya or Uganda. (Note that where $t_j^!$ is small, particularly where $t_j^! \ll V_{kj}$, $E_j^! \rightarrow E_j^j$. More formally, $E_j^! \rightarrow E_j^j$ as $t_j^! \rightarrow 0$, i.e. $\frac{t_j^!}{1 + t_j^!} V_{kj} - \frac{t_j^!}{1 + t_j^!} \rightarrow \frac{t_j^!}{V_{kj}}$.

Thus, if we rank activities according to $E_j^!$ and/or E_j^j we will obtain some indication as to how revenues might shift from a pre-transfer tax situation to a post-transfer tax situation.²⁸

²⁸ For a discussion of the reliability and relevance of effective protection rates as indicators of possible resource shifts see Chapter II (especially pages 124-26) and Chapter III (especially pages 152-154).

Table 6.1

Tanzanian Transfer Taxes and Rates of Effective Protection for "Selected" Industries

Industry	Kenya Value Added Coefficient, 1963 (1)	Transfer Tax Rate (%) (2)	Rate of Effective Protection from Transfer Tax (%) (3)	Ranking by Effective Protection from the Transfer Tax (4)	Ranking by Effective Protection from External Tariff (5)
Matches	0.43	100	233	1	2
Tobacco	0.40	50	125	2	1
Dairy Products	0.23	20	87	3	7
Misc. Chemicals	0.28	15-30	60-100	4	6 ^a
Biscuits	0.30	18	60	5	9
Paints	0.31	18	58	6	3
Textiles	0.35	20	57	7	5
Soap	0.34	18	53	8	10
Bicycle Tyres	0.35	17	49	9	4
Clothing	0.30	20	40 ^b	10	11
Beer	0.66	25	38 ^c	11	8
Footwear	0.40	15	37	12	12
Metal Products	0.34	10-15	30-45	13	13
Furniture & Fixtures	0.45	10-15	25-30	14	14
Glass Products	0.61	15	25	15	15
Paper & Paper Products	0.42	7-10	20	16	16

Notes: (a) Based on effective rate for cosmetics in column (1) of Table 4.2.

(b) Based on assumption that input coefficient of textiles in the clothing industry is 0.40 and using formula (6.1).

(c) This is probably too low because 0.66 appears to be an "unusually" high value added coefficient - see text, page 275.

Sources: Column (1): Table 4.1, column (1).

Column (2): Roe, op. cit., Appendix Table III.

Column (3): From formula (6.2), $E_j^i = \frac{t_j^i}{V_{kj}} \times 100 = \frac{\text{column (2)}}{\text{column (1)}} \times 100$.

(see text, pp. 268-269)

Column (5): Table 4.2, column (1).

To estimate rates of effective protection afforded to selected industries in Tanzania by the recently imposed transfer tax we use the formula $E_j^1 = \frac{t_j^{67}}{V_{kj}^{63}} \times 100$ where t_j^{67} measures the percentage rate at which the Tanzanian Government levied a transfer tax on the products of industry j in December 1967 and V_{kj}^{63} represents the value added coefficient for industry j in Kenya in 1963.²⁹ We are assuming in the above formula that (a) there are no transfer taxes on inputs in these industries (with the exception of the clothing industry as explained in footnote to Table 6.1), and (b) that Tanzanian consumers bear the full amount of the transfer tax in the form of increased prices for imports from Kenya and Uganda or their domestically produced equivalents.³⁰

Table 6.1 shows estimates of the rates of effective protection for 16 industries (whose products are subject to transfer taxes) obtained from the above formula. For similar reasons to those discussed in Chapter IV³¹ these estimates must be treated with extreme caution. There is

²⁹ See Chapter IV, pages 159-60, for an explanation of why the figures from the 1963 Kenya Census of Industrial Production are regarded as the most reliable for estimating value added coefficients.

³⁰ The empirical evidence for such an assumption is based on Roe's findings already discussed above on page 256.

³¹ See Chapter IV, pages 179-181.

the additional problem here of what happens to the domestic price of a product subject to a transfer tax given that there may not be a full "price" effect as we have assumed in (b) above in the previous paragraph. A less than full "price" effect may also occur if the Tanzanian producers do not raise their prices by the full amount of the transfer tax, and as already indicated the Tanzanian Government has been urging them to keep their prices down.³² Nevertheless, it seems reasonable to assume that the rankings given in column (4) of Table 6.1 are reliable indicators of the relative protection afforded to different activities by the transfer tax. The ranking of these 16 industries by effective protective rates afforded by the transfer tax are strikingly similar to the ranking for the same industries on the basis of effective protection against competition from outside East Africa (as shown in column (5) of Table 6.1). There are only three industries where the rankings in column (4) differ by more than 3 from the rankings in column (5). These are the dairy products, biscuits and bicycle tyre industries, and for none of these is the difference in ranking greater than 5.

We turn now to consider the question of what criteria the Tanzanian Government should use in choosing which

³² See above, page 258.

industries to protect through the transfer tax. Finally we go on to examine the structure of protection from the present transfer tax structure in the light of some of these criteria.


The criteria which Tanzania should employ in choosing which products should be subject to a transfer tax and how high the tax should be in each case are, for the most part, the same criteria as those which should govern the choice of industries to which any other form of protection is offered. Thus, following our analysis in Chapter V, the greatest effective protection should generally be given to those activities which i) are most labor intensive and/or have a low capital-output ratio, ii) lead to the greatest linkage effects, though we should bear in mind, as Resnick points out, that:

....these linkages must not simply be technical... but must be economic - in that it is or becomes possible and profitable to establish the links in the country - in order for the effect to be felt. Thus, for example a product which has a high import content, even though the linkages may be great, will contribute less to growth than products with lower linkages having less import content. 33

iii) lead to external economies especially greater possibilities for learning so that unskilled labor may be upgraded.

In addition to these generally applicable criteria

³³ Resnick, op. cit., page 83.



there are considerations which have special importance for a transfer tax and import substitution strategy within East Africa. As far as possible Tanzania should avoid investment in new industries which would duplicate already existing Kenyan capacity and which would thereby prevent the attainment of economies of scale within East Africa as a whole.

Bearing in mind all the above mentioned criteria, Tanzania should, *ceteris paribus*, apply transfer tax protection to those commodities where her terms of trade losses as a result of the workings of the East African common market (i.e. the common market prior to December 1967) were greatest. More precisely, effective protection should usually be greatest for those activities where the annual value of Tanzania's interterritorial imports of the product(s) of that industry multiplied by Tanzania's external tariff rate on that product (in *ad valorem* terms) is greatest.³⁴ Before turning to a consideration of how well this particular criterion is presently being met we examine the existing structure of transfer taxes in terms of the other criteria mentioned above.

³⁴The assumptions, implications, and relevance of this criterion will be discussed more fully below when we examine the present transfer tax structure in the light of this criterion (see pages 281 ff.).

III

From Table 6.2 it is clear that there is a strong negative correlation between the rankings according to rates of effective protection afforded by the present structure of transfer taxes (shown in column (2)) and labor intensity (as shown in column (3)).³⁵ Of the nine industries receiving the greatest effective protection from transfer taxes only two - matches and textiles - are labor intensive. And of these two the production of matches in Tanzania is not really labor intensive. The reason it is classified A is that this measure is based on data for the industry "other wood products" as a whole.³⁶ The transfer tax is levied on matches only and in Tanzania matches are now produced at a modern plant which is not highly labor intensive. On the other hand of those seven industries receiving the least effective protection from transfer taxes three (clothing, furniture and fixtures, and paper and paper products) are labor intensive and another three have an intermediate degree of labor intensity. The rate of effective protection for beer shown in Table 6.2 is probably too low (see footnote c to Table 6.1) and thus it is a further case of an industry

³⁵ Following the notation used in Chapter V (see page 220) a high degree of labor intensity in an industry is denoted by A, while a low degree of labor intensity is denoted by C, intermediate degrees of labor intensity being denoted by B - see the footnotes to Table 5.3 for the sources of measures of labor intensity on which this classification is based.

³⁶ See Chapter V, Tables 5.2 and 5.3.

Table 6.2

Ranking by Transfer Tax Rates, Effective Protection Rates
and Relevant Criteria for Selected Tanzanian Industries

Industry	Ranking by	Ranking by	Labor	Linkage	Prevalent
	Transfer Tax	Effective Protection from Trans- fer Tax	Intensity	Effects	Size of Establish- ment
	(1)	(2)	(3)	(4)	(5)
				Back-For- ward	ward
Matches	1	1	A	-	-
Tobacco	2	2	C	-	- Large
Dairy Prod.	4	3	C	8	8 Small
Misc. Chem.	7	4	C	6	4 -
Biscuits	8	5	A	8	8 Medium
Paints	9	6	C	6	4 Large
Textiles	5	7	A	7	7 Medium
Soap	10	8	C	-	- None
Bicycle Tyres	11	9	C	8	8 Large
Clothing	6	10 ^a	A	4	10 Medium
Beer	3	11 ^a	C	-	- None ^b
Footwear	12	12	B	4	10 None ^b
Metal Prod.	14	13	B	2	1 None ^b
Furniture & Fixtures	15	14	A	3	2 Small
Glass Prod.	13	15	B	-	- None ^b
Paper & Pa- per Prod.	16	16	A	3	3 Medium

- Notes: (a) The "true" ranking for clothing should probably be lower while that for beer should be higher - see footnotes a and c to Table 6.1.
- (b) In the Tanzanian context the prevalent size of establishments in these industries tends to be at least medium, if not large, given that 'modern' plants have been or would probably be built in these industries.

Sources: Column (3): Roe, "Terms of Trade and Transfer Tax Effects in the East African Common Market," *op. cit.*, Appendix III.

Column (3): see Table 5.2.

Column (4): Hirschman, The Strategy of Economic Development, pp. 116-117.

Column (5): K.A. Bohr, 'Investment Criteria for Manufacturing Industries in Underdeveloped Countries,' *op. cit.*

with a low labor intensity being given significant effective protection by the present level of transfer taxes. Overall then, the present structure of transfer taxes is highly unsatisfactory in terms of the labor intensity criterion.

The classification of linkage effects given in column (4) of Table 6.2 is taken directly from that given by Hirschman³⁷ and used earlier in Chapter V. Following Resnick's suggestion referred to above (see page 273), this classification needs to be significantly modified when applied to Tanzania at least with respect to short run considerations. For given the limited extent of industrialization in Tanzania the usual linkage effects in certain industries are not likely to have any significant impact in the domestic economy. Thus for example, the backward linkages in the metal products industry in Tanzania is likely to be very low in Tanzania; even though it has a very high ranking according to Hirschman's classification, which is based on a study of industrialized nations. For, in Tanzania there is now no extraction and processing of primary metals other than gold or diamonds nor is there likely to be in the foreseeable future given the smallness of the domestic market and the lack of adequate transportation to the iron and coal deposits in the SouthWest region of

³⁷Hirschman, op. cit., pp. 116-117.

the country near the Zambian border. The backward linkages in footwear in Tanzania (ranked 4 by Hirschman's classification) are potentially significant if production is to be mainly of leather shoes. But if production continues, as it is now, to be mainly of cheap rubber shoes then backward linkages are likely to be small given that rubber has to be imported.

There are however a number of industries where the major raw material is domestically produced, most notably tobacco, textiles, and clothing. Here, of course, backward linkages are important and a good case can be made for emphasizing these industries, a case which has already been developed in Chapter V.³⁸ These industries are presently ranked 2, 7, 10 respectively according to rates of effective protection provided by the present level of transfer taxes.

In terms of the criterion of size, the present structure of transfer taxes appears fairly satisfactory, especially if we agree that the limited size of the Tanzanian market makes it desirable to give greatest protection to those industries where the "prevalent" (optimal) size of establishments is small. Of the ten industries most heavily protected by the present structure of Tanzanian transfer taxes only three (tobacco, paints, bicycle tyres) typically have

³⁸ See pages 195-196.

large size establishments. There is as yet no production of bicycle tyres in Tanzania. It appears that this is a case where it would be unfortunate if the imposition of a transfer tax speeded up the initiation of production in a particular industry. For Tanzania imports a significant quantity of bicycle tubes and tires from Kenya and Uganda.³⁹ The establishment of a bicycle tire factory in Tanzania in the near future would lead to unnecessary duplication within East Africa.

In connection with this last point it is important to note that in the 16 industries which we have been examining in this chapter some production already exists in all but one of them - the above mentioned bicycle tire industry. However, the classification we have used here is a fairly broad one and there are important sectors of these industries where there was in mid-1967, as yet no production in Tanzania. Thus, in the "metal products" industry there was no production of steel doors and windows or of metal furniture; in the "glass products" industry no production of glass bottles; in the "miscellaneous chemicals" industry no production of perfumes and cosmetics.⁴⁰ But we should bear in mind that according to the terms of the Treaty for

³⁹In 1966 of total imports of bicycle tires into Tanzania over 80% in value came from Kenya and Uganda.

⁴⁰Resnick, op. cit., Table 18.

East African Cooperation

A Partner State may impose a transfer tax upon manufactured goods only if at the time the tax is imposed goods of a similar description are being manufactured in that State or are reasonably expected to be manufactured in the State within three months of the imposition of the tax.⁴¹

Furthermore "in the reasonable expectation that the manufacture of such goods will commence within three months," the industry producing these goods in the tax imposing country must have within a year the capacity to produce

- (a) a quantity of goods equivalent to not less than fifteen percent of the domestic consumption within the Partner State of goods of that particular kind in the period of twelve months immediately preceding the imposition of the tax; or
- (b) goods of that particular kind having an ex-factory value of not less than two million shillings.⁴²

According to Resnick, for all of the products mentioned at the beginning of this paragraph, the Tanzanian market is large enough to absorb any output which would be sufficient to satisfy this last mentioned provision of the Treaty.⁴³

As we mentioned briefly earlier (see page 274), a criterion which appears relevant to any discussion of the


⁴¹Treaty for East African Cooperation, op. cit., p. 13.

⁴²Ibid., p. 14.

⁴³Resnick, op. cit., Table 18.

structure of Tanzanian transfer taxes has to do with the changing terms of trade between Tanzania and her neighbors as a result of the workings of the East African common market prior to December 1967. We choose to call this the "recovery of terms of trade criterion." We stressed in Chapter I (see particularly pages 31-35) that Tanzania long viewed the East African common market as working to her disadvantage. As a consequence of being less industrialized than Kenya Tanzania finds herself buying goods from Kenyan industries which shelter behind the common external tariff that exists in East Africa. It is largely as a result of this view that the transfer tax has now emerged as the main tool for reducing Tanzania's imbalance of trade in manufactures with Kenya.


As we also saw in Chapter I (pages 28-30) economists have attempted to measure the cost of the common market to Tanzania in terms of the national income (or loss of revenue from import duties) foregone as a result of Tanzania buying goods from Kenya or Uganda instead of importing these same goods from outside East Africa, or instead of these goods being produced in Tanzania behind a tariff wall which included duties against imports from Kenya as well as from the rest of the world. This economic "loss" to Tanzania can alternatively be viewed as a "terms of trade" loss in the



sense that in Tanzania prices of goods imported from Kenya are higher than they would be if East Africa and therefore Tanzania had no tariffs on the products at all.

For an individual product imported from Kenya the annual terms of trade loss to Tanzania would be equal to the annual value of Tanzania's imports from Kenya multiplied by the external East African tariff on that product (measured in ad valorem terms) if we assume that in Tanzania the price of this product is equal to the "free trade" world price for that product plus the East African tariff. The studies by Ghai and Ndegwa, referred to in Chapter I (see pages 29-30), which dealt with the question of measuring Tanzania's losses from the common market, made this simplifying assumption. Later we shall relax this assumption and consider the implications for our study. On the basis of this simplifying assumption it is simple to calculate the annual terms of trade loss to Tanzania in 1966 for each of the sixteen industry categories we have used thus far in this chapter.

Given our assumption here, if Tanzania imposes a transfer tax on a product equal to one half of the external tariff on that product (which is the maximum under the new Treaty), she will be recovering one half of this terms of trade loss. For the imposition of a transfer tax will result in the



transfer tax being borne by the Kenyan or Ugandan manufacturer." The recovery to Tanzania will be accounted for by an increase in Tanzanian Government revenues. This is the second pure case we discussed earlier in this chapter (see pages 253-255), i.e., the situation where there is no "price effect" in Tanzania as a result of the imposition of a transfer tax. What is involved here is a transfer of income from the Kenyan (or Ugandan) manufacturer to the Tanzanian Government.

In assessing or deciding on the appropriate transfer tax structure for Tanzania it seems to us that the potential terms of trade recovery is a valid and most important criterion. As we have already mentioned this criterion can be formulated more precisely as follows: Tanzania should, ceteris paribus, levy transfer taxes in such a way as to maximize her recovery from terms of trade losses that resulted from the workings of the common market prior to the introduction of the transfer tax.

Table 6.3 gives an overall picture of how well the present structure of transfer taxes in Tanzania satisfies this criterion with respect to trade with Kenya.⁴⁴ Column

⁴⁴ Transfer taxes have also been imposed on imports into Tanzania from Uganda. The number of industries covered (eight) is lower than in the Kenyan case and the value of imports involved is considerably less. We conduct our analysis here in terms of imports from Kenya only but the considerations and the conclusions apply in much the same way to the use of transfer taxes on imports from Uganda. C

(5) shows the "actual" recovery of terms of trade losses. This is obtained by multiplying the value of Tanzanian imports from Kenya in the industry in 1967 by the actual transfer tax rate imposed by Tanzania in December 1967 (i.e. by multiplying column (2) by column (4)). Column (6) shows the difference, if any, between the maximum potential recovery (i.e. if Tanzania levied the transfer tax at the maximum possible rate) and the "actual" recovery. In nine of the eighteen industries transfer taxes have been levied at (or very near to) the maximum rate. In only four of the remaining nine industries is the difference between the potential annual recovery and the "actual" annual recovery significantly large; that is, larger than 500,000 shillings. These four industries are tobacco, textiles, beer, and paper and paper products.

From the total figures for columns (5) and (6) in Table 6.3 it would appear that the Tanzanian Government has not made the fullest use of the transfer tax from the point of view of recovering terms of trade losses to Kenya. For the total annual "actual" recovery of terms of trade loss is 19.1 million shillings while the unrealized annual recovery is 9.3 million shillings (see Table 6.3). That is, the present structure of transfer taxes appears to yield only two thirds of the total potential recovery of

Table 6.3

"Actual" and "Unrealized" Terms of Trade Losses from the Transfer Tax

Industry	Interter- ritorial Imports from Kenya 1966(Shs.1000)	External Tariff	Transfer Tax Rate	'Actual' Terms of Trade Re- covery(Shs. 1000)	Unrealized Terms of Trade Re- covery(Shs. 1000)
(1)	(2)	(3)	(4)	(5)	(6)
Matches	302	200	100	302	-
Tobacco	3 540	300	50	1 770	3 540
Dairy Prod.	9 640	40-50	20	1 928	-
Misc. Chem ^a	7 340	20-75	10-30	1 940	420
Biscuits	2 180	37.5	18	3 924	-
Paints	1 060	37.5	18	191	-
Textiles	6 820	73 ^b	20	1 364	1 200
Soaps	1 082	40	18	195	-
Bicycle Tires	1 200	36	17	204	-
Clothing	2 100	60 ^b	20	420	210
Beer	8 760	100-150	25	2 190	2 190
Footwear	12 140	30	15	1 821	220
Metal Prod.	8 960	30	10-15	1 060	300
Furniture & Fixtures	2 480	30	15	372	-
Glass Prod.	2 360	43	15	354	120
Paper & Pa- per Prod.	14 700	30	7-10	1 080	1 145
Total for All 16 In- dustries	84 664			19 115	9 345

Notes: (a) This includes toilet preparations, plastic foam, other articles of plastic and suitcases of vulcanized fibre.

(b) These tariff rates are based on the specific amounts levied. The alternative "ad valorem" rates for most products in both these industries are 40 percent.

Sources: Column (2): East African Customs and Excise, Annual Trade Report of Tanganyika, Uganda and Kenya for the year ended 31st December 1966, Mombasa, Commissioner of Customs and Excise.

Column (3): See Table 4.1.

Column (4): Alan Roe, op. cit., Appendix, Table 14.

terms of trade losses. Furthermore one could argue that these numbers underestimate the gap between actual and potential recovery. There are a number of products which Tanzania imports from Kenya which are eligible for the transfer tax according to the terms of the new East African Treaty; yet the Tanzanian Government has chosen not to place a transfer tax on these items. Among the more important of these are meat and meat preparations, butter, insecticides and disinfectants, leather, manufactures of wood, cement, bars and rods of iron and steel, metal containers for transport and storage, and crown corks.⁴⁵ We have estimated (on the basis of 1966 interterritorial trade statistics and 1966 tariff rates) that if the Tanzanian Government were to levy transfer taxes on the import of these items from Kenya at the maximum possible rate, the additional recovery of terms of trade losses would be about 5 million shillings.

In practice however the maximum potential recovery of terms of trade losses from the transfer tax are likely to be considerably less than is indicated by the above discussion.

As we have already stressed, the measures of terms of trade savings shown in Table 6.3 are based on the assumption

⁴⁵In the case of Tanzanian imports from Uganda there are analogous products on which no transfer tax has been levied. The more important of these are biscuits, soaps, bars and rods of iron and steel, jembes (hoes), and enamel holloware.

that the pre-transfer tax prices in Tanzania of imports from Kenya are equal to the prices of equivalent imports from outside East Africa. However, according to Roe's study, mentioned earlier, this is frequently not the case. For many products Roe found that prior to December 1967 the price in Tanzania of a Kenyan good to be considerably below the price of the 'equivalent' product imported from outside East Africa. In such cases the imposition of a transfer tax should not result in as much recovery to Tanzania of terms of trade losses as would appear to be indicated by the figures in columns (5) and (6) of Table 6.3. For now the Kenyan (or Ugandan) producer should be able to pass on part of the transfer tax to the Tanzanian consumer in the form of higher prices. In certain cases the imposition of a transfer tax could result in no recovery of terms of trade loss. More precisely, this could occur where the price of the Kenyan good in Tanzania was less than the post-tariff price in Tanzania of the "equivalent" import from outside East Africa by an amount equal to or greater than the specific equivalent of the transfer tax levied.

But, as we have mentioned a few times before, there is a real problem in attempting any comparison of the prices of Tanzania's imports from outside East Africa with the prices of "equivalent" goods manufactured within East Africa.

Because the quality of goods imported from outside is frequently considered to be superior to East African products (as evidenced by the willingness of Tanzanian consumers to pay higher prices for the former) the method of direct price comparisons, on which much of Roe's study is based, is open to serious question. Moreover, what is pertinent here is that even if the prices of certain Kenyan products in Tanzania are less than the prices of "equivalent" imports from outside East Africa, Kenyan producers will still have to bear most of the burden arising from transfer taxes on such products, as long as Tanzanian consumers are willing to pay more for non-East African products. Largely for this reason we have chosen not to attempt to modify the numbers which are presented in Table 6.3 and which form the basis of our analysis here.

The question of quality differences appears to be of some use in throwing light on the final question we wish to consider here. As we mentioned earlier, for four of the sixteen industries classified in Table 6.3 the Tanzanian Government in December 1967 chose to levy transfer taxes at less than the maximum possible rate. These four industries are tobacco, textiles, beer, and paper and paper products. Why did the Tanzanian Government choose not to levy the maximum possible transfer tax on these products? In trying

to answer this question we are led into a brief discussion of a broader and more fundamental question. What criteria, if any, does the Tanzanian Government seem to have adopted in deciding which industries to protect (and how much protection to give each) by means of the transfer tax.

There appear to be two possible reasons (which are not mutually exclusive) why transfer taxes were not levied at the maximum rate on the products of the first three of the four above-mentioned industries (i.e. tobacco, textiles and beer). Firstly, if the quality of these products manufactured in Kenya is considered by the Tanzanian consumer to be lower than the quality of comparable products manufactured outside East Africa then a higher transfer tax rate might well have resulted in a sharp reduction in Tanzanian imports of these products from Kenya. For a high transfer tax would result either in the prices of the Kenyan products being raised in Tanzania or in the Kenyan producer being forced to accept a much lower price for his export to Tanzania. From either or both such developments there could arise an increase in Tanzania's imports from outside East Africa and/or an increase in Tanzanian production. The former is not permitted by the terms of the East African Treaty.⁴⁶ The

⁴⁶ Treaty for East African Cooperation, op. cit.

latter might not be possible in the short run, although it has to appear possible according to the terms of the Treaty.⁴⁷

If the Kenyan producers could pass on all or most of the transfer tax in the form of higher prices to the Tanzanian consumers they are more likely to continue trying to expand their sales in Tanzania. On the other hand, if they have to absorb most or all of the burden of the transfer tax themselves they would probably become much less interested in the Tanzanian market and try to sell more in Kenya and Uganda as well as outside East Africa. Why might such developments be of concern to the Tanzanian Government? Here we are led into a discussion of the second possible reason for the Tanzanian Government's decision not to levy transfer taxes at the maximum rate on the products of these industries.

The Tanzanian Government, like most governments in underdeveloped countries, is highly concerned with raising revenue to finance its growing current and capital program expenditures. As in the case of formulating and implementing policy on external tariffs so also with the setting of transfer tax rates the Tanzanian Government appears to have the need for revenue very much in mind. Hence perhaps an important reason for the decision to levy transfer taxes on beer,

⁴⁷ Ibid.

cigarettes and textile goods at less than the maximum possible rate. As long as Tanzania cannot rapidly expand its supply for the home market in these products there is no point in levying tariffs and/or transfer taxes at rates which might lead to a reduction in revenue. While the price elasticity of demand in Tanzania for these products (beer, cigarettes, and textiles) is probably fairly low, since all three are in some sense 'necessities' to the typical Tanzanian consumer, this elasticity may be greater than one because these three commodities make up an important part of the consumer's overall meagre budget. In addition the Tanzanian Government has to bear in mind that large increases in the prices of these 'necessities' would hardly be popular with the public.

It appears that the reason for not levying transfer taxes at the full rate in the case of the fourth product, paper and paper products, is similar to the last point discussed in the previous paragraph. The major import from Kenya in this industry is exercise books used by school children. The Tanzanian Government not surprisingly appears unwilling to increase unduly the cost of education, a 'good' so treasured by the masses as well as the President himself. Our analysis here may also help explain why certain products clearly eligible for the transfer tax have been omitted from the list of those products subject to be transfer tax. As

we mentioned earlier the most significant of these are meat and meat preparations, butter, insecticides and disinfectants, leather, manufactures of wood, cement, bars and rods of iron and steel, metal containers for transport and storage, and crown corks. Meat products are an important Tanzanian export. It would hardly make sense to try to protect the thriving Tanzanian meat products industry and thereby divert potential exports to a small domestic market at higher prices to the consumer. Of the remaining products listed only butter and manufactures of wood are not primarily inputs into the production of other goods. Perhaps after all the Tanzanian Government was not unaware of the fact that tariffs on inputs lower the effective protection given to domestic producers!⁴⁸

⁴⁸ This point is also relevant to the transfer tax on textiles which is a major input in the clothing industry and for which, as we have seen, transfer tax rates were levied at less than the maximum possible rate.

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