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**CHOICE OF TECHNIQUE AND
UNDERDEVELOPMENT IN TANZANIA**

by

© Samuel E. Chambua
B.Sc.(Ed.), M.A.(DS), M.A.(Soc.)

A thesis submitted to the Faculty of Graduate
Studies in partial fulfillment of the requirements
for the degree of Doctor of Philosophy.

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ABSTRACT

This study focuses on the problem of choice of technique in industrial production of a less developed country - Tanzania. It examines the factors which have influenced the choice of production techniques imported by Tanzanian state enterprises. The socio-economic implications of these techniques are also analysed. In line with the world system/dependence perspective which has guided this study, the analysis employed is historical, structural, and places emphasis on contradictions as well as on core-periphery relations.

Since the focus is on state owned enterprises, the nature and role of the post-colonial peripheral state is investigated and analysed. What has emerged from this analysis is that the post-colonial peripheral state is both an object of class struggle as well as an agent in class formation.; that it is imperatively interventionist, expansionist, and thence central in economic development. The technical choices made by state enterprises in Tanzania have been found to be heavily influenced by the dominant capitalist mode of production, organizational constraints resulting from this active state involvement in the economy, and the interests of external institutions (aid donors). These factors all tend to bias technical choices away from small scale and labour intensive techniques despite the fact that labour is considered to be cheap and capital to be scarce in Tanzania. This bias calls for labour to be retained in villages (rural areas) and implies deepening of external dependence.

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Finally, I take full responsibility for any shortcomings and views expressed in this study.

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LIST OF ABBREVIATIONS

ACAST	- The Advisory Committee on the Application of Science and Technology to Development
ACs	- Advanced countries
BIS	- Basic Industry Strategy
CCM	- Chama Cha Mapinduzi (Party of the Revolution)
CIDA	- Canadian International Development Agency
EAU	- Economic Affairs Unit
EADB	- East African Development Bank
ECC	- Economic Committee of the Cabinet
EEC	- European Economic Community
EMCO	- East African Management Company
FRG	- Federal Republic of Germany
GDR	- Germany Democratic Republic
GDP	- Gross Domestic Product
IDA	- International Development Agency
IDRC	- International Development Research Council (Ottawa)
ILO	- International Labour Organization
IMF	- International Monetary Fund
ISI	- Import Substitution Industrialization
KVAB	- Kalmar Verkstad AB
LDCs	- Less Developed Countries
MFI	- Mbeya Farm Implements (Factory)
NAFCO	- National Agricultural and Food Corporation
NBC	- National Bank of Commerce
NDC	- National Development Corporation

NEC	-	National Executive Committee
NIC	-	National Insurance Corporation
NUTA	-	National Union of Tanganyika Workers
OAU	-	Organization of African Unity
PMP	-	Peasant Mode of Production
RDA	-	Ruvuma Development Association
(T) Shs.	-	Tanzanian Shillings (US \$1 = Shs. 8.28 in 1980 and Shs. 12.50 in January 1984)
SUDECO	-	Sugar Development Corporation (Tanzania)
TANU	-	Tanganyika African National Union
TDFL	-	Tanzania Development Finance Co. Ltd.
TIB	-	Tanzanian Investment Bank
TRAMCO	-	Tanzania Railway Wagons Manufacturing Company
TWS	-	Tractor Workshop
UDI	-	Unilateral Declaration of Independence
UPI	-	Ubungo Farm Implements Manufacturing Company
UK	-	United Kingdom of Great Britain
UNESCO	-	United Nations Education, Scientific and Cultural Organization
UNIDO	-	United Nations Industrial Development Organization
USA	-	United States of America
USSR	-	Union of Soviet Socialist Republics
UTAFITI	-	Tanzania Scientific Research Council
VKCM	-	Vereenigde Klattensche Cultuur Mattschappij
WSP	-	World Systems Perspective

CHAPTER ONE

INTRODUCTION: OUTLINE OF THE PROBLEM AND LITERATURE REVIEW

1.1 Background to the Problem

The problems surrounding social change and economic development in less developed countries (LDCs) have been debated extensively since the 1950s. The list of proposed solutions to the social and economic problems facing these countries has, since then, been long and confounding. This is not surprising however, given the fact that not only is the list derived from different, but dominant, schools of thought in the social sciences (especially from development economics and sociology), but also the problems facing LDCs are numerous and diverse. At one point or another, the following according to Ghai (1977:1) have been regarded as solutions to the problem of underdevelopment:

capital accumulation; availability of foreign exchange; industrialization, first of the import substitution variety and then of export oriented; population control; human resources development; employment-oriented strategies; redistribution with growth - to mention only the star contenders.

Although the above list is mainly derived from development economics, most of the above proposed solutions are, of course, incorporated into the various theories of development/underdevelopment - especially those associated with

the modernization perspective (see Hirschman, 1958; Lebenstein, 1957; Rostow, 1950; etc.). Yet the success of development strategies in the third world based on the modernization perspective (or on the above solutions for that matter) has not been impressive especially insofar as the issue of improving the well being or living standards of the masses is concerned (Lisk, 1977: 175).¹ Thence, as the debates continue(d) there is/was also a search for alternative theories or paradigms and development strategies.² For example, the dependency school (or paradigm) and with it the world systems perspective on social and economic development was formulated in conjunction with and in opposition to theories such as modernization theories which seek exclusively for internal fetters to development in LDCs (Roxbough, 1979).

In the same vein, some critical social scientists such as Frank (1971) and Galtung (1980) have offered vivid evidence that development and underdevelopment, poverty and affluence are linked with the values and life styles inherent in the science and technology of the advanced countries (ACs) in Western Europe and North America. It is perhaps partly because of this observation that the appropriate technology movement gained momentum and the shift of emphasis from industrialization per se to the basic needs development and industrial strategy occurred in some development literature. Actually, in many international agencies and conferences concerned with technology and

development, the use of appropriate technology and, or, the basic needs approach to development is currently regarded as the omnipotent solution to underdevelopment (see The Advisory Committee on the Application of Science and Technology to Development - ACAST, 1977; Bhalla, 1979; The International Labor Office - ILO, 1977; Lisk, 1977).

This new approach to development (that is the stress on appropriate technology and on basic needs), however, is not qualitatively different from the earlier development approaches or strategies. For example, they all recognize and stress the inevitability of economic growth, industrialization, and the substantial contribution that technology (or technical progress) can make in raising labour productivity, output, incomes and employment opportunities. What is new is the realization that economic growth or industrialization for that matter, by and of itself is pejorative. Far more important is who are the beneficiaries, the masses or just a small minority of the people. Thus, the new approach differs from the earlier ones in the sense that both the choice of product and that of technology have been made explicit. That is, the use of the so called appropriate technology (in promoting industrial and economic growth) for the production of basic needs for the masses³. Notice that although under import substitution industrial/development strategy the choice of product seems to have been made explicit (i.e. by

stressing the establishment of industries for the local production of goods which would otherwise be imported), the choice of technology is usually not made explicit. As a matter of fact, the experiences of many LDCs which adopted the strategy of import substitution show that it leads to the use of complex and high cost technology (which is in most cases labour saving) for the production of goods which cater for the needs of high income earners and the rich - a tiny minority of the population (see Baer & Samuelson, 1977; Hirschman, 1968; Kuuya, 1976). Contrary to this, proponents of basic needs/appropriate technology strategy lay stress on the production of goods for mass consumption. They further argue that the use of appropriate technology will create more employment opportunities than otherwise, raise incomes and living standards of the poor masses in less developed countries (ILO, 1977).

Nonetheless, it is important at this point to emphasize that the problem of either meeting the basic needs of the majority of the people or that of raising their incomes and living standards is, in our view, largely a political question. If the political will to do so is lacking then very little can be accomplished especially in the poorer LDCs. After all, it has been observed by Bhagavan (1979: 7) that it is actually the political context which determines and, or, influences the following:

- the development approach/strategy to be pursued;

- the technological choices made; and
- the type and character of industrialization.

The implication of the above for this study is that development in any LDC cannot escape from being a political question. Thus, insofar as this study is concerned, technology per se, appropriate or otherwise, will be regarded as a necessary but not sufficient factor in overcoming/solving most of the socio-economic problems now facing the LDCs.

1.2 The Problem

The assertion/belief that the utilization of appropriate technology in LDCs for the production of goods and services by itself is i) a panacea to the problems of underdevelopment and ii) will satisfy the basic needs of the masses, not only lends itself to technological determinism and counters the arguments advanced so far in this study but also raises the ontological question: Do technologies actually exist which are ipso facto appropriate for LDCs? This problem is further confounded by the different definitions and interpretations of the concept. For example, Schile (1974: 77) defines appropriate technology as "any technology based on modern science which is in harmony with its environment". One wonders how this definition can be reconciled with the definition below given by ACAST 1977: 1):

For working purposes appropriate technology might be broadly defined as that technology which is appropriate in a given techno-socio-economic

framework at a given point in time; it is that technology which contributes the most to the social and economic aspects of development. (Our emphasis)

In the first definition, the defining characteristic is the property of being in harmony with the physical environment. That is, any technology which is based on modern science and which does not disturb or disrupt the ecosystem is appropriate. In the second definition the stress is on promoting social and economic development. Surely the two definitions cannot be said to connote or describe identical technologies always and everywhere. Moreover, the latter definition is tautological because appropriate technology is defined as that technology which is **appropriate** in a given techno-socio-economic framework. Consequently, the concept being defined is not scientifically analytical.

As a matter of fact we are of the opinion that appropriate as opposed to inappropriate technology should be used but first there is a need to answer the questions: Appropriate for whose interests? Under what circumstances? And who is making the judgement or evaluation? These questions are important because technology is not necessarily socially neutral and on top of this, the word **appropriate** definitely connotes certain value judgements. Thus, unless the answers to the above questions are made explicit, there is the danger that the concept will not only remain situationally specific but also, what is to be considered appropriate will be a function of (or vary with)

the values, interests, and ideologies of those advocating it. It is plausible that even ACAST is aware of this problem because it goes further to emphasize that for any technology to qualify as being appropriate it has to be:

- employment generating (so as to reduce unemployment);
- capital saving due to capital scarcity in many LDCs; and,
- contribute to the basic needs of the masses (ACAST, 1977: 4).

The above views of ACAST are consistent with those advocated by the ILO (1977: 141-156). Even so, other interpretations of "appropriate" do exist. Suffice it to point out that there are five major ways in which the concept has been discussed.

1.2.1 Small Scale versus Large Scale Technology

Small scale as opposed to large scale technology is considered to be more appropriate in terms of financial and managerial requirements, market, and other considerations. In other words, "small is beautiful" (see Schumacher, 1973). Actually, Stewart (1977: 103) makes the observation that "small scale is often emphasized as a leading characteristic of appropriate technology".

1.2.2 Labour versus Capital Intensive

The more labour intensive the more appropriate the technology is on the basis of the assumed high rates of either

unemployment, underemployment, or both (ACAST, 1977; DLODS, 1975; ILO, 1977). Capital intensive technology is seen as inappropriate mainly because of its failure to provide as many jobs as labour intensive technology. However, there is little agreement as to how the employment problem should be defined and, or, measured in countries where not only is wage labour (employment) accounting for only a minority (in some LDCs less than 10%) of those of working age but also, most of those referred to as unemployed or underemployed are actually working long hours a day (Stewart, 1977: 32-56). But despite the definitional and measurement problems there is wide agreement that the problem of employment actually exists in many LDCs. Even so, the problem is not limited to these two aspects only. Given the fact that the rural population in many LDCs accounts for about 80 percent or more of the total population, then it is still plausible to argue that even if the most labour intensive technology were used in all the modern sectors of the country/economy in question, this in itself would not solve the under/un/employment problem - however defined. Furthermore, unemployment is neither a one dimensional problem or mainly technical for that matter. It is first and foremost political, social, and economic as the Chinese and Japanese experiences seem to indicate.⁵

1.2.3 Low Cost versus High Cost

Another requirement of appropriate technology is that it should be cheap (i.e. low cost) both in absolute and relative terms. In other words, the lower the investment per labourer or employee the more appropriate it is due to, among other things, capital scarcity in many LDCs (Jequier, 1979: 10-14; Schumacher, 1973 & 1979).

1.2.4 Simple versus Complex Technology

The argument here is that the simpler the technology, up to a certain point, the more appropriate it is insofar as conformity with local skills, education, and, or, training facilities are concerned and also in "matters of organization, raw material supply, financing, marketing, and so forth" (Schumacher, 1973). However, the concept of simplicity as opposed to complexity is not all that simple especially if we take into consideration that there are several ways a machine can be considered to be simple: a) simple to make b) simple to operate c) simple to repair and maintain d) organizationally simple (Stewart, 1977: 104). Now, the problem is that it is not always possible to reconcile these four characteristics of simplicity. For example, it is usually the case that machines that are simple to make, operate, and repair are complex in their organizational requirements if simplicity is to be reconciled with small scale. Furthermore, highly automated machines are

less skill intensive, simple to operate, and they are often also organizationally simple. Perhaps because of these problems, proponents of simplicity talk of alternative or intermediate technology i.e. the technology lying between the very simple traditional technology in LDCs and the one currently in use in most advanced countries. But the so-called intermediate/alternative technology was once in use in the advanced countries but was made obsolete and hence replaced by technologies associated with techniques which are more efficient technically.⁶ Seen this way, their obsolescence was inevitable.

1.2.5 Harmony versus Disruption of the Environment

Here what is appropriate is situationally specific. That is to say the more harmonious the technology is perceived to be with its physical environment the more appropriate it is (see Jequier, 1976; Reddy, 1979: 173; Schile, 1974).

From the above discussion, the following problems and consequences can be detected insofar as the concept of appropriate technology is concerned. First, none of the above definitions and interpretations of the concept are categorical or universally adopted.

Second, it can also be argued that since most of the technologies deemed appropriate for third world countries turn out to be small-scale, labour intensive, and, or, the so-called intermediate technologies then their adoption will have the

effect of condemning the LDCs to docility, continued technological dependence, and at the same time keep them at a lower stage of development (see Paolillo in ILO, 1977: 183).

Third, a close look at the above interpretations and the literature on this subject in general reveals that what is really discussed and advocated under the label appropriate technology is actually (production) techniques rather than technology in its wider sense.⁴ This study therefore focusses its attention on the constraints of (i.e. factors which seem to have influenced) the choice of techniques which have been imported and brought into use in productive units of Tanzania - a less developed country which, according to Bhalla (1977: 7), is practising a basic needs development strategy. As a matter of fact, it is our opinion that it is the choice (of technique or technology for that matter) that can be labelled as appropriate or inappropriate. This approach solves the problem of referring to one and the same technique/technology as appropriate in one context and inappropriate in another different situation.

Although we do not entertain the view that certain technologies in and of themselves are a universal remedy to the problems now facing the LDCs, we nonetheless recognize the fact that techniques have certain intrinsic properties which can have serious consequences for the countries in which they are employed. To this end, Edquist & Edqvist (1979: 12) have

identified the following characteristics as being the most important: complexity, scale, and spatial extension.⁷ In our own circumstances we think there is the need to add one more property: namely the type of raw materials needed if a certain particular technique is to be employed. Sometimes, it should be noted, a certain technique can rule out the use of locally available raw materials. For example, despite the fact that the Kibo Matches factory in Tanzania is located near a huge forest, it had to rely on imported timber for making match sticks (for seven years) because the technique imported and employed dictated the use of soft wood while Tanzanian wood is essentially hard (Philips, 1980: 90). Furthermore, Wangwe (1977) lists the shortage of imported raw materials as one of the major causes behind severe capacity under-utilization in Tanzanian manufacturing industries. It should be noted that one of the major factors behind the poor performance of Tanzanian manufacturing industry from the late 1970s to date is lack of foreign exchange to import essential inputs, and, or, spares. We shall deal with this problem in chapter three of this study.

The above properties of techniques in turn lead to social consequences for labour relations, skill requirements, the type and degree of control systems, and so forth. This is what Edqvist & Edqvist meant when they wrote,

sometimes, there exist several techniques with different intrinsic properties, with which similar results can be achieved. ... the choice of technique

is therefore simultaneously a choice of consequences emanating from the intrinsic properties. ... The choice of technique thence implies social consequences, favouring some social groups or classes, while disfavouring others.

Economically, the choice of technique is also important and crucial in that it has direct bearing on the following:

- the speed at which imported technology can be mastered locally;
- the utilization of local resources;
- forward and backward linkages; and,
- the degree and type of external dependence (O'Brien, 1981; Philips, 1980).

From our discussion so far, it is apparent that the socio-economic progress of LDCs is linked with, among other things, the technical choices they make, techniques they import and, or, use in production processes. Consequently, the concern of this study is not limited to the constraints of choice of technique in Tanzania (and hence decision making procedures) but also includes an investigation of their socio-economic implications for Tanzania.

1.3 Statement of the Problem

Short of technological determinism and in view of the fact that production techniques are not chosen in a social vacuum, it is inadequate to make a catalogue of appropriate techniques deemed to solve the social and economic problems now

facing LDCs without at the same time addressing the issue of what (especially non-technical) factors affect (i.e. influence, interfere with, or constrain) the choice of technique by decision makers of a typical LDC. Furthermore, although many studies concerned with the issue of transfer of technology to LDCs in general and to Tanzania in particular have been undertaken, the problem of constraints (which are non-technical in character) of choices of techniques seem to have been largely ignored. So far, and to the best of our knowledge, no systematic study has been made along the lines we are suggesting on the question of what factors influence decision makers in Tanzania in their choice of production techniques to be imported into the country. This study is therefore an attempt to fill this gap. Now, since development in the context of this study is taken to mean or imply, at least, increasing the capacity and capability of any LDC to i) deal with (or to master and control) its environment, both physical and otherwise, thereby controlling its own destiny (see Sammoff, 1980: 23); and, ii) meet more and more and at a higher level than before the broad needs of the masses then, the concern of this study will also emphasize/analyse the socio-economic implications of the choices made so far. Particular reference will be placed on the problems which are currently being encountered in several of the country's major industrial sectors.

1.4 The Theoretical Framework

Production techniques are not chosen simply because of their intrinsic (technical) properties. True, these technical properties influence decision makers but non-technical factors and/or conditions which are social, economic, and political in character also play a decisive role. As was argued earlier in this chapter, techniques are not necessarily socially neutral. It follows therefore that society and social organization will favour those technical choices that correspond to dominant social interests, "whether it is the consolidation or strengthening of a power position, or the desire for creating new power structures" (Edquist & Edvist, 1979: 10). On the other hand, the choice of certain techniques has very important consequences for the society and for the social organization. Both the colonial government and the newly independent Tanzanian state, for example, chose to promote rural development by using tractors and other modern inputs. Once this choice was made, it became necessary to re-organize some of the rural Tanzanian peasantry into what were known as Settlement Schemes which as it turned out were highly mechanized and closely supervised by state authorities. Close supervision was the consequence of the fact that the settlers received loans from external institutions such as the World Bank. Thus, close supervision was seen as necessary for making sure that the settlers paid back the loans they received (for details, see Cunningham, 1973). For individual

Tanzanian subsistence peasants, with small family units of production, the tractor is impossible, both to acquire and to make sense of, given the purpose of their production and the size of their (land) plots.

From the above discussion and example, it follows that the relationship between technique and organizational structure is dialectical in character. We can also hypothesize that the technical choices made by decision makers in Tanzania, tend to correspond to and reinforce the dominant interests of the bureaucratic bourgeoisie - mainly that of securing more and more control over production in the country.

It is also vital to remember that usually the choice of product or goal takes place prior to the choice of technique and it can influence or limit the range of possible technical choices available. Other factors such as product quality, financial constraints, natural laws, and other physical environmental limitations clearly set bounds for the type and kind of techniques that are possible for a given society to use and, or, develop. This issue is, however, outside the concern of this study. As a result, this range will be taken as given and our focus instead will be upon the constraints of the "choice" among the alternatives within this range of possible techniques. In our opinion, we consider the following as being the most important factors influencing technical choices:

- I. Mode of Production and National Development Objectives.

II. Interests of External (foreign) Institutions (Aid Donors)

III. Organizational Constraints (emanating from State-economy Relationship).

Now, before elaborating on the above factors, let us first make explicit a few assumptions upon which our analysis is based. In other words, it is assumed that:

- i) the choice of technique is constrained by many factors;
- ii) both technical and non-technical factors or conditions greatly influence the choice among existing techniques;
- iii) there exists a range of alternative techniques from which LDCs can choose those best suited to their needs and development objectives/strategies. It is not assumed however, that the choosers are aware of all the different alternatives open to them;
- iv) a typical LDC is usually faced with the problems of underemployment, unemployment, or both as well as capital shortage; and,
- v) external financial aid (loans and grants) play a crucial role, in many LDCs, insofar as the financing of technological imports and, hence, industrial growth is concerned. (This is a corollary of assumption 4 above.)

The implications of the above assumptions and of what has been discussed so far in this study are that the theoretical

perspective we are employing will have to lay stress on the following: contradiction and conflict rather than unity and harmony of interests, historical and structural analysis. From assumption five above, it is also implied that dependence, hence, relations between LDCs and advanced countries are also to be analysed. This being the case, we think that the world systems perspective (WSP) on social and economic development is best suited for the type of analysis we are making in this treatise. Let us therefore briefly throw some more light on this perspective.

We have already pointed out that the dependence/world systems perspective was formulated as a critique of theories associated with the modernization perspective. These theories locate the most determinant factors or causes of the problems facing the third world exclusively within the underdeveloped country itself. The WSP on the other hand insists that i) it was and still is of little and limited value to study the development or, underdevelopment for that matter, of the LDCs in isolation from the development of the now advanced countries ii) the world has to be treated as one single system as a starting point and that, iii) the problem is, therefore, that of analysing and discovering the manner in which LDCs were incorporated into this world system, its implications and consequences insofar as the historical pattern of their development is concerned (Bach, 1980; Roxbough, 1979; Wallerstein, 1974). However, WSP is more than

simply a critique of modernization theories. It can be regarded as constituting a particular school of thought. The following are its basic tenets or assumptions.

- i) Capitalism arose only once and it is, as it was, a world system from inception (Bach, 1980: 295; Hopkins & Wallerstein, 1977: 1230).
- ii) Change in LDCs has primarily been "the consequence of the externalization of Western European capitalism through the formation of a world market and through various forms of imperialism and colonialism" (Roxbough, 1979: 42).
- iii) Sovereign states or multiple political sovereignties are one of the many kinds of organizational structures within the system, and no one of them can subsume the whole (Skocpol, 1977: 1096).
- iv) The (world) system is based on a geographically differentiated division of labour featuring three main zones: core, semi-periphery, and periphery tied together by/or with the world market.
- v) The law of value rewards the three zones differently, i.e. surplus flows disproportionately to the core areas (Amin, 1973).
- vi) Although the economic structures differ according to the mix

of economic activities and forms of labour control, they all give rise to a state and a dominant class within that state oriented towards the world market.

vii) The core states dominate the system more than they are constrained by it and this difference in strength is essential for the maintenance of the system (Stinchcombe, 1982). That is, the strong (core) states use their power to perpetuate and maintain those mechanisms and structures that allow the differential flow of surplus to their regions.

At this juncture, there is need for one to recall that just as the relationship between technique and organizational structure is a dialectical one, so is the relationship between social processes and social structures. That is, we are of the view that although (social) structures impose limits on social processes and reproduce established forms of behaviour, they also produce conditions and social tensions, which open up the possibility that social movements and ideologies of change may emerge. When they do emerge and in this process, "subordinated social groups and classes, as well as dominated countries, try to counter attack dominant interests that sustain structures of domination" (Cardoso & Falletto, 1979: xi).

Having made explicit our underlying assumptions and perspective, we now proceed to elaborate on the three most

important constraints of choice of technique (in LDCs in general and in Tanzania in particular) which we mentioned earlier on in this chapter.

1.4.1 Mode of Production and National Development Objectives

Different national development objectives can have different and varying success in influencing the choice among the range of possible techniques. These differences can be more vivid if the national development objectives also entail different ideologies and, or, different socio-economic systems: planned or market economies. But at this juncture it is important to bear in mind that a socio-economic formation is characterized by a dominant mode of production interacting with other subordinate modes. Thus, when we say that a certain economy is capitalist (i.e. market economy) all we mean is that the capitalist mode of production is either the leading and dominant mode or it is the one that is expanding and most dynamic. In other words, although it is quite possible that in many LDCs characterized as capitalist societies there may be a huge non-capitalist sector and, of course, varying degrees of state intervention in economic activity, these are subordinated to the expanding capitalist production. Hence, in these societies decisions concerning the choice of technique will be, to a larger extent than in other non-capitalist LDCs, influenced by private profitability. The influence of other factors such as

the country's development objectives (say, employment generation) will depend very much on the extent to which they are in line with the interests of private capitalist production. Of course the expanding capitalist mode of production in like manner is also influenced, modified, or distorted by the other non-capitalist modes.

This interaction or articulation of several modes of production explains not only the internal complexity and variations of capitalism (see Chevalier, 1982: 108-111; Forster-Cater, 1978) but also the inadequacy of the conventional theory concerning the choice of technology. According to the conventional theory, the task of a manager of a firm insofar as the choice of technology is concerned boils down to simply finding and thence choosing the technology that will combine the factors of production in such a way that production (or manufacturing) costs are minimized. Otherwise, the firm would incur higher costs of production as compared to its competitors and would therefore be forced out of business or else it would have to modify its technology (Stobaugh & Wells, Jr., 1984: 3). Usually, the factors of production are considered to be capital and labour. Thus, the relative prices of these two factors determine which combination of capital and labour will lead to minimum production costs. But since factor costs vary from country to country, the optimal ratio of labour to capital, and hence the technique chosen, will vary by country (Yeoman, 1984:

46). This being the case, the theory further predicts that since LDCs are faced with lower labour and higher capital costs, managers in these countries will choose more labour intensive techniques than will managers in advanced countries. But facts confound and contradict this traditional conventional theory.

Empirically, it has been observed that in many LDCs labour and capital intensive plants are surviving side by side (i.e. in the same country) and not only for the production of different products but also for the manufacture of apparently comparable if not identical products (Wells, Jr., 1984: 48-54). It has also been observed that industrial growth in LDCs is not always accompanied by an enormous increase in employment opportunities (Timmer, 1975).

The theory makes and, or, entails the following assumptions which are erroneous.

- a) "Firms exist in a perfectly competitive market in which both buyer and seller are price takers, in that neither can control the price" (Yeoman, 1984: 22). But the truth is that many choices are made in an oligopolistic environment resulting from either government protection or product differentiation.
- b) "All firms possess perfect knowledge" (Yeoman, 1984: 22) or information of the full range of techniques available elsewhere. Yet, as a matter of fact, lack of information is

often an important determinant of the choice (Ansalem, 1984).

In his article, "Selection of Production Processes by U.S. Based Multinational Enterprises", Yeoman (1984) starts by pointing out and questioning the soundness of some assumptions implied by the traditional conventional theory concerning choice of technology. Despite this however, he still uses the same basic model, i.e. the one employed by the conventional theory - namely, "minimization of costs". According to his study, the extent to which U.S. multinationals adapt their technology to foreign costs, especially lower labour and higher capital costs, is mainly dependent on the following two variables. i) The price elasticity of demand faced by the individual firm; and, ii) the relation of manufacturing costs to total costs. He concludes that the bigger the magnitude of each of these two variables the greater the extent of adaptation (Yeoman, 1984: 37-44).

Wells, Jr.'s, (1984) study - first published in 1973 - showed that in situations where firms can escape severe price competition (say due to product differentiation or direct state action) managers did not attempt to minimize costs through their choice of manufacturing technique.

The managers choice of technology appears to be influenced by two objective functions, which in low wage countries generally conflict. The first objective, that of the "economic man", is to minimize costs, which leads to a relatively labour-intensive production process. On the other hand, the objective of the "engineering man", tends to lead towards more sophisticated, automated technology. Where price competition is the rule,

the objectives of the economic man seem to override those of the engineering man. But when a firm has a monopolistic advantage, it is under less pressure to minimize costs to survive; the goals of the engineering man can, be allowed to lead the firm to a level of technology more advanced than that which the economic man would choose (Wells, Jr., 1984:64).

What emerges from the above mentioned studies and those by Keddle (1984) and Lecraw (1984) is that competition plays an important role in determining the choice of technique irrespective of whether the firm is a multinational or a local enterprise. Consequently, the nature and degree of competition faced by a firm is a crucial factor in its choice of technology. But this finding is not peculiar to LDCs. It applies also in the case of advanced capitalist countries (ACs). Yet in the former situation the objectives of the "economic man" and those of the "engineering man" do not appear to be contradictory. In other words, technical choices made there do not appear to be inappropriate to relative factor prices prevailing in ACs as is the case in LDCs. Thence, what is variable is the capitalist mode of production. That is, capitalism in ACs is different from that in LDCs. This is, inter alia, mainly due to two reasons.

First, the capitalist sector (sometimes referred to as the modern sector) in LDCs characterized as capitalist is heavily dependent on external forces - i.e. forces external to the LDC in question. This is particularly evident in the field of choice and transfer of technology where not only are the ties with

multinational enterprises sometimes stronger than links to other sectors within the country but also because of all the dramatic gaps between the ACs and the LDCs, "the technological gap might as well be the most marked" (Thomas, 1979: 119).

Second, the capitalist mode of production (or the capitalist sector for that matter) is not quantitatively the dominant one. Consequently, since the size of the modern sector is not constant across LDCs and since development objectives can and do vary between countries, then the articulation of modes of production leads to internal complexity and variations of capitalism among LDCs. These variations can explain and, or, entail different degrees and nature of competition facing firms operating in a particular LDC. Thus, the implication of these variations is that the choice of technique is structurally constrained and conditioned by the specificity of the mode of production, especially with respect to the "state-economy" relationship.

In Tanzania, the capitalist mode was expanding and qualitatively dominant during the early years of political independence, 1961-1966. The country's First Five Year Development Plan (1964 to 1969) for social and economic development put much emphasis on, inter alia, the following:

- rapid expansion of modern industry so as to raise productivity and output per capita;
- modernization of agriculture; and,

- massive expansion of the education system.

The plan also listed three main objectives to be attained by 1980:

- i) to raise per capita income from Tshs. 386/= to Shs. 900/=;
- ii) to be fully self-sufficient in skilled and trained manpower requirements at all levels; and,
- iii) to raise the expectation of life from 30-40 years to an expectation of 50 years (Tanganyika, 1965: viii Vol. I).

The directorate of planning which prepared this plan, was staffed by expatriate economists and it is apparent that the plan was heavily influenced by the strategies of the 1960s - especially the American orientation which was so prevalent at the time (see Harbison & Myers, 1959).

Industrial growth was to be undertaken under the so called Import Substitution Industrialization (ISI) strategy. It was also planned that a) 78 per cent of all government investment was to be financed from external sources through foreign investment; b) 14 per cent from external borrowing; and, c) 8 per cent from taxation (Rweyemamu, 1973: 122-144). Thus, it is also fair and logical to assume that profitability and other interests of foreign investors had considerable influence on the choices of technique made during this time. But, of course, since the capitalist sector was only the dynamic/expanding sector and not the only one, other factors apart from profitability did influence the technical choices made - especially in the public

sector. In addition to this, the implementation of the above mentioned plan ran into several difficulties.

First, foreign resources or aid became increasingly inadequate to finance the plan. Second, the government's attempt to augment the available resources through domestic borrowing was also not very successful because the local financial institutions were privately owned. The banks, for example, were both under private and also foreign ownership. Thence, insqfar as the government was concerned, the logical solution to these events seemed to be state control of the major economic institutions and other major means of production in the country and less dependence on the international capitalist system. Thus, February 5, 1967 saw the announcement of the Arusha Declaration which committed Tanzania to the path of Ujamaa (brotherhood/socialism) na Kujitegemea (and self-reliance). By so doing, Rweyemamu (1973: 44) argues, the government was acting in response to the bottlenecks imposed upon Tanzania's potential for development as a satellite on the chariot wheel of dependence and international capitalism.

Following the Arusha Declaration, there was a change of emphasis from private foreign investment to joint ventures with the government as the majority shareholder. Furthermore, the declaration and subsequent policies which followed from it emphasized the following development objectives.

- a) Public (control over the economy) ownership of the major means of production;
- b) Self-reliance - that is economic growth resulting from a high degree of domestic mobilization and from local resource utilization;
- c) Egalitarianism - greater emphasis to be placed on achieving greater social equity i.e. reducing income differentials and also to narrow the gap between rural and urban living standards; and,
- d) Agricultural and rural development, that is, development programmes including education should be adapted more and more to the basic needs of the (rural) masses.

The above objectives and others stated in the Arusha Declaration defined the aims of the Second Five Year Development Plan (1969-1974). However, insofar as industrialization was concerned, ISI remained the industrial strategy for the entire First and Second Five Year Plan period (1964-1974). In addition, this new development strategy, ironically, seemed to have attracted more foreign aid than before (O'Brien, 1981). Consequently, although the state was in a position to influence the choice of industry through the system of central planning, joint ventures with multinational corporations meant that private profitability and other interests of foreign partners and, or, aid donors would still have some influence on the choice of technique.

Partly because of the oil crisis of the 1970s (which implied higher prices than before for both oil and imported manufactured goods) and, partly because of the influx of foreign aid the Tanzanian government placed, once again, much more emphasis on industrialization. But this time the ISI strategy was abandoned. The country's Third Five Year Development Plan (1976-1981) ~~called~~ called for a "Basic Industry Strategy" (BIS). Even so, it is apparent from our discussion so far that the choice of technique is not simply a matter of conscious policy making but it is rather, to a large extent, structurally constrained by the (specificity of the) mode of production. Since the forces of production (technology being an important part of them) and social relations of production together define a mode of production, then it follows that the social relations of production are the most decisive insofar as influencing technical choice is concerned. This is so because the social relations of production express:

- the relationship between those who control the means of production and thence can appropriate the surplus and the group/class comprised of the direct producers;
- the form of ownership of the means of production and also the objective of production - e.g., private profit or meeting the basic needs of the producers;
- the relationship between the state and the economy; and,
- the framework for the labour process (see Braverman, 1974).

We can therefore hypothesize that the influence of

national development objectives on choice of technique will be minimal in those cases where they are in conflict with, or tend to contradict, the logic of the dominating, dynamic, and/or expanding mode of production. This implies that structurally, technical choices are strongly influenced by the following factors.

- i) the type of ownership (private, state/public, co-operative, etc.);
- ii) the objective of production;
- iii) the internal class and power relations of the production unit concerned; and,
- iv) the size of the production unit (Edquist & Edqvist, 1979: 24).

Other important constraints of production techniques in LDCs are factors connected with their dependence on external aid. It is to a discussion of such factors that we now turn.

1.4.2 Interests of External Institutions (Aid Donors)

It is important at this point to mention that the market within which technology is being bought and sold is a very imperfect one. Like all other imperfect markets (c.f. the labour market) bargaining plays a major role in determining the prices of what is being sold or bought (Vaitsos, 1973). The implication of this feature is that the method by which decisions concerning the importation of technology is arrived at ceases to be a

process indigenous to the local enterprise or government system. Unfortunately, it is rather a bargaining process between local and foreign institutions. The process therefore crosses both national and cultural lines and as a consequence it can become difficult to reach an agreement on what constitutes the "appropriate technology/technique" for the project under consideration (Thomas, 1975: 51). On top of this, an external institution (say a certain transnational corporation) may have an interest in preserving its monopoly over the use of certain production technique(s), and hence, will push for a technique which is highly protected by patents and other legal provisions to be entered in the final contract. The buyers, in this case LDCs, may push for unprotected techniques but they may lack the necessary information (technological) of the different alternatives open to them so as to make rational choices. Structurally, they are thus placed in a position of fundamental weakness.

In addition to this, the availability of foreign aid may complicate the process still further. External aid is neither simple nor flawless. At least, it can affect the choice of technique in three ways.

First, from the point of view of officials of an LDC faced with the problem of capital shortage, the securing of foreign aid may be seen as the only way the project concerned can

be financed and hence undertaken and completed. Consequently, the officials may be compelled by this situation to accept a technique which they consider to be second hand and perhaps even inappropriate if foreign aid is the only financing available for that choice.

Second, the form of aid frequently depends more on the economy of the donor country than those of the recipients. And because of this, "the donor exercises leverage so as to induce the recipient to act in certain ways favourable to the donor's own interests. ... leverage may also be exercised in order to control or influence the country's actions" (McNeill, 1981: 9, 10; - emphasis added). It follows therefore that foreign aid can be one of the sources of the so-called inappropriate technologies/techniques in third world countries despite the fact that it relieves them, at least temporarily, of the problems of foreign currency/exchange scarcity.

Third, participants in the negotiations and hence decision-making process may, perhaps partly due to different interests, perceive the same problem differently. These different perceptions may stall the negotiations since they create a situation whereby participants harbour different concerns on such issues as the appropriate technique for the project under discussion. In such situations, the aid donor by the mere fact that the withdrawal of aid might mean the cancellation of the project (at least for the time being) may, in

fact, determine the choice of technique to be adopted. Or, it may be a fact that the LDC concerned geared its industrial program or development strategy to the technology it considered most likely to attract foreign aid. To quote McNeill (1981: 19):

Virtually every developing country prepares a Development Plan. ... This may be attributable to what Myrdal called the ideology of planning or, more cynically, one may simply regard the preparation of a Plan as a prerequisite for obtaining aid. Certainly the form in which plans are prepared owes much to the requirements of foreign aid donors (and indeed they are often prepared with technical assistance from abroad).

Abdul Rahman Mohamed Babu, a former Minister of Economic Development in Tanzania, was writing from experience, we think, when he wrote:

Before aid became the most substantial part of our development strategy, it was originally and theoretically designed merely to cover any shortfall in the event of our exports failing to yield the necessary 'badly needed' foreign exchange. Our experts have stressed this point so strongly that we tremble in horror if we are ever threatened with withdrawal of aid. In fact this threat has often been used as a weapon with which to dragoon us into accepting unpalatable policies which are sometimes against even the apologetic 'principles' we stand by (Babu, 1981: 45; emphasis in the original).

Both Coulson (1982a) and O'Brien (1981) are of the view that the consequences of the assistance rendered to Tanzania by the world capitalist system are that the country's external dependence, both financial and technological, has been deepened rather than minimized despite her official policy of self-

reliance. This being the case, it is only logical, if not obvious, to expect that the role of foreign aid in the choice of technique will be deterministic in many situations in Tanzania.

1.4.3 State-Economy Relationship: Organizational Constraints

The role of the state or the relation between state and society (economy) is also crucial in determining technical choices. This relation is different in all different modes of production. Yet, in all non-capitalist socio-economic formations, political control is perplexed with economic control. In actual fact, it is impossible to separate the political from the economic (Laclau, 1975). Ideally, however, capitalism is quite different in that it entails not only the separation of the economic from the political but also the autonomy of the economy and its insulation from the state.⁸ Yet, in many, if not all, LDCs the state not only creates the conditions necessary for economic growth and capital accumulation but also state power may be used to aid capital accumulation or the appropriation of surplus labour. Furthermore, state enterprises are either granted monopoly or they compete side by side with private ones. Thus, although the extent of state intervention in the economy may vary from country to country, nonetheless, in many LDCs political power is often confused with economic power.

In Tanzania it is very difficult to differentiate the political from the economic. For example, the state legally is

the owner of all the land and those who possess it such as peasants, own only what they have grown on it and, of course, their houses. The state also, through parastatal organizations owns most of the major industrial firms and other economic institutions in the country. There are therefore some organizational constraints emanating from this state-economy relationship which affect the behaviour of the economic institutions.

The organizational or investment procedures developed by the government and parastatals in Tanzania, have important consequences on the choice among different technical alternatives. For example, investments by parastatals have to be approved by other institutions like the Bank of Tanzania, the Ministry of Planning and Economic Development, and the Economic Committee of the Cabinet - to mention the most important ones. This implies that the organizational process of other institutions may constrain the choice of technique. Moreover, parastatal investments sometimes originate from these other institutions.

For instance, the decision to build a factory for the manufacture of hand and animal drawn farm implements in 1967 and also that of seeking Chinese technology originated from the Presidents' Office. The parastatal concerned (The National Development Corporation) was only requested to take care of the

factory as one of its subsidiaries after construction work was almost completed. Hence, in this case, the decision on both product and technological choice was a political one taken outside the parastatal system. In chapter four of this study we shall examine in detail how the organizational procedures and the environment within which parastatals operate affect the decisions they make concerning technical choices.

1.5 Organization of this Study

This work is organized into six chapters. Chapter one is an introduction to the study. It mainly deals with the outline of the problem and literature review of issues surrounding the problem of appropriate technology, social and economic development in less developed countries.

Chapter two is devoted to a discussion of methodological strategies and procedures insofar as data collection is concerned.

A critical review and approach of socio-economic problems facing Tanzania is made in chapter three. The focus is on the current development debates: the wider Ujamaa development strategy and industrialization debates.

Chapter four deals with the nature of Tanzania's development and with organizational constraints. The system of central planning and decision making in Tanzania as well as the environment within which parastatals operate will be discussed

and analysed. The implications arising from both the particular system of central planning adopted by Tanzania and those of the environment it created on such issues as the behaviour of parastatals, choice of imported technology, and the like are also analysed in this chapter.

The case study of this work is presented in chapter five. Herein the constraints of choice of technique in Tanzania and the socio-economic implications arising thereof are discussed and analysed.

Finally, chapter six is devoted to a discussion of policy implications and recommendations.

FOOTNOTES

Chapter One

¹N.B. Although in some LDCs impressive economic growth has occurred, the well-being of the majority of the population did not follow suit. This growth has occurred amid increasing poverty and underemployment for the masses (see Adelman and Morris, 1973).

²Notice that the hegemonic position of neo-classical economics and modernization theories has begun to be challenged in the field of development theory (Edquist & Edqvist, 1979: 15). The main challenge comes from Marxist political economy, dependence and World Systems perspectives.

³According to ILO (1976: 32) report, "basic needs" include the following things: i) material needs (adequate food, shelter, clothing, and certain essential household equipment and furniture); ii) essential services (safe drinking water, public transport, sanitation, as well as health and educational facilities). It follows therefore that, basic needs are not satisfied by technologies or techniques but by the services offered and products produced.

⁴Technology in this context is taken as including techniques, knowledge, information, skills and knowhow, management and organization of work associated with the production of goods and services (Girvan, 1970: 1). On the other hand, by techniques we mean only the material aspects of technology such as machines, instruments, tools and implements (Edquist & Edqvist, 1979: 9).

⁵N.B. In China full employment became possible only after the revolution of 1949 and although a small scale labour intensive industrial sector was established, it only accounts for, at most, 5% of the total labour force. Japan, on the other hand, has a culture which tends to discourage the laying off of workers due to technical developments.

⁶Notice that a technique A is technically more efficient than another technique B if it uses less of one input and no more of another input to produce the same output (Stewart, 1977: 30).

⁷Spatial Extension refers to the geographical extension (area) required and necessary for the use of a certain technique. For example, the generation of hydro-electricity requires not only the construction of huge dams to act as water reservoirs but

also compels the establishment of a social network stretching over a wide area. In this particular case, the larger the scale of production the wider the geographical area concerned and the inevitability of a central system of control.

⁸In practice however, this autonomy is transgressed since the state actually provides for the conditions necessary for capital accumulation and economic growth.

CHAPTER TWO

METHODOLOGICAL STRATEGIES AND PROCEDURES

2.1 Introductory Remarks

In chapter one of this treatise, we dealt with the outline of the problems and literature review of issues surrounding the problems of appropriate technology. We pointed out that although "appropriate technology" is currently regarded as the omnipotent solution to the problems now facing the LDCs, the word "appropriate" is not only value ridden (i.e. connotes certain value judgements) but also there are many interpretations of the concept, none of which is categoric or universally adopted. We also argued that short of technological determinism, it is inadequate to have a list of technologies deemed appropriate for LDCs without at the same time addressing the question of constraints of technical choices in LDCs. Advocates of appropriate technology seem to have ignored this question. In addition to this, the few studies which have specifically addressed the issue of choice of technology seem to have been greatly influenced by the traditional conventional theory.

This traditional conventional theory on the choice of technology considers the "minimization of costs: as the main factor that will, in the final analysis, determine the "choice". In offering a critique of this theory, we argued that the theory entails certain assumptions which were shown to be erroneous. It

was further argued that technology is seldom socially neutral. Thus, the choice of technology in any particular situation is, to a large extent, conditioned by the socio-economic and political structure. Consequently, in our opinion (as was pointed out) we consider the following to be the most important constraints of technical choices: mode of production, interests of external institutions (e.g. aid donors), and organizational constraints.

In this chapter we shift our analysis to a discussion of methodological strategies and procedures in connection with data gathering. Organizational arrangements in the industrial sectors of our "case" (Tanzania) are also described, albeit briefly. This description is intended to highlight the relationship of the firms studied with other institutions in their environment and thence the nature of organizational constraints. However, since the analysis employed is both structural and historical, let us begin this chapter with a brief political history of the case study, Tanzania.

2.2 The Case Study - Tanzania

In this treatise, mainland Tanzania is taken as the case study and the constraints of choice of technique are analysed from, among other things, the point of view of Tanzanians involved in decision making in one way or another. But, both the nature of the problem and the theoretical perspective we employ require that such a study be undertaken on the basis of an

interdisciplinary study which takes many factors into account: historical, economic, political, technical, etc. In this work, more emphasis is placed on socio-economic factors and, or, implications arising thereof. The case study method we employ can be justified from the following theoretical and practical considerations.

Theoretically, it has already been pointed out that our analysis is both historical and structural. As a result of this, since LDCs do not constitute a homogeneous group but rather a group of countries with varying and differing histories and socio-economic structures, the causal relations in a theoretical model may vary from society to society. The implication of this is that even if several LDCs were studied, this would just amount to a multiplication of cases. However, from a practical point of view, lack of adequate resources would still have made it impossible for the researcher to cover more than one country. Furthermore, according to Lijphart (1971:691-93), case studies in general have the following advantages:

- they can be of great value in generating hypotheses and refining relations among variables;
- the case can be intensively examined even when the research resources at the investigators' disposal are relatively limited;

- cumulative effects of many cases can lead to fruitful generalizations; and

- the case can be used to test general theories by making use of established theoretical propositions.

Having noted this, we can now turn to a brief discussion on political history of Tanzania - our case study.

The United Republic of Tanzania came into existence as a result of the union between the Republic of Tanganyika (mainland Tanzania) and the People's Republic of Zanzibar on April 26, 1964. This work deals with mainland Tanzania only. Therefore, the word Tanzania in the context of this treatise should be taken to refer to mainland Tanzania (former Tanganyika) unless stated otherwise.

Coastal Tanzania (including Zanzibar) was subject to Arab commercial penetration and settlement from as early as the 8th century A.D. The area also served as a trading centre for Arabia, India, and Eastern Africa long before active Arab colonization. Beginning in the 15th century A.D., the Portuguese also established settlements along the East African coast. From the 16th century, this coast became both the prize and battleground of conflict in the mercantile expansion of Europe. The Portuguese, for example, had had to hold their settlements against Arab attacks for a period of about 200 years (Svendseven,

1969:35-37). This protracted Arab-Portuguese rivalry succumbed to the competition of the most advanced industrial powers of Western Europe during the 19th century.

Tanganyika territory fell to German colonization in 1885 following the 1884/1885 Berlin Conference on the "Scramble for Africa". But the systematic imposition of German rule encountered much local resistance both along the coast and in the interior. The period of pacification ended only with the suppression of the Maji Maji uprising which left more than 120,000 natives dead between 1905 and 1907 (Rweyemamu, 1973:13). Following the defeat of Germany during the First World War, 1914-1918, Tanganyika was mandated to Britain by the League of Nations. After the Second World War it became a United Nations Trusteeship Territory also under Britain.

Zanzibar was under the Arabs and became a British Protectorate in 1890 after the British forced the Arab-Sultanate there to cut links with Muscat. Zanzibar became independent in 1963 and united with Tanganyika (which attained its political independence from Britain two years earlier on December 9, 1961) in 1964 to form the United Republic of Tanzania.

The most important events in the history of the country include the following: the formation of a one party state on July 5, 1965; the Arusha Declaration of February 5, 1967 which proclaimed the adoption of the policy of **Ujamaa na Kujitegemea**; **Mwongozo** (Party Guidelines) of 1971 which to all appearances

sanctioned vigilance and action against acts of arrogance and commandism against the people by government and party leaders; compulsory villagization, 1973 to 1976; the merger of the sole political party of Zanzibar with its counter-part on the mainland to form a single political party Chama cha Mapinduzi (CCM) literally meaning "Party of the Revolution" or simply "Revolutionary Party"; and the Uganda war in 1979. The aftermath of the war was a severe economic crisis.

2.3 Organizational Arrangements and the Selection of Firms

In Tanzania today it is very difficult to separate the polity from the economic and the party from the government if only because of the systems of central planning, state control of the major means of production, and the one party state. This issue will be discussed in more detail in chapter four of this study. Suffice it here to simply point out that the organizational arrangements in the country's economic sectors reflect this state-economy relationship. This relationship is shown diagrammatically in the form of an organizational chart overleaf.

At the bottom of the power and authority hierarchy in the industrial sectors are the production units such as factories (simply referred to as Production Parastatals). On top of them are the holding corporations (or simply Holding Parastatals). Actually the production parastatals are subsidiaries of the

Figure 1

ORGANIZATIONAL CHART FOR THE INDUSTRIAL SECTOR

- Note:
- (a) The lines show channels of communication
 - (b) NAFO -- National Food & Agriculture Corporation
 - (c) NDC -- National Development Corporation
 - (d) SUDECO -- Sugar Development Corporation
 - (e) UFI -- Ubungo Farm Implements (Factory)
 - (f) The organizations are ranked vertically by power and authority.

holding corporations/parastatals.

Each holding parastatal is attached to a ministry. The ministries are responsible for the main sectors of the economy, implementation of national development plans, and parastatals which fall under their control.

All proposals for all projects that will involve foreign exchange from all ministries must pass through the Ministry of Finance. That is, the ministry has financial control over all imports, technological or otherwise.

The Ministry of Planning and Economic Affairs serves as the secretariat of the National Planning Commission. It reconciles and coordinates policies and programs formulated by other ministries. The formulation of annual, or short and medium term plans and the monitoring of program implementation also falls under the Ministry of Planning together with the Ministry of Finance.

The different plan proposals formulated by the Ministry of Planning are sent to the National Planning Commission. The alternatives eventually chosen are sent to the parliament for approval. For major investments, these also have to be sent to the Economic Committee of the Cabinet (chaired by the President) for possible review and final approval.

One of the units within the President's Office has the task of reviewing and evaluating the country's economic policy,

problems and options. It is empowered to draft and issue a "Presidential Directive" on economic matters whenever the need arises. These directives have the power of overruling the whole system. Once issued, they must be implemented by those concerned as matters of highest priority. There is need at this juncture to point out that insofar as technological choices are concerned the holding corporations play the most decisive role, though of course their choices may be reviewed, rejected, or influenced by the other institutions above them. The way this organizational structure affects the behaviour of the parastatal will be discussed in detail in chapter four.

Now, concerning the choice of firms to be studied, the investigator was initially influenced by two factors: the poor performance of Tanzanian manufacturing industry during the late 1970s and (early) 1980s and the overall economic problems facing the country during this period. Industries were not producing enough goods to meet local demand due to low capacity utilization (Wangwe, 1977; UNIDO, 1982:Appendix 4A). Agriculture also was not producing enough food to feed the Tanzanian population and even the production of cash crops was fluctuating in a downward trend (Ellis, 1982; Weaver and Kronemer, 1981). This being the case, the author decided to concentrate on industries producing basic needs for the Tanzanian masses. However, due to transportation problems in the country, time and financial constraints, it was impossible for the investigator to study all the industries in

this category. This meant that the decision on the particular firms to be studied would have to be made after the researcher had been in the country - of course, taking into consideration the concrete conditions prevailing there. It was also agreed that the selection of the firms should, none the less, be made according to the following criteria. The selected firms were:

- to be representative of several/different products;
- to be representative of different time periods corresponding to different development and/or industrial strategies pursued in the country;
- to cover only state owned firms (i.e. parastatals); and
- to be accessible both for data and transport. That is, firms that were known to not co-operate with researchers, for whatever reason, were to be avoided as were those which could not be reached easily due to transport problems. [Note: The investigator was only able to be in the field (Tanzania) during the summer of 1984.]

Even so, things did not turn out exactly as was initially planned. After being in the country for some time consulting with various people and experiencing for himself the magnitude of the problems connected with data gathering in such a short time period (given the Tanzanian situation), the investigator

decided to focus the attention of the study on two areas: (a) the manufacture of hand and animal drawn farm implements and (b) sugar processing. Both products (i.e. sugar and farm implements) have a wide local market, can be considered as providing for the basic needs of the masses, and their production to date is below the local demand.

As will be apparent shortly, to a large extent the firms selected meet the above criteria. Furthermore, given the organizational arrangements in the industrial sector together with the system of central planning the firms selected are more representative of all industrial firms in the country than they may appear to be. Perhaps at this point it is important for one to recall that hand and animal drawn farm implements (especially the hoe and plough) are basic tools for agricultural production for Tanzanian peasantry, which constitutes more than 85% of the total population. In addition to this, the sugar-cane used in the production of sugar is locally grown in the country by the parastatals concerned as well as by peasants. Consequently, the focus on these two areas make it possible for one to bring out and explore the inter-relationships, connections, or inter-linkages between industry and agriculture. It is our view that in many LDCs the two sectors should be developed in such a way that each complements the development of the other. In other words, (manufacturing) industry should, inter alia, produce

inputs needed to promote agricultural development and agriculture in its turn should produce industrial inputs. The present food crisis in Africa serves to reinforce this position. Having said this, let us address the question of data collection procedures from primary and secondary sources.

2.4 The Field Investigation.

The major and primary source of data was the field investigation that was conducted in Tanzania during the months of June to October, 1984. The survey was carried out mainly at two levels: the level of factories (production parastatals) and at the level of holding corporations/parastatals. At both levels data were gathered from records and documents of the parastatals in the sample. This enabled the author to get background and historical information about the institutions being studied. This information was also used in cross-checking the information obtained from other sources. The main methods used for data gathering were, however, interviews and discussions, both formal and informal, with various officials of the parastatals studied. These discussions enabled us to acquire inside information about the firms under investigation as well as the views and opinions of those involved in the decision-making process.

Now, out of two factories in the country manufacturing hand and animal drawn farm implements, one was selected for detailed study. This was Ubungu Farm Implements factory (UFI)

located in Dar es Salaam. And out of three state owned sugar processing factories and estates, two were selected for detailed study. These were Kilombero and Mtibwa Sugar Companies. The Kilombero Sugar Co. Ltd. consists of two factories and two estates located in two different (political and administrative) districts. Both factories as well as companies are situated in one region - Morogoro region. Transport and time constraints made it impossible to visit the other factories concerned with sugar processing and manufacture of farm implements respectively. Even so, some information about them was obtained from their holding corporations: the National Development Corporation (NDC) and the Sugar Development Corporation (SUDECO). It should be noted that all the farm implement factories are subsidiaries of NDC while the sugar factories are under SUDECO as of 1974. Prior to 1974, all national sugar factories were subsidiaries of the National Food and Agricultural Corporation (NAFCO). NAFCO is a holding parastatal under the Ministry of Agriculture presently charged with the maintenance and development of large scale state farms for the production of grains - especially maize and rice. Thus, the author also spent some time with NAFCO officials discussing such issues as choice of technique in their farms and the problems they face.

During our discussions with parastatal officials at both levels, the investigator had pre-prepared two sets of interview questions, one set for each level, which guided him during the

course of the discussions (see Appendix A on page 264). It is also worthwhile mentioning that for those factories which were either started during the colonial period or became state owned through nationalization following the Arusha Declaration, the focus was directed at technological choices for major expansion after the government take-over. This being the case, there is a need to discuss -- albeit briefly, some of the characteristics of the firms in our sample.

Ubungo Farm Implements factory (UFI) is, and always has been, wholly owned by the Tanzanian government. Construction work began in 1967 after the governments of Tanzania and China signed an agreement for the latter to build a farm implements factory in the country. More than 20 Chinese technicians and over 300 Tanzanians formed the construction team. By August 1969, construction work was completed and the factory became operational in 1970 with an installed capacity of producing 1030 tons of farm implements per annum. In 1979/80 major expansion work was undertaken by Chinese experts and UFI's capacity more than trebled i.e. from 1030 to 3700 tons of finished implements per year. At present, UFI is planning its second major expansion and negotiations have already begun with a British Firm -- Chillington Tools Ltd., to undertake the project.

The Mbeya Farm Implements factory (MFI) became operational in 1982. It was built by an Indian firm with a soft

loan from the government of India to the government of Tanzania.

The Mtibwa Sugar Factory was established during the colonial period and changed hands several times before it was nationalized in 1969 -- the government through NAFCO acquired 50% of the shares. In 1974 a new parastatal, SUDECO, was formed to deal specifically with sugar production and development in the country. The factory (Mtibwa) was wholly nationalized in 1974 and as mentioned earlier, all sugar factories and estates formally under NAFCO were transferred to SUDECO.

Kilombero sugar factory was built in 1960 and became operational in 1962. Initially, it was owned by several foreign institutions (94%), Standard Bank of East Africa (5%), and by a number of individual Tanzanians (1%). In 1969 the Kilombero Sugar Co. Ltd. was wholly nationalized and placed under NAFCO. NAFCO, however, entered into a management agreement with H.V.A. International of Holland for the latter to run the factory.

In 1974, major expansion work was undertaken and a second factory was built. By July 1976 construction work was completed and the new factory started to produce sugar on September 5, 1976. Both factories, new and old, are under the same management.

Lastly, according to SUDECO officials, Kagera Sugar Co. is still an ongoing project and not yet a viable operating company. The main contractor and supplier of factory machinery and equipment is Walchandneger Industries Ltd. of India. The

construction of the factory and that of a Tractor Workshop (TWS) for the maintenance of vehicles have been completed. First trials started in 1982 and about 4,800 hectares of land under sugar-cane are at varying stages of development.

2.4.2 The Holding Parastatals

Holding parastatals in general have been, and still are, very influential insofar as investment decisions are concerned. The NDC in particular, is the oldest, the biggest and most dominant industrial corporation in Tanzania. It was established in 1962 by an act of parliament -- under the name: Tanganyika Development Corporation. Its mandate then was to stimulate the establishment and growth of industrial enterprises in the country. On January 1965 its name was changed to National Development Corporation following the union of Tanganyika and Zanzibar. After the Arusha Declaration of 1967, its mandate was expanded to include the task of increasing government participation and control of the country's industrial sector. The government also nationalized seven major industrial firms in the same year and placed them under NDC. And new industrial firms or projects that were established, in most cases, took the form of joint ventures between NDC and foreign firms through management agreements (Shivji, 1976).

The period following the Arusha Declaration saw a rapid growth and expansion of NDC activities. By 1968 for example, the

corporation employed more than 20,000 people, was involved in some 75 companies and projects with assets of about \$95 million US as well as a commitment for new projects valued at \$83 million US in various fields: manufacturing, mining, agriculture, commerce and tourism. Yet the corporation lacked enough personnel with adequate experience and skill to handle industrial development and also lacked those with the diversity of skills needed to match the diversity of project activities (Williams, 1984:134). Consequently, in 1969 the government created separate parastatals in Agriculture, Tourism, Building, and Construction. NDC's companies and projects operating in these fields were transferred to the newly established holding parastatals or corporations.

NAFCO was one of the new holding corporations established in 1969. It began to operate on July 1, 1969 and eight enterprises (seven from NDC and one from the Ministry of Agriculture) were transferred to NAFCO. Among them were the Kilombero and Mtibwa sugar companies. NAFCO was to be responsible for agricultural development and food processing

SUDECO, as was mentioned earlier, was formed in 1974 to deal specifically with sugar factories and estates in the country. Thus, it took over from NAFCO the sugar companies and projects. The corporation was involved during major expansion work at Kilombero and Mtibwa sugar factories and during the

construction of the ongoing Kager sugar project.

It should be clear from the above discussion that the firms selected meet the criteria which we have developed concerning the selection of firms (see page 51 of this study). Furthermore, the institutions, as has already been pointed out, provided the primary sources of data.

The field investigation also included data gathering from secondary sources. This comprised information obtained from published and unpublished materials such as dissertations; research papers; government publications, documents, or records; etc. obtained mainly from the library of the University of Dar es Salaam. This source supplemented the data obtained from the primary sources, provided background material and historical information on the institutions being studied, and also provided various views and opinions on particular projects and issues.

2.5 Limitations of this Study

This study is limited in its scope to a one country case, Tanzania, due to time and financial constraints. These constraints plus lack of a quick and reliable means of transport were also responsible in limiting the number of firms in the sample. But this is not a very serious limitation given the fact that we are dealing with state owned enterprises in one country operating in the same environment. For example, all major investments from all of them have to be approved by the

same higher bodies.

Secondly, the interview-discussion method employed has the fundamental limitation that what people say and how they say it can vary with either circumstances and, or, the person to whom they are talking. However, the investigator had to check or compare the information obtained from one respondent with the rest of the information obtained from others. Even so, in Tanzania, experience has shown that interviews in general have the following problems:

- a) the interviewer is most likely to get only positive answers especially if the respondents are not quite certain about the end results of the investigation; and
- b) respondents are usually reluctant to release information under the pretext that it is too sensitive (politically) or a factory secret. This is especially so in the following areas: marketing, administrative costs, consultancy agreements, procurement contracts, disciplinary matters, and workers participation.

For example, the researcher wanted to have access to the original drafts of the construction, management, technical and/or consultancy agreements/contracts presented by both the Tanzanian parastatals (for the firms in our sample) and the collaborators at the initial stages of the negotiations as well as the

final/actual contracts/agreements that were signed. This would have enabled him to assess the strengths or weaknesses, interests, and concerns of the bargaining teams depending of course on how the original drafts differ from the final documents. It would also have been easier for the investigator to direct discussions with parastatal officials on issues such as why this or that concession was made. For reasons beyond our control access to these documents was not possible. Thus, the researcher had to depend on verbal answers from the respondents to obtain information on these issues. At the level of holding corporations discussions were held with seven officials in total working in Project Planning and or Industrial Promotion sections. At the factory level, discussions were held with heads of departments or their appointees. More than 20 company officials were interviewed.

The above problems of interviews-discussions, ironically, are also strong points against the use of other methods such as mail questionnaires (given the Tanzanian situation) since, in most cases many officials do not want to commit themselves in writing. Of course interviews have the advantage of allowing the interviewer to go deeper into the issues involved as well as capturing the opinions or views and even biases of the respondents. Thus, despite the above limitations the investigator still believes that (since the information obtained from one source was cross-checked with that obtained from other

sources) this treatise presents, on balance, a relatively accurate picture of the factors influencing technical choices in Tanzania and the socio-economic implications arising thereof. But before discussing these factors, we shall first present a critical analysis of the general social and economic problems facing the country. It is to such a discussion that we turn in the next chapter.

CHAPTER THREE

TANZANIA: THE DEVELOPMENT DEBATES

We are under no illusions about the difficulties of the tasks we have undertaken. With few socialists we are trying to build socialism... With few technicians we are trying to effect a fundamental transformation of our economy.

J.K. Nyerere¹

The fact is that the policies of the Nyerere government have effectively destroyed the possibility of Tanzanian capitalism. With socialism not even conceivably on the agenda, the only possible result is what Tanzania has to-day - bureaucracy and stagnation... not socialism and self-reliance.

R.Martin (1983)

Tanzanian socialism - there was never a more noble social experiment; and there was never a more miserable failure... a perfect failure.

Weaver and Kronemer (1981)

Meanwhile for Tanzania the struggle continues.

M. Bienefeld (1982)

3.1 Introductory Remarks

This chapter is concerned with the various theoretical and other debates surrounding the development process in Tanzania. The preceding chapter dealt with methodological strategies and procedures in connection with data collection. We pointed out, among other things, that the analysis we are employing in this treatise is qualitative and structural, as well as historical. Thus, a brief description of the political history of our case study (Tanzania) was presented. Herein, it

was pointed out that in 1967 the country, through the Arusha Declaration, committed itself to the policy of socialism and self-reliance (Ujamaa na Kujitegemea). This declaration, and subsequent major policy statements/documents have stressed, inter alia, the promotion and achievement of the following:

- i) public ownership of the major means of production through Ujamaa villages, co-operatives, and government;
- ii) elimination of exploitation of one person by another or of one group by another - meaning work by everyone who is physically able to work;² every person obtains a just return for the labour he performs, and the incomes derived from different types of work are not grossly divergent. Consequently, "in order to ensure economic justice" and "the well-being of all citizens" the State must intervene actively in the economic life of the nation" and it must also have "effective control over the principal means of production" (Nyerere, 1968: 14);
- iii) democracy, involvement, and participation. That is, the masses (workers and peasants) must be involved and participate not only in (elections) choosing their leaders but also in considering, planning and implementing their development plans. "Any action that reduces the say of the people in determining their own affairs or running their own lives is not development and retards them even if the action brings them a little better health and a little more bread"

(Mwongozo, 1971: Clause 28);

- iv) self-reliance, that is, insofar as economic growth is concerned, emphasis should be placed upon the "hard work and intelligent application of Tanzanians". Hence, the country cannot depend on loans and grants from abroad nor foreign private investment because these are not likely to be forthcoming in adequate quantities and private foreign investment would be contrary to the policy of socialism. Moreover, "to burden the people with big loans,, is not to help them but to make them suffer" (Nyerere, 1968: 24);
- v) Rural Development - the Arusha Declaration identified two abundant local resources as being the basis for development: land and people. Since the bulk of the land and people (about 90% at that time) is found in the rural areas, then development implies rural development (geared to the Ujamaa villages policy) and industries (using local raw materials) aimed at rural mass consumption markets;
- vi) egalitarianism - that is, greater developmental emphasis would be placed on achieving greater social equity (reducing income inequalities and living standards both between and within urban and rural areas), on meeting basic needs of the masses, etc; and,
- vii) education for self-reliance - meaning that the educational system should help to build a socialist society and the

education offered should inculcate socialist values while at the same time aiming at a realistic preparation for a working life in a developing, but overwhelmingly, rural society. Furthermore, there is the objective that educational establishments must be self-reliant units of production.

As a continuation of the above development orientation the Third Five Year Development Plan (1976-1981) placed particular emphasis upon achieving the following:

- i) self-sufficiency in food requirements by 1981;
- ii) a pattern of industrialization based upon the processing of locally available raw materials and upon the utilization of local reserves, and basic, and, or, capital goods industries;³ and,
- iii) universal primary education, provision of clean water and health services in the villages (see Tanzania, 1976).

Tanzania has had mixed success to date in achieving its own development objectives since the Arusha Declaration. From the mid 1970s up to now the country has been and continues to be faced with severe economic difficulties. This situation has led Weaver and Kronemer (1981: 839) to make the assertion that, "Tanzanian socialism - ... we have something here that is fairly rare in human history - a perfect failure". Although we do not claim, and no one has claimed, that socialism or self-reliance

have been achieved in Tanzania, we do not accept the above assertion. After all what meaning is to be attached to the phrase "perfect failure"? This is to ignore some of the remarkable achievements that the country has made.⁴ In this chapter therefore, we offer a critical review of the current debates⁵ about the nature of Tanzania's development and the explanations given to account for the socio-economic difficulties in which she finds herself. In order to have a clear picture of the Tanzanian situation, however, the next section offers some background data and information on the Tanzanian economy per se.

3.2 The Tanzanian Economy

It is generally accepted by many observers that Tanzania's achievements in the areas of basic human need fulfillment and social equity have been quite good (Freund, 1981; Weaver and Kronemer 1981; Nursey-Bray, 1980; Pratt, 1980; etc). Some indicators of basic human need fulfilment are presented in Table 1. This table shows that life expectancy (which can be regarded as a useful summary indicator of general well-being) increased markedly and surpassed the goal set in the First Five Year Plan of 51 years by 1980. Remarkable achievements have also been made in the field of primary education, adult literacy, clean water supply and health care. Clearly this is not an example of a "perfect failure". There is also a general agreement that economic performance during the 1960s was good but

Table 1

**Some Indicators of Tanzania's Performance
in Basic Human Need Fulfilment**

Indicator	Situation at Independence (early 1960's)	Situation Now (1980)
Life expectancy (Years)	30*	51
Adult Literacy	10%	73% (1978)
Percentage of Primary School Enrl. of the School Age Pop.	25	95
Rural Population/Villages with		
(i) clean tap water	almost nil	40%
(ii) clinics	almost nil	35%

Source: Compiled from Weaver and Kronemer (1981:840)

Note: * Figure taken from First Five Year DevPlan (See Tanganyika, 1965:viii (Vol. 1))

weakened during the early 1970s and continued to be even weaker during the early 1980s. The situation is summarized in Table 2.

The gross domestic product grew by 5% per year, 4.8% per year, and 6.1% per year during the First (1964/65 - 68/69), the Second (1969/70 - 73/74), and the Third (1974/75 - 78/79) Five Year Development Plan periods respectively.⁶ However, the growth rates were negative after 1979 an indication of a very poor economic performance during this period (Table 2). Nonetheless there is need to point out that these figures tend to conceal certain salient features of the Tanzanian economy. For example, agriculture is the dominant sector of the economy and it accounted for 40.1% of the GDP in 1972 and for 50.7% of the GDP

Table 2
Basic Economic Indicators

	(% Average Annual Growth Rate)				
Year:	1964-69	1969-74	1974-79	1980-81	1981-82
Population Growth	2.7	2.7	2.7	2.8	3.2
Growth of GDP (1966 Constant \$)	5.0	4.8	6.1	-1.7	-3.2
Agricultural Prod. (Marketed)	-	0.25	9.0	-13.6	-11.8

	(Millions of Tshs.)				
Balance of Payments Position	1971	1978	1979	1980	1982
(i) Exports	1,988.1	3,671.0	3,671.1	4,186.9	3,484.1
(ii) Imports	2,725.6	8,798.0	8,985.9	10,003.1	8,392.4
(iii) Bal. of P.	79.0	1,946.7	-512.1	-1,092.3	-907.4

Source: Compiled and calculated by the author from Economic Surveys and from Ellis (1982:Table A1)

in 1980 - at current prices (Ministry of Planning, 1982:Table 2). The volume of output of marketed agricultural crops seems to have remained below the 1970/71 level throughout the 1970s except for 1978/79 (Table 3).

Tables 2 and 3 above reveal not only a crisis in the agricultural sector but also the magnitude of the economic crisis facing Tanzania. This is more evident especially if we recall that export of agricultural crops is the major source of foreign exchange earnings. Furthermore, the poor performance in the output of food crops necessitated massive food imports and with

Table 3

**Indices in the volume of Output of Crops Purchased
by Parastatal Authorities in Tanzania 1969/70 - 79/80
(1970/71 = 100)**

Year	Export Crops	Food Crops
1969/70	95.6	45.1
1970/71	100.0	100.0
1971/72	97.2	55.0
1972/73	98.8	76.0
1973/74	94.2	56.2
1974/75	94.9	25.3
1975/76	57.6	46.6
1976/77	86.3	65.6
1977/78	76.2	122.3
1978/79	73.0	137.7
1979/80	69.9	94.2

Source: Extracted and calculated by the author from Ellis (1982:Table A1).

them the deficit in trade increased (Tables 4 and 5).

The 1974-77 food imports cost the country about Tshs. 2000 million and exhausted Tanzania's holdings of foreign exchange during 1975 (Coulson, 1982a: 260). The problem of balance of payments was also deepened by the decrease in the output of export crops as the trade deficit grew (see Table 5). But, at this juncture there is need to point out that the decline in the volume of output of food and export cash crops coincided with drought (i.e. inadequate rainfall) and with the villagization drive. The former was a "natural" disaster, the latter was "man-driven".

Table 4
Net Cereal (Including Food Aid) Imports 1974 - 1977
(Tons)

	1974	1975	1976	1977
Maize & Corn Flour	255,700	231,400	139,900	6,000
Rice & Milled Rice	71,200	84,000	8,800	32,000
Wheat & Wheat Flour	102,700	233,020	3,000	59,600
Sorghum & Millet	<u>200</u>	<u>4,800</u>	<u>0</u>	<u>n.a.</u>
TOTAL	429,800	553,220	151,700	97,600

Note: n.a. = not available.

Source: Extracted by the author from Coulson (1982a: Tables 22.2 and 22.3).

The Kagera War (i.e. War with Uganda) also aggravated Tanzania's difficulties. The war disrupted transportation and caused reallocation of funds originally set aside for development purposes so as to meet the war efforts. As a matter of fact, the situation became worse after the war than before it. It has been estimated that the war cost Tanzania about \$600 million U.S. in foreign exchange (Freeman, 1982: 497).

Performance insofar as the objective of self-reliance is concerned has not been good. The attainment of this objective was defined in terms of reducing the country's dependence on loans and grants from abroad to finance its development programmes or projects and on imported food stuffs. We have just shown the massive importation of food into the country and thence

Table 5

**Balance of Payments Position 1962-1982
(Million Tshs.)**

Year	Exports	Imports	Trade Balance	Balance of Payments
1962	1193	1127	66	n.a.
1966	1878	1691	187	n.a.
1967	1760	1625	135	n.a.
1968	1717	1834	-117	n.a.
1969	1793	1710	83	n.a.
1970	1852	2274	-422	n.a.
1971	1989	2725	-736	+79**
1972	2277	2879	-601	n.a.
1973	2581	3479	-898	n.a.
1974	2861	5258	-2397	n.a.
1975	2765	5694	-2929	n.a.
1976	4109	5421	-1312	-184
1977	4482	6160	-1678*	+992
1978	3671	8798	-5127	-1947
1979	3671	8986	-5315*	-512
1980	4187	10003	-5816	-1092
1981	4373	9120	-4747	-16
1982	3484	8392	-4908	-907

Note: * These figures have been corrected by the author

** Figures from Economic Survey 1982, Table A.

n.a. = not available

Sources: 1965 - 1976 from Economic Surveys '71-'72 & '77-'78
1978 - 1982 from Economic Survey 1982, Table A

the specific objective of being self-reliant in food requirements (by 1981) has not been met. But even when we examine the proportion of foreign aid (i.e. loans and grants) to the total development expenditure, the picture is also not very impressive (see Table 6).

Table 6

Trends in Government Expenditure 1968/69 - 1981/82
(Millions Tshs.)

Year	Total Recurrent Expenditure	Total Development Expenditure	Foreign Loans & Grants	Loans & Grants As a % Dev. Expend.
1966-67	-	294	127	43.20%
1967-68	-	344	84	24.24%
1968-69	1186.0	461	123	26.68%
1969-70	1526.7	611	122	19.97%
1970-71	1631.4	829	270	32.57%
1971-72	1780.6	739	359	48.58%
1972-73	2223.4	753	325	43.16%
1973-74	2785.0	1442	481	33.36%
1974-75	3961.1	2225	1038	46.65%
1975-76	3715.6	2253	1031	45.76%
1976-77	4702.5	3244.3	1402	43.21%
1977-78	5563.3	3330.8	1368.0	41.10%
1978-79	8295.0	4749.9	2427.2	51.10%
1979-80	9229.0	5184.0	2320.0	44.75%
1980-81*	10136.0	4759.0	1872.0	39.34%
1981-82*	12903.0	4484.0	1838.1	40.99%

Source: Economic Surveys - various years

Notes: *Provisional Actuals

N.B. % figures in the last column have been calculated by the author

Thus, it is clear so far that Tanzania's overall growth record has been quite reasonable⁷ especially if we take the growth of GDP as our overall indicator. Performance during the 1960s and 1970s has been positive (above 5% per annum). Unfortunately the growth in GDP slumped badly in the early 1980s and was actually negative (see Table 2). However, the country has performed very well in meeting the basic needs of the people.

There are many explanations which have been put forward to account for this performance and the crisis situation now confronting the country: the oil crisis of the early 1970s; drought from 1973 to 1976; floods in 1978-79; second round of oil price increases in 1979-1980; drought again in 1980-81; the Kagera War; and the fall in prices of Tanzania's major export crops; etc.

"Important reasons for this trend are adverse weather conditions, shortage of both farm implements and other inputs due to foreign exchange constraints (Ministry of Planning and Economic Affairs, 1983: 82). There is no doubt the above factors contributed to the present crisis but other theories, and, or, explanations have also been put forward. The theories we are about to review offer explanations not only to account for the present crisis but also for the alleged failure of Tanzanian socialism. As a matter of fact the former is explained in terms of the latter. Since many theories have been put forward, we shall discuss only the ones we consider to be the most important. It is to such a discussion that we now turn.

3.3 The Modernization School of Thought

According to this school of thought, Tanzania's economic difficulties are explained in terms of modernization theory. The problem of underdevelopment is seen mainly as a problem of raising labour productivity, by providing modern inputs, in the

so-called traditional sectors? The state is seen as the modernizing agent while the peasants are regarded as thorns in the state's side whose problems are either based on their traditional outlook and conservatism; lack of modern inputs; or both. Two versions of the same explanation have been put forward to account for what has taken place since the Arusha Declaration by this school of thought. One version tends to emphasize the failure on the part of the state to take effective measures while the other has gone further than that and placed more emphasis on the conservatism of the peasantry. We shall discuss the former first, under the heading "Bad Policies/Poor Planning and Faulty Implementation" and the latter under the heading "Peasant Mode of Production".

3.3.1 Bad Policies/Poor Planning and Faulty Implementation

The crisis facing Tanzania is seen as a consequence of the policy of **Ujamaa** villagization. Aid agencies view the crisis essentially in terms of administrative bottlenecks and identify "the crux of the problem as poor planning and faulty implementation" (Lofchie, 1978: 468) of the villagization program. It is further argued that the measures contained in major policy documents, which rejected the path of capitalist development, had the effect of delinking the country from the world capitalist system and thence from the world market. The evidence for this is, however, drawn exclusively from the fact

Table 7
Average Annual Growth Rates in the Production
of Cash Crops in Tanzania

	Pre-Arusha Period 1960 - 1963	Post-Arusha Period 1966/67 - 1977/78
Sisal	-0.5%	-7.5%
Coffee	12.5%	1.0%
Cotton	13.0%	-4.1%
Cashew Nuts	9.0%	0.5%
Tea	8.0%	9.0%
Tobacco	10.0%	7.3%
Pyrethrum	n.a.	-6.3%

Source: Coulson (1982a:145, 190)

Notes: n.a. = not available

that the production of main export cash crops seems to have declined considerably during the post-Arusha Declaration period as compared with earlier periods.

With the exception of tea, the average annual growth rates (%) in the production of cash crops for export have been low and sometimes negative during the post-Arusha Declaration period (Table 7). But even the production of food crops has declined as we saw earlier (see Table 3).

The poor performance of the economy over this period and the current crisis are seen as emanating mainly from the poor performance of the export sector, specifically that of export cash crops. Cash crops for export are the main source of the country's foreign exchange. Thus, the decline in their

Table 8

**Capacity Utilization in 39 Manufacturing Firms
in Tanzania for the period Jan- 1974 to Sept- 1975**

Rate of Capacity Utilization (%)	Frequency Distribution	
	Number*	%
0 - 20	2	5
21 - 30	2	5
31 - 40	3	8
41 - 50	4	10
51 - 60	4	10
61 - 70	8	20
71 - 80	4	10
81 - 100	<u>12</u>	<u>32</u>
	39	100

Source: Wangwe (1977:68)

Note: *These figures were calculated by the author

production implied that there was little money available for the importation of industrial raw materials and other inputs including oil (petroleum). Actually, a study covering 39 manufacturing enterprises in Tanzania made by Wangwe (1977) revealed that about 80% of the sample firms experienced shortages of raw materials and 70% of them (i.e. of 80%) blamed shortages or inadequate allocation of foreign exchange as the main reason for operating below installed capacity. Other factors mentioned included inadequate transport and storage facilities (15% of all the firms); power cuts; and water shortages (Wangwe, 1977: 69-72). This meant that there was excess capacity mainly caused by

supply factors despite widespread shortages "in even the most common items as soap, cooking oil, and milk" (Weaver and Kronemer 1981: 840).

During the period of January 1974 to September 1975, about 59% of the 39 firms studied were working at not more than 70% of the installed capacity (Table 8). The problem seems to have been worse during the 1979-1980 period (Table 9) and this definitely contributed to the negative growth rate in GDP observed for the first time in 1980 (see Table 1).

Planning and faulty implementation of the Ujamaa programme are explained in the following way. First, it is argued that the implementation of the programme was haunted, from beginning to end, by an administration which made inept decisions. "There were numerous occasions on which peasants were moved from their traditional residences to new villages in the midst of a planting, growing, or harvesting period, with the result that entire crops were lost simply because of a poor sense of timing by local officials" (Lofchie, 1978: 469). In some instances, peasants were moved away from their productive tree crops; good and fertile soils; etc. to areas with poor soils and, or, inadequate water/rainfall (see Mueller, 1980: 209, 212; Coulson, 1982a: Chapter 22). The timing was also poor in the sense that the majority of the population was moved into new

Table 9

**Utilized Capacity in Parastatal Manufacturing Enterprises
in Tanzania 1979 & 1980**

Product	1979	1980	Direction of Change**
Sugar Processing	58.2*	58.5*	nil
Cashew Processing	85	53	down
Other Food Processing	45-70*	30-65*	down
Beer	89.73	76.22	down
Tobacco	56.0	69.5	up
Textiles	55.6	49.4	down
Leather	53	49	down
Footwear	66	62	down
Wood Products	38	38	nil
Fertilizer	36	34	down
Pyrethrum Extract	18	27	up
Petroleum Refining	82.3	82	nil
Tyres	52	53	up
Plastic Products	36	22	down
Cement	50	48	down
Aluminium	51	39.7	down
Metal Fabrication	23-50	15-49	nil
Motor Vehicles	33	25	down

Source: UNIDO (1982: Table 3.15)

Notes: * Figures are for financial year July-June.

** Comments by author.

villages between 1974-1976 which coincided with the drought. The consequence was a decline in the production of agricultural food and export cash crops.

Second, another aspect of bad policy according to Ellis (1982) was the country's Agricultural Price Policy. He argues that during the post-Arusha period there were very low money

price increases accorded to peasant agriculturalists and terms of trade in general were biased against the peasants. This policy was responsible for the poor performance of the agricultural sector (see also Lofchie, 1978). Even the Tanzanian president admitted that, "Government has been too slow in changing the prices offered to the farmers, so that at times they were not recompensed for their effort on food crops or for the increased costs of production following inflation" (Nyerere, 1977: 20).

But to simply point out that there was poor planning and faulty implementation is not enough. What is far more important is to explain the factors behind this state of affairs. That is, even poor planning and faulty implementation need to be explained. Price policies are also inadequate since the peasants failed to produce even enough for their own subsistence consumption. Lofchie (1978) while agreeing, to some extent, with the above explanations, also cites their limitations as follows;

This point of view, while indisputable as an explanation of some loss of production, has a singular deficiency. It does not address the basic issue of a programme of collective villagization as a general strategy of development. There is an unfortunate implication that if Tanzania had simply been able to resolve its administrative difficulties, and had planned properly to anticipate delays and bottlenecks, the programme might well have proved successful (Lofchie, 1978: 469).

In his own views, the peasants in general, whether poor or wealthier, did not support collectivization because it ran

completely against the "grain of an essentially property minded class". For him, "peasant opposition to collectivism also explains why coercion had to be so widely used to implement the programme, a factor which is conspicuously absent in accounts which emphasize administrative ineptitude" (p. 473). This feature, he further argues, became a far more conspicuous aspect of the relationship between government officials and peasants than mere poor planning. Consequently,

one of the reasons why even well conceived plans for collectivization tended to fail at the village level was that peasants were so resistant to them. . . . socialism represented such a fundamental change in the life style of every person affected or about to be, Tanzanians reacted with a mixture of emotions, prominent among which were insecurity and misgiving (Lofchie, 1978: 473).

Put this way, the argument is not different from those emphasizing the peasant mode of production as the major cause behind the decline in agricultural production. We shall discuss this later on in this section. Suffice it to point out that it has one major limitation: namely that the argument assumes that collectivization took place. The fact is, though the peasants moved and lived in villages, individual, as opposed to communal, production prevailed.

Third, the socialization of the transport sector (which is also seen as a product of the policy of socialism) was also undertaken during the villagization period. This socialization, it is argued, disrupted the transportation of both agricultural

products and inputs. This situation reduced not only the motivation but also the actual production of agricultural crops. In some areas crops were not bought in time (and there were no places to store them) due to transportation difficulties.

Fourth, most of the major industrial enterprises in the country are owned by the government. This school of thought points out that most of these government owned enterprises are inefficiently run. For example, the argument goes, wages; salaries; and other benefits and privileges are not related to labour productivity nor to profitability. This has resulted in a situation whereby profits from these parastatal enterprises are very low, with some of them actually making huge losses (see Coulson, 1977). But despite the fact that Coulson (1982b: 70) claims that throughout the 1964-1977 period growth rates in value added have been constantly declining the facts seem to contradict this claim. That is except for the years 1971, 1972, and 1975 the value added per worker at constant 1966 prices has been above that of 1970 (Table 10).

Those who hold the above views argue that Tanzania should make the following changes if it is to develop: encourage and promote the production of export cash crops; allow and encourage the expansion of capitalist farmers and their operations; drop government subsidies where offered and allow prices to be set by market forces while at the same time letting (or leaving)

Table 10

**Employment and Productivity in Manufacturing Firms
With 10 or More Employees, 1970 - 1974**

Year	Value added in Constant 1966 Prices (Tshs. mil.)	Employment (Number)	Growth in Employment Index* (1970=100)	Value Added per Worker (Tshs.) in 1966 Prices	Growth in Value Add. per Worker Index* (1970=100)
1970	485	48,314	100.00	10,038	100.00
1971	525	53,516	110.77	9,810	97.73
1972	600	62,118	128.57	9,659	96.22
1973	644	63,355	131.13	10,610	101.22
1974	703	69,974	144.83	10,047	100.09
1975	667	73,218	151.54	9,110	90.76
1976	820	75,003	155.24	10,933	108.12
1977	858	78,090	161.63	10,988	109.46
1978	945	81,216	168.10	11,636	115.92
1979	896	85,495	176.96	10,480	104.40

Source: UNIDO (1982: Table 3.11)

Notes: * Figures have been calculated by the author using 1970 as the base year.

inefficient government enterprises to go bankrupt and die; some social services like education, health, water supply, etc. should have a user fee rather than being free;⁸ price control measures should be dropped; wages, and especially minimum wages, should not be allowed to increase so as to reduce labour's share of the national income and thereby increase the surplus available for investments; etc. (see Weaver and Kronemer, 1981: 848).

Although the Tanzanian government has implemented some of the things suggested above, e.g. intensifying the production of export cash crops; subsidies for fertilizer, maize/maize flour,

etc. have been dropped; school fees have been reintroduced in secondary schools; etc. it is necessary to point out that the above views assume that Tanzania is a socialist state and the solution offered boils down to saying that the government should promote capitalism. In other words, socialism is seen as the major cause behind the present crisis. Yet Tanzania is not and has never been a socialist state - and those who hold the above views agree. If so, we find it strange to blame socialism for the country's difficulties. Furthermore, there is ample evidence offered by many scholars of underdevelopment which suggests that the preoccupation with the production of cash crops for export and integration with the international capitalist system may lead only to intensification of underdevelopment and external dependence (Frank, 1971; Szentes, 1971). Thus, to use the words of Samir Amin (1974), the solution offered by this school of thought will only lead to the perpetuation of unequal exchange relations and to what he has termed "peripheral development".

3.3.2 The Peasant Mode of Production Thesis

Another explanation of the situation in Tanzania (also based on the Modernization Perspective) has been offered by Hyden (1980). He maintains that if we are to be alive to the social realities of the African continent and if we are going to look at Africa on its own terms then we should realize that the roots of the continent's underdevelopment are not found in the world

system, but in the rural areas where a Peasant Mode of Production (PMP) prevails and holds capitalism at bay. Below we present a brief summary of his major arguments.

First, he advances the argument that the roots of underdevelopment in Sub-Saharan Africa are not found in the international capitalist system but rather they are found in the resilience of the pre-modern and pre-capitalist structures of the continent's rural areas (Hyden, 1980: 3,4).

Second, is the argument that although colonialism destroyed the pre-colonial modes of production, it did so only at the expense of creating, in the rural areas, a new pre-capitalist mode of production - namely the PMP (Hyden, 1980: 12). Consequently, because of the failure of capitalism to break the pre-capitalist barriers that still persist in Africa, socialism will have to serve as the main agent of modernization. But even so, modern development can only take place if the social autonomy of the peasants is removed.

Third, the PMP is characterized by a rudimentary division of labour and small, yet independent units of production with no structurally enforced cooperation. Consequently, nature plays a central role in peasant production. There is also very little exchange between the various units of production.

Fourth, the use of rudimentary technology or techniques of production coupled with the lack of variety of production

among these units has the following implications: a) production of basic necessities is both a full time occupation and a primary concern of the peasant household. This situation accounts for the observed domestic orientation of each unit of production; b) the peasant invests so much time and effort that he becomes reluctant to take any chances including that of adopting new innovation. It has been estimated, for example, that African peasants spend about 70 percent of their labour time in subsistence farming (de Wilde, 1976: 21-22; Hyden, 1980: 13). Herein, therefore, lies the so-called conservatism and anti-modern behaviour of the peasants. This is also the reason offered as to why they should be regarded as fetters to developmental efforts.

Peasants operate according to the law of subsistence rather than the law of value . . . the needs of men rather than those associated with the development of the means of production take precedence . . . Agricultural modernization is a threat to the domestic orientation of the peasant household . . . the social logic of the Peasant Mode of Production pre-empt any serious interest in modern modes of production (Hyden, 1980: 14,16).

Another major feature of PMP is what Hyden calls "Resource-Based Agriculture". In other words, since land is both abundant and a free good, soil fertility is maintained through rotation of fields rather than that of crops. The implication of this is shifting cultivation and/through bush fallowing. Thus, farming depends, to a large extent, on natural resource

of both capital and labour.

It is argued (correctly for that matter) that the technology deemed appropriate and/or implied by the country's development objectives since the Arusha Declaration of 1967 is one with the following characteristics: (i) surplus generating but low cost; (ii) simple as opposed to complex; (iii) small scale; (iv) labour intensive; and (v) standardized (Williams, 1984:129; Coulson, 1982b; etc.) Within this context, it is argued that the post-Arusha period is characterized not only by firms employing a wide range of technologies but also with a consistent bias towards inappropriate technology -- meaning that a bias towards capital intensive, sophisticated and large scale technologies (Coulson, 1982b; Green, 1982:90-92; etc.)

Both Coulson (1982b:73) and Williams (1984) specifically point out that although the (Dar-es-Salaam based) labour-intensive Urafiki (Friendship) Textile Mill was more profitable, and had simpler technology and output nearer capacity than the capital-intensive Mwanza Textile Mill (Mwatex), the government based its 1974 expansion plans on the latter. This is supposedly taken as a proof for either an inability to choose better and/or a bias against labour intensive technology. If we take a *ceteris paribus* assumption the above argument is valid. Unfortunately, the *ceteris non paribus* assumption holds in this case. In actual fact the Tanzanian government had earlier on in 1973 decided to

endowments rather than on modern inputs. Furthermore, the prevalence of PMP gives rise to a specific economic system, the "economy of affection" where,

the affective ties based on common descent, common residence, etc. prevail, . . . , conflicts naturally tend to arise between communities rather than between forms of social organization . . . the economy of affection is primarily concerned with the problems of reproduction rather than production (Hyden, 1982: 18).

The above characteristics are seen, then, as obstacles to development.

Fifth, the PMP is independent both of the state and of other social classes insofar as its own reproduction is concerned - neither does it presuppose exploitation of man by man. But the state and other social classes in these countries need the peasants for their own survival. This is due to the fact that the peasants are the majority, numerically, constituting between 80-90 percent of the total population. Their contribution to GNP is also generally high. Consequently so long as the PMP is dominant and with it the "economy of affection", the (small) peasantry will and indeed has proved its power by remaining economically independent both of the state and of other classes. This independence is seen as being at the centre of the peasants' resistance to change as well as their ability to ignore the state's modernization policies and programmes. Hence, "the principal structural constraints to development are the barriers against state action created by the Peasant Mode of Production"

(Hyden, 1980). Consequently, modern development will not take place until the social autonomy of the peasants is removed. To achieve this, Hyden (1980) further argues, history has shown that the use of coercion is inevitable.

Hyden (1980) has taken the case of Tanzania to offer empirical evidence for his theory. He maintains that the peasantry in Tanzania has not yet been captured either by the state or by other social classes: land is not concentrated in the hands of a few landlords; it is not scarce; and it is not a marketable commodity. Tanzanian peasants therefore do not feel the need for economic development because the economy of affection provides for their traditional needs. This to him is a major problem since development requires the capture of the peasantry, the curtailment of its power and freedom.

The main problem with Tanzanian socialism is therefore seen primarily as lying in the fact that the government tried to accomplish the above process (i.e. of capturing the peasantry) without coercion. The method adopted was that of bribing the peasantry into living in Ujamaa/development villages thereby producing a marketable surplus in exchange for free social services: schools, clinics and dispensaries, clean tap water, and so on. But in actual fact no deal was struck. Whereas the government provided the social services free of charge, the peasants did not give up their independence and thence failed

also to produce a marketable surplus. This implies that the policies the Tanzanian government tried to implement do not fit the reality of the social structure, hence the failure of the Ujamaa policy. Weaver and Kronemer (1981) have also come to the same conclusion.

It is further argued that Tanzanian workers and employees including the petty bourgeoisie continue to be captured by, instead of them capturing, the peasantry or the "economy of affection" for that matter. That is, their commitment to their jobs (or modern sectors of the economy) is limited due to the existence of an exit option provided by the economy of affection - i.e. if they lose their jobs they always have the option of going back to the rural areas where their needs will be met by essentially kinship units - the economy of affection. This leads to nepotism on the part of officials (government or otherwise), low morale and inefficiency on the part of workers. However, the above explanations suffer from the following limitations.

Since we are told that it was extrinsic forces (colonialism or the world capitalist system) that gave birth to PMP (at least in Sub-Saharan Africa), logically this makes it difficult for us to understand how and why capitalism would give rise to a pre-capitalist mode of production. Certainly, if it is a creation of capitalism (or colonialism), then PMP, is not pre-capitalist although of course it is possible for it to be non-capitalist.

Conceptually, a mode of production is a unity of forces and social relations of production. The PMP as defined by those who advocate it is therefore not a mode of production because they have failed to formulate and specify the wider social relations of production in social formations dominated by the PMP (Bernstein, 1979: 422).

Empirically, not all post-colonial states are progressive forces for development. To view them as such is to confuse potentiality with actuality. For example, was Idi Amin's regime progressive?

Theoretically, the arguments reduce to the following tautology: African (or Tanzanian) peasants are underdeveloped because they are the root causes of underdevelopment and they are also the main obstacles to development because they are underdeveloped. Like all tautologies this argument is scientifically not analytical.

Methodologically, the explanations based on the concept of PMP reduce to the a-historical ideal type of modernity versus tradition employed by modernization theories. These theories, as we have already pointed out in chapter one of this study, see underdevelopment solely in terms of factors intrinsic to underdeveloped countries. Hyden's theory is no exception and it suffers from the same limitations.

Finally, it is also erroneous to regard the Tanzanian

peasantry as "uncaptured" or "independent" of capital. In actual fact, the Tanzanian peasantry is not pre-capitalist but has been subjected to the laws of motion of capitalism and the subsumption of the peasantry under capital has already occurred. We shall come to this point later on but now let us turn to yet another explanation of the nature of Tanzania's development since the Arusha Declaration.

3.4 The Dependency/Disengagement School

There are several variants of this school of thought. Nonetheless, all share the view that what has taken place in Tanzania since the Arusha Declaration simply amounts to a special case of peripheral capitalist development. In this section we shall only review the most common explanations given by this school of thought: i) the Foreign Aid Thesis ii) the Ruling Class Thesis, and iii) Utopian Socialism Thesis.

3.4.1 Foreign Aid Thesis

O'Brien (1981) has advanced the argument that the strategy of socialism and self-reliance in Tanzania has been heavily influenced by the ideas of modernization of Nyerere (a Fabian socialist (according to O'Brien)) who in turn has been influenced by Rostow. The consequence of this was the application of technocratic solutions without careful scrutiny as to their appropriateness. O'Brien (1981) is also of the opinion that the idea of self-reliance and the country's stance on non-

alignment were attractive to all sorts of donors: China, East European countries, Scandinavian countries, Canada, etc., the concomitant of which was massive flows of financial and technical assistance to the country. But this aid did not take into consideration the huge technical gaps which existed between Tanzania and the donors. Tanzania therefore relied heavily on expatriate personnel and as a result the imported technology was never mastered locally. Nevertheless, the capacity to produce industrial products (but not the capability) was extended considerably. But, he further argues, the country was unable to sustain production in the new industries that were possible, to start with, only through foreign aid - i.e. loans and grants. Tanzania therefore, had to rely heavily on foreign aid to keep things going.

The current world recession which has also hit many of the advanced capitalist countries and the coming to power of many conservative governments in the West (which are assumed to be hostile to foreign aid), has led to a significant reduction in the volume of aid Tanzania used to get from the world capitalist system. Thus Tanzania's economic problems are a consequence of her heavy dependence on the world system which has now let her down. Ironically, the recession seems to have hit Tanzania the hardest and she is now in more desperate need of aid than ever before. Seen in this light, the Arusha Declaration only in a

limited sense had a past or history and its future is also dubious.

The Arusha Declaration had warned that "loans and grants will endanger our independence"; however, it did not say that overseas finance would be refused, and the policy was quickly clarified to mean that Tanzania would not bend its political, economic or social policies in the hope of getting overseas aid as a result. The paradox was that self-reliance in this sense was attractive to many countries, or at least gave them the justification they needed to give aid to a country they wished to support (Coulson, 1982a: 301).

The volume of aid (loans and grants) has been increasing steadily from 1969/70 to 1978/79 (Table 6). It started to decline in 1979/80 and although the growth in GDP was negative (for the first time since independence) in 1980/81 and again in 1981/82 Tanzania's problems started in 1970 when the balance in trade grew by -608% over 1969 (Table 5). The proportion of aid as compared to the actual development expenditure remained fairly constant throughout the 1970s. The influx (in terms of volume) of foreign aid into the country, however, coincides with the drought of 1973/74 - 75/76, oil price increases in 1973, and the movement of people to villages, the very period during which Tanzania's economic problems began judging from the Trade Balance situation (Table 11).

There is also another way of looking at the rapid increase of foreign aid to Tanzania, especially U.S. and World

Table 11

**External Aid, Trade Balance, and Villagization
(Millions of Units)**

Year	Trade Balance (Tshs.)	Foreign Loans and Grants (Tshs.)*	Population Living in Villages & Ujamaa Villages	Percentage of Village Population to Total Population in Tanzania
1968	-117	123	0.150 (1967)	1.5% (1967)
1969	83	122	n.a.	n.a.
1970	-422	270	0.531	5.3%
1971	-736	359	1.545	15.4%
1972	-601	325	1.981	19.8%
1973	-898	481	2.028	20.2%
1974	-2397	1038	2.560	23.5%
1975	-2929	1031	9.140	70.4%
1976	-1312	1402	13.067	81.6%
1977	-1678	1369	13.847	86.4%
1978	-5127	2427	n.a.	n.a.
1979	-5315	2320	n.a.	n.a.
1980	-5816	1872	n.a.	n.a.
1981	-4747	1838	n.a.	n.a.

Source: Columns 1 and 2 extracted from Tables 5 and 6 of this study. Last two columns from Maendeleo Vijijini, Prime Minister's Office Dodoma, 1979.

Notes: * Figures refer to financial year July-June. Thus, 1968 refers to 1968/69 and 1981 refers to 1981/82.

n.a. = not available

Bank aid, first proposed by Tschannerl (see Coulson, 1982:316).

According to Tschannerl's view, by 1970 there was a realization by U.S. leaders such as MacNamara of the inadequacy of free enterprise alone both to bring reliable markets and to bring a rise in the living standards of the poor insofar as the LDC's are

concerned. To achieve these things, it was realized, the post-colonial state had to play a much more active role in the economic life of the LDC in question. Tanzania, therefore, became a kind of laboratory or testing ground for various forms of state intervention or involvement. It had (or was willing to create) all the necessary conditions for carrying out this experiment: a state that has already intervened; the political philosophy and ideology that could justify intervention to support the greater good of the masses; and a willingness to create new institutions. The World Bank used its influence to legitimize lending to Tanzania.

...it put money into the development of agriculture -- food crops to feed the cities, and export crops for capitalist world markets; it produced a series of reports on the Tanzanian economy, more detailed ... than in any Tanzanian government publications; it inevitably became involved in villagization, giving its support because villagization simplified the administration of the agricultural projects...the Bank warned against communal work...Some Bank officials even concluded that there was an intellectual case for a basic industry strategy. (Coulson, 1982a: 316)

As a result of all this, there was a lack of correspondence between the Tanzanian policy of socialism/self-reliance and its implementation. Or one can simply assert that the revolution was hijacked -- foreign aid acted as a quid pro quo, or at least had that effect, for not disengaging from (i.e. pulling out of) the world capitalist system. The major problem and limitations of this view is that it says very little about

the nature/character of the state or internal forces in Tanzania at work which allowed the revolution (assuming of course that there was one) to be hijacked.

3.4.2 The Ruling Class Thesis

Issa Shivji (1974; 1976) sees the Arusha Declaration as an attempt by what he calls the "bureaucratic bourgeoisie", the ruling group in Tanzania to establish itself as the dominant class -- both politically and economically. By nationalizing property, this group, which also controls the state, created an economic base for itself thereby completing the process of being a class for itself. That is, the nationalized property is not controlled by the workers and peasants but rather by those who control the state. Ujamaa was merely an ideology used to justify the nationalization measures and to legitimize its rule. Hence the apparent contradiction between official government policy/rhetoric and practice or implementation. Consequently, socialism cannot be achieved by the present Tanzanian state because the bureaucratic bourgeoisie, as Shivji (1976a: 85) argues, is incapable of restructuring the internal (Tanzanian) society and thereby disengaging from the world capitalist system. This is because their objective class interests in the long run converge with those of the international bourgeoisie.¹⁰

Michaela von Freyhold (1977) argues that a distinction should be made between the "ruling class" and the "governing

class". She maintains that (insofar as the once colonized LDCs are concerned) the ruling class has always been the metropolitan bourgeoisie and that the governing class has developed from the colonial administration to the post-colonial state with a multitude of sophisticated instruments to control society -- including the development of various forms of monopoly capitalism. In the case of Tanzania, the rise to power of the governing class is examined and she illustrates how the various progressive or socialist measures undertaken by the state, such as nationalization and Ujamaa villages programme, were in reality methods adopted by the governing class to extend its power and control.

Even before the major nationalization measures had taken place, a number of foreign investors and foreign financial institutions had already indicated their preference for joint ventures with the state and as the state became more powerful as the result of nationalizations...the metropolitan bourgeoisie became more interested than ever in using this state for their own purposes...After having taken over the banks, wholesale trade, the larger industrial enterprises and most of the larger plantations and farms, it...engaged in new industrial ventures together with metropolitan capital...At all levels of the state apparatus the annual plans for direct production are plans for the expansion of the state economy financed and assisted by metropolitan capital in one way or another. (von Freyhold, 1977:83)

She further makes the assertion that whatever the anti-capitalist nature of the ideology propagated by the governing class in Tanzania, together with the best intentions of the socialist intellectuals, viewed over a longer period of time, the

policy of socialism in the country was in practice a strategy adopted by the governing class to expand its power over the subordinated classes and also to put members of this class in a position that "made them a viable partner to the metropolitan bourgeoisie" (von Freyhold, 1977:88).

Nursey-Bray (1980:76) argues that the problem with the above two approaches "is that by starting with the premise that Tanzania is, and always has been, a capitalist state they are forced to explain away apparently inconsistent behaviour by the petty-bourgeoisie in control of the state, by rather tortuous means".¹¹ This argument is not sound. We think it is more misleading and contrary to reality to start with the opposite premise, i.e. that Tanzania is or was, not a capitalist state at a certain period after independence and now "is moving at an increasing momentum towards peripheral capitalism, but of a type that is quite distinct" (Nursey-Bray, 1980:77). Even so, we agree with him that it is not correct to maintain that all measures, progressive and otherwise of the Tanzanian state, are those of an indigenous class pursuing its own interests (Shivji) or of a governing group expressing the total will of the metropolitan bourgeoisie (von Freyhold).

The Disengagement School also leads to the assertion that for Tanzania to develop, it should engage only in selective trade with the world capitalist system, make less and less use of

foreign aid, and/or avoid the obvious relations which drain surplus out of the country to the world system. However, the Arusha Declaration was an attempt along that path which was, unfortunately, not successful. Furthermore, the only way Tanzania can engage in selective trade with the world system, in our view, is through the export of traditional export crops because her industry is not at present well developed to deal with the competition with well established transnational corporations. The country also lacks strategic mineral resources. Yet this school calls for selective trade and at the same time maintains the view that the emphasis in export cash crops and other primary products is the major way through which dependence, exploitation and underdevelopment is perpetuated. The way out is to promote industrialization, but for a country like Tanzania where is it going to get foreign currency needed for promoting industrial growth without, at least initially, promoting the growth of certain export cash crops if dependence on external aid is to be avoided? Both the growing protectionist policies in the advanced capitalist countries and the present food crisis in Africa suggest that both agriculture and industrial growth should be developed together for internal consumption first and export markets later. There is also a need to point out that perhaps one of the major limitations with the disengagement/dependency school in general is its hidden assumption, namely that "capitalism" and "development" are

antagonistic. Empirically this is yet to be proven.

3.4.3 Utopian Socialism

It has also been argued that whatever the well meaning intentions of the Tanzanian regime to implement the Arusha Declaration, socialism in Tanzania cannot be achieved primarily because of its utopian character. There is no ideological clarity in the Arusha Declaration: unity and harmony of classes are emphasized rather than class alliance or class struggle; Marxism is rejected as a Eurocentric theory and as a result both class struggle and capitalism are seen as European imports (see Freund, 1981:490, Nursey-Bray, 1980:55,56). This approach is further developed by Mueller (1980) to account not only for the failure of socialism in Tanzania but also for the present crisis in the country.

In her article, "Retarded Capitalism in Tanzania", Suzanne D. Mueller (1980) argues that a particular type of (reactionary) utopianism has actually been institutionalized in Tanzania and labelled socialism. Her argument proceeds as follows:

- that state capital in Tanzania has consistently acted to forestall the development of a bourgeoisie and a proletariat by basing accumulation on the expansion of middle peasant household;
- labour and capital have been confined to their most primitive state while middle peasants are increasingly squeezed as the State intensifies the production of cash crops;

- the state has fettered the accumulation of indigenous capital within smallholding production by (forstalling the divorcing/separation of the peasants from their means of production;
- but the peasantry is not pre-capitalist. "It has been subjected to the laws and motion of capitalism and gets none of its progressive benefits. Its fetter is...the State which has legally restricted its freedom of movement, confined it into villages and re-introduced minimum acreage requirements" (p. 204);
- the result is primitive productive forces, overwork and under consumption, a pauperized and trapped peasantry.

Mueller (1980:205) further argues that the ruling class itself in Tanzania is capitalist and petit-bourgeoisie. Thus the "State is not against capitalism per se, but simply big capitalism out of its control as opposed to small capitalism within its control" (p.205). The policies pursued by the state are utopian because they are both anti-labour and anti-big-capital. The question is why this particular type of utopian socialism (or narodinism¹² as Mueller refers to it)? She offers the following explanation.

In colonial Tanzania, the argument goes, the colonialists alienated less than 1 per cent of the land from the peasants. Consequently landlessness never took place and the direct producer was not separated/divorced from the ownership of the means of production -- quite the reverse took place in Kenya. Furthermore, within East Africa, Tanzania was a periphery so industrial development took place also in the Kenyan settler

economy while Tanzania was a "dumping ground for Kenya's developing industrial and manufacturing sector" (p.205). Consequently, a non-productive petit-bourgeoisie -- teachers, traders, and clerks -- predominated with only a very small number of Kulak farmers. This non-productive petit-bourgeois class actually led the independence movement in Tanzania while in Kenya it was led by the "big bourgeoisie". After the attainment of independence, Kenya's ruling class -- "big-bourgeoisie" -- stripped capital of its racial fetters and proceeded to smash its petit-bourgeoisie opponents. Tanzania's ruling class -- the non-productive petit-bourgeoisie -- lacked the material base to act like its Kenya counterparts and was reluctant to support land policies which would develop capital out of control while at the same time proletarianize the peasantry. "Hence, while Kenya devised policies to support the further development of a big bourgeoisie, its poorer sister chose Narodinism to institutionalize a petit-bourgeoisie and small capitalism" (Mueller, 1980:206).

Despite numerous definitional problems with the above approach (e.g. small capitalism, retarded capitalism, etc.), the argument is not different from the one presented by Shivji (1974; 1976a) which we have already discussed. The only major difference is that Mueller's argument upon close scrutiny, is tautological: capitalism in Tanzania is the fetter of capitalism. Seen in this way, the argument is self-defeating and merits no

further discussion.

The above debates and hence discussion presented so far provide valuable background information to the problem of choice of technique. This is because the debates in a way hinge upon the factors or constraints we discussed in chapter one: the dominant mode of production, interests of external institutions such as aid agencies, and the state-economy relationship. These debates also provide the context within which Tanzanian industrial growth/development has been assessed. This being the case, before concluding this chapter we shall first examine the industrialization debate in the next section.

3.5 The Industrialization Debate

Industrialization in Tanzania has been assessed in the context of the wide development debates discussed in the preceding sections of this chapter. For many observers the Tanzanian "social experiment" or policy of Ujamaa and Self-Reliance has been a failure. Within that context, the analysis of Tanzania's industrial development readily arrives at similar repeated announcements of failure. By focusing specifically on the industrialization debate this section asserts that such negative conclusions are not only ideologically motivated but they are also not well founded. The debates revolve around the following: choice of technology; choice of industry; import dependence and surplus outflow; and performance or productivity

of both capital and labour.

It is argued (correctly for that matter) that the technology deemed appropriate and/or implied by the country's development objectives since the Arusha Declaration of 1967 is one with the following characteristics: (i) surplus generating but low cost; (ii) simple as opposed to complex; (iii) small scale; (iv) labour intensive; and (v) standardized (Williams, 1984:129; Coulson, 1982b; etc.) Within this context, it is argued that the post-Arusha period is characterized not only by firms employing a wide range of technologies but also with a consistent bias towards inappropriate technology -- meaning that a bias towards capital intensive, sophisticated and large scale technologies (Coulson, 1982b; Green, 1982:90-92; etc.)

Both Coulson (1982b:73) and Williams (1984) specifically point out that although the (Dar-es-Salaam based) labour-intensive Urafiki (Friendship) Textile Mill was more profitable, and had simpler technology and output nearer capacity than the capital-intensive Mwanza Textile Mill (Mwatex), the government based its 1974 expansion plans on the latter. This is supposedly taken as a proof for either an inability to choose better and/or a bias against labour intensive technology. If we take a *ceteris paribus* assumption the above argument is valid. Unfortunately, the *ceteris non paribus* assumption holds in this case. In actual fact the Tanzanian government had earlier on in 1973 decided to

buy two more Urafiki (Friendship) Textile Mills from China (the original supplier) and was told by the Chinese that such mills were obsolete and their production had stopped (Green, 1982:91). The above debate does not take this fact into account.

Furthermore the argument that the capital intensive "technology selected did not meet the criteria implied by national goals" (Williams, 1984:129-30), is also not sound. This is because the choices were made by state owned corporations whose decisions were approved by the Economic Committee of the Cabinet (Williams, 1984:142). As a matter of fact the country's Basic Industrial Strategy (BIS) encompasses a three-tier approach in the promotion of industries: (i) National industries consisting of large and medium scale establishments. These will be modern "capital" or "labour intensive" plants producing for domestic and export markets; (ii) District Industries ¹³ consisting of modern small scale plants producing basically for the district; and (iii) Village Industries ¹⁴ and Handcrafts producing essentially for a village or a number of villages (for details see Mpango wa Tatu wa Maaendeleo, 1976). Thus both large scale and capital intensive technologies/ plants are not necessarily contrary to national goals.

Concerning choice of industry or product some observers (Coulson, 1982b:72; Kuuya, 1976; Barker et al, 1976) point out that the post Arusha Declaration industrial firms are also inappropriate in the sense that the majority of them produce

goods not for mass consumption but for luxury consumption. Coulson (1982b:72) asserts that between 1966 and 1972 only 31% of the investment was for mass needs, and only 21% of the estimated expenditure between 1972 and 1975. However, it is interesting to just see what these "luxury" products are: polyester, textiles, fashion shoes, strip matches, more than one-band radio sets, soft drinks, beer, bread and cigarettes (Barker et al., 1976; Coulson, 1982b:72; Kuuya, 1976).

Are the above products really luxury goods? We think they are not and we agree with Green (1982:82) when he notes that:

Very few luxury manufactures were -- or are -- produced if luxury means either goods like Mercedes cars or brandy or, alternatively, products with very narrow markers. To 1967 the dominant reason was market logic - the Tanzanian upper-income consumer market was so narrow that it made no sense to produce for it....thereafter..., state commitments pushed production choices in the same direction. True wheat flour, FCI sheet, refined sugar, beer and cigarettes are not necessities. But all five are ... among the most widely purchased items in rural as well as urban areas. It is important to stress this point because analyses of Tanzanian industrialization which find a high share of luxury goods do so by including cigarettes, beer, and similar items. For instance, leather shoes...Necessities they are not, broad market wage goods they are.

Some of the above goods like beer, wheat flour/bread, and the like, are in our view necessities especially in urban areas.

It has also been observed that many of the industries built after (1967) the announcement and commitment to the policy

of socialism and self-reliance are import-dependent and perpetuate the drain of surplus outside the country.¹⁵ For example, Coulson (1982b:72) claims that whereas about 80% of the value added in the firms built before 1967 was retained within the country, the post 1967 firms retain only about 50% of the value added.

The conclusion is that the post Arusha period is characterized by industrial investments which are efficient vehicles only for transferring surplus outside the national economy (Barker et al., 1976:3 chapter V).

One of the implications of high import-dependence has been severe capacity under-utilization caused by scarcity of foreign currency (Wangwe, 1977). Although the author agrees with Hare (1982:77) that the problem of under-utilization of much of the installed capacity is not unique to Tanzania, there is need to point out that this excess capacity (in the case of Tanzania) is mainly due to supply as opposed to demand factors. The problem would not have been so severe if only great care and scrutiny of the imported production techniques was made so as to exclude those which required the use of imported raw materials/inputs at the expense of not utilizing available local resources. This was the case with the Kibo match factory (Coulson, 1977), and the like (see Kuyya, 1976). We do not, however, accept the allegation that the post-Arusha firms "are efficient vehicles only for transferring surplus outside the

national economy". This assertion is far fetched -- it is more a statement of faith than of fact.

Another issue which has been of heated debate both within the government of Tanzania and outside it concerns the performance of parastatals. Critics argue that there is low productivity of both labour and capital; that parastatal performance is worse than that of the private sector despite the fact that it pays higher wages (on the average) than the private sector (Coulson, 1982b:72); that wage differentials "tend to vary with capital intensity and value added per worker in ways not associated with worker effort or efficiency (Green, 1982:87), etc. In short, parastatals are accused of being very inefficient.

For the World Bank, IMF and even for some Tanzania leaders,¹⁶ the fall in productivity is mainly a consequence of lack of "material incentives" for both workers and management and lack of "discipline" on the part of Tanzanian workers. This situation has led to a situation where laziness and lack of discipline by workers is tolerated by the managers (Green, 1982:93).

The president, Nwalimu Nyerere, rejected the above position and defended the workers. For him and for the ILO (1978) lazy workers and incompetent managers are not as significant a contributing factor to the fall in productivity as the lack of or inadequate worker participation and experience. But even this

position seems to imply that indeed there is low productivity, and/or inefficiency which has somehow to be associated by the workers. This, in general, is not the case.

For example, we have already pointed out contextual factors affecting productivity/efficiency. Lack of foreign exchange leading to lack of inputs and/or spare parts and hence severe capacity utilization, power cuts/shortages, water shortages, poor or inadequate transport facilities, and inadequate storage facilities. Surely workers cannot be blamed for decline in productivity/efficiency resulting from such factors. Productivity and efficiency in the Tanzanian industrial sector have also been hampered by scarcity of high level personnel (Green, 1982:92; O'Brien, 1981). This is clearly not a fault of the workers. Furthermore, it is our view that even in those cases where the workers are/were lazy, this may also be a consequence of incompetent or poor leadership by the management.

The argument that the growth rates in value added per worker and in GDP show a declining tendency (Coulson, 1978b:70) is also contradicted by facts. We have reproduced part of Coulson's (1982b) Table 3.8 which he used to support his argument to show that even his own figures contradict his conclusion insofar as Tanzanian manufacturing industries (excluding handcrafts) are concerned (see Table 12). The situation becomes clearer if we plot a graph of Index of Value Added per worker at

Indices of Value Added per Worker in Manufacturing (1966 = 10.0) and GDP (%) Annual Growth Rates at 1966 Constant Prices in Tanzania, 1965 - 1979

Figure 2

constant 1966 prices against the years concerned. This graph (Figure 2) does not show any general trend. Wage employment also increased by an annual average of 9% from 15,729 in 1965 to 86,500 in 1979 in manufacturing industries (Table 12). In actual fact Mansfield (1982) provides ample data/evidence to indicate the conclusion "that the average rates of growth of GDP and productivity display a decreasing tendency" is an illusion created by average in the data of each of the three particular periods: 1964-67, 1967-72, and 1972-76. This periodization is unnecessary and tends to serve the ideological interests of those who want to prove (and indeed believe) that only the invisible hand of the market is efficient and any significant state involvement is only going to create inefficiencies.

The issue of profitability or surplus generation in the Tanzanian manufacturing sector is also problematic. The World Bank and Fund functionaries occasionally seem to imply that the sector is over-all deficit.¹⁷ However, Green (1982:89) and Bienefeld (1982:128) point out that this is not and has never been the case sectorally -- at least up to 1980. Some individual firms have, of course, run up deficits before breaking through to profitability. Defenders (Bienefeld, 1982; ILO, 1978; etc.) correctly point out that the Tanzanian public enterprise manufacturing sector generates substantial surpluses (Bienefeld, 1982:128 (Table 6.12)). Insofar as this aspect is concerned, critics are quick to point out that profitability in

Table 12

Employment and Value Added in Manufacturing Industries
1965 - 1979**

Year	Employment (Number)	Annual* Growth in Employment	Value Added in Constant 1966 Prices (Tshs. Mil.)	Value Added per Worker in 1966 Prices (Tshs.)	Index of* Value Added per Worker, 1966 Prices (1966=10.0)
1965	25,729	-	227	8823	8.94
1966	29,890	16%	295	9870	10.00
1967	31,186	4%	319	10229	10.36
1968	35,359	13%	357	10096	10.23
1969	40,323	14%	430	10664	10.80
1970	43,746	8%	485	11087	11.23
1971	55,158	26%	525	9518	9.64
1972	55,389	0%	600	10832	10.97
1973	59,336	7%	644	10853	10.99
1974	64,921	9%	703	10829	10.97
1975	74,133	14%	667	8997	9.12
1976	75,003	1%	820	10933	11.08
1977	78,090	4%	858	10987	11.13
1978	80,276	3%	945	11772	11.93
1979	86,500	8%	896	10538	10.49

Source: Coulson (1982b:69, Table 3.8), Economic Survey (Various years).

Notes: * These figures have been calculated by the author.

** Industries employing 10 or more workers

Tanzania is not a good test of efficiency/or is itself problematic because the Tanzanian market is, to a high degree an administered market set of prices. That is prices of most industrial/manufactured products are set by a government institution, the Price Commission, on a cost plus profit basis -- "so that with reasonable effort...a manufacturing enterprise can

obtain 15-20% post tax return on net worth or 30% pre-tax on assets net of current liabilities"(Green, 1982:89).

But, one has to bear in mind that the basic objective of price setting and price controls in Tanzania is to protect the consumer. Furthermore, since some firms make losses and others generate profits then profitability figures cannot simply be dismissed as arbitrary quantities (Bienefeld, 1982:129). To what extent they are a valid measure of efficiency, is however, beyond the scope of this study.¹⁸

In concluding this section we think it is vital to mention that the debates about Tanzania's development can be reduced to two opposing political and ideological concerns: state intervention versus advocates of free market forces. Consequently, for those who advocate free enterprise, their main concern has been to prove that (using Tanzania of course) state intervention is only going to result in inefficiency and negative consequences. Thus they have been content to see both the general development strategy and the industrialization experiences as sure sign posts of failure.

The advocates of state intervention and hence supporters of socialism tend to see the problem as lying in the failure of the Tanzanian state to promote industrialization aimed at the production of mass consumption goods as opposed to luxury goods. However, the evidence offered by the two camps (although not

necessarily in this pure form) is selective, problematic, and inconclusive. But both sides have jumped into hasty conclusions to prove and adhere to their original theoretical, political and ideological stand. The consequence is that Tanzania has been rejected by both sides. How then can we characterize the nature of Tanzania's development? Is it capitalist or socialist? The next chapter will attempt to answer this question through a historical analysis.

3.6. Summary and Concluding Remarks

In this chapter, several explanations have been presented to account both for Tanzania's development and for the causes of the current economic difficulties facing the country. We must admit that there are elements of plausability in each of the individual explanations we have examined so far. The main problem facing all of them is the tendency to be mono-causal and/or to confound two or more issues: the current economic problems facing the country and the alleged failure of the policy of **socialism** and **self-reliance** in Tanzania.

The modernization/world market integration school tend to see everything in terms of internal factors. It is even denied that underdevelopment or its roots are not connected with the world capitalist system. Instead, the problem or root causes of underdevelopment are either the African (in this case Tanzanian) people, their culture, or their government(s). In addition to

this, Tanzania is seen by this school of thought as being a socialist state. Consequently, socialism is blamed as the cause of the country's socio-economic problems. Specifically, the agricultural crisis of the mid 1970s is seen as being caused by collective farming. This, as we pointed out is incorrect and misleading simply because there was very little and thence insignificant collective farming in Tanzania to this date. We therefore regard explanations based on this school of thought as one-sided, inadequate, misleading, and ideological.

The disengagement school also suffers from mono-causality (i.e. an over-emphasis of external forces) and overdetermination. The major thrust of its arguments has been to deny that Tanzania is a socialist state or in the transition to socialism. This school tends to see LDCs, including Tanzania, as being so determined by the world capitalist system that it becomes difficult to see how they (or it) can possibly break away (Worseley, 1980:305) or be held responsible for their (its) socio-economic problems.

It is obvious from the various explanations that we have presented so far that both internal and external factors are responsible for what has taken place in Tanzania since, and even before, the announcement of the Arusha Declaration in early 1967 up to the present. As a matter of fact the capitalist countries of the world, both LDCs and ACs have been facing a severe recession since the mid 1970s -- Tanzania included. This

suggests that had the country been able to implement its policy of self-reliance, perhaps it would not have found itself in such a difficult situation. In other words, the effects of the world recession would have been minimal.

The tendency towards uni-causal analysis is rooted in taking an a priori stand depending on one's political and ideological stance: either to the Right (c.f. most of the modernization school analysts) or to the Left (c.f. dependency/disengagement school theorists). For those leaning to the former camp (Rightists) socialism and development are antagonistic. The opposite is true of the latter camp (Leftists), for them capitalism and development in (LDCs) are antagonistic.¹⁹ From these two initial positions, each camp has tended to collect/see only the evidence that proves its case. This is true even on the subject of industrialization. Seen in this light we find Tshernnel's account or explanation more illuminating. What is lacking in her account is the internal forces or contradictions which forced the state to adopt the policy of self-reliance and its ability or inability to implement/stick to it. The next chapter will attempt to clarify this point. Suffice it to mention here that on another level the debates are very valuable to our general concern -- the factors influencing the choice of technique in Tanzania. These were identified as (a) the dominant/dynamic mode of production; (b)

external interests; and (c) State-economy relationship. The debates have clearly thrown more light on the last two factors. But the question still remains - is the dominant or expanding mode of production in Tanzania capitalist or socialist? Most of the debates have taken 1967 (the Arusha Declaration) as the starting point.²⁰ Yet the declaration did not come out of the blue. Thus to understand the nature of Tanzania's development (and thence the dominant mode of production there) one needs to analyse the situation and events before the Arusha Declaration. In addition to providing such a background, chapter four will also deal with planning and decision making in Tanzania as well as with organization constraints emanating from the particular nature of the state-economy relationship in the country. The role or effect of foreign aid insofar as decisions leading to investments are concerned will also be discussed.

FOOTNOTES

Chapter Three

¹Notice that J.K. Nyerere is the president of Tanzania. He has occupied that position since 1962.

²The only people identified by the Arusha Declaration who should live on the work of others "and who have the right to be dependent upon their fellows, are small children, people who are too old to support themselves, the crippled, and those whom the state at any one time cannot provide with an opportunity to work for their living" (Nyerere, 1968: 16).

³This was termed "The Basic Industry Strategy". The term "basic industries" refers (i) to either industries that manufacture/produce implements of labour or inputs to feed other industries, and (ii) to industries utilizing local Tanzanian resources (man-power and raw materials) for the production of goods that are fairly priced to meet the needs of Tanzanian masses.

⁴Furthermore, the Arusha Declaration was, as a matter of fact, the beginning, not the end, of the extremely hard struggle of building/or transition to socialism. Thus it makes little or no sense at all to talk of "the failure of Tanzanian socialism".

⁵N.B. These debates have a direct bearing on the issue of choice of technique in Tanzania since they touch on each of our three important factors: (i) mode of production - socialist or capitalist; (ii) interests of external institutions (aid donors) and dependence on the world capitalist system; (iii) and internal factors (e.g. the role of the Tanzanian government).

⁶Notice that the average annual growth rates (%) of GDP - 1970 to 1976 for Africa as a whole was 4.39 and it was 0.95, 2.39, 4.68, 1.69, -1.31, -0.10, and 2.78 for Ghana, Guinea, Kenya, Liberia, Sudan, Uganda, and Zaire respectively (see Fransman, 1982: 404 Table 20A.2).

⁷To this end, Bienefeld (1982: 138) has pointed out that, "By comparison to virtually all other countries in sub-Saharan Africa, Tanzania's development has been more than respectable - whether in terms of growth, distribution, the extent of social polarization, political stability . . . This may not be saying much but it is saying more than statements which compare it to South Korea or Brazil, and a great deal more than those which compare it to some unspecified implicit ideal".

⁸But they are "free" only in a limited sense since Tanzanians pay for them indirectly through income and sales taxes.

⁹The question is why? Coulson (1982b: 313-316) gives the following reasons: (a) increased strategic and diplomatic importance of Tanzania as countries of southern Africa liberated themselves from white rule; (b) the World Bank and governments in the west wanted to legitimize themselves by lending and offering aid to a socialist regime; (c) considerable diplomatic skill on the part of the Tanzanian president (Julius K. Nyerere) and his ministers; (d) many governments and political parties in the west were convinced that what Tanzania was attempting was in the best interests of the masses.

¹⁰The implication of this argument is that the socialism advocated by the Tanzanian state is actually a form of hegemony exercised by the ruling class.

¹¹Notice that here Nursey-Bray (1980) refers to the leadership code adopted by the Tanzanian government after the announcement of the Arusha Declaration in 1967. This code forbids party and government leaders to (a) be associated with the practices of capitalism or feudalism (b) hold directorships in any privately owned enterprise (c) receive two or more salaries (d) own houses for rent "(In this context leader means a man, or a man and his wife; a woman, or a woman and her husband.)" Nyerere, 1968: 36.

¹²The term Narodinism is "used metaphorically insofar as (a) no exact parallel with the material conditions in Russia at the time Lenin was writing is suggested; (b) the Narodniks were a movement and not a State; (c) the ruling class in Tanzania became 'populist' after becoming dominant in the State and not before. The metaphor applies in the sense that many of the Narodniks' populist ideas have been institutionalized in Tanzania with the results predicted by Lenin "(Mueller, 1980: 203). If this is the case, we are of the view that (a) through (c) negates the conclusion (last sentence) and it is erroneous to use the metaphor.

¹³N.B. District corporations, cooperatives, and private firms have been given the task of establishing and running these industries.

¹⁴These industries are to be established and run by village governments or cooperatives or even individual persons.

¹⁵Singh (1982) and Rweyemamu (1973) are of the opinion that import dependence is a consequence of lack of capital goods industries. It can only be overcome by giving priority to the establishment of capital goods industries from an early stage. Tanzania did not, and hence the problem of high import dependence and its ramifications it is now experiencing.

¹⁶For example, the ex-Tanzanian Minister of Finance - Mtei, now Tanzanian representative to the IMF in Washington, during a speech he delivered to Tanzanian managers (of industrial enterprises) in October 1979 alleged that productivity has fallen by 50% due to lazy and undisciplined workers (see Green, 1982: 93).

¹⁷This observation has been made by Green (1982: 89, 102 Footnote 36).

¹⁸For more details see ILO (1978) and Rice (1979) where some detailed information on Tanzanian Price Controls is provided.

¹⁹Insofar as we are concerned, we accept the position that state intervention in LDCs is necessary given the nature of underdevelopment itself. But intervention by itself is not a sufficient condition to bring about rapid and more equitable socio-economic development. Much depends on the forces in control of the State, whether they represent the interests of the masses, and whether they have the capacity to serve those interests.

²⁰There are few exceptions, notably Coulson (1982a); Hyden (1980); Shivji (1976a).

CHAPTER FOUR

THE NATURE OF TANZANIA'S DEVELOPMENT: DIRECT STATE INTERVENTION IN THE ECONOMY

4.1 Introductory Remarks

The theoretical debates about Tanzania's development which we examined in the previous chapter of this study place a lot of emphasis, directly or indirectly, on the role of the state in socio-economic development, and, or, on social change in Tanzanian society. It was also pointed out that they all suffer from being one-sided, insofar as the balance of internal, external, or natural calamities are concerned. It was apparent that both internal and external factors, including even natural calamities such as droughts and floods are responsible for the situation in which Tanzania finds itself.

Whether one approaches the debates examined in the preceeding chapter from the left, the right, or even the centre of the ideological spectrum, however, their central argument is the same: that the Tanzanian situation today is a consequence of what the Tanzanian (post-colonial) state did or failed to do. But what is lacking in all the explanations is a theory of the role of the post-colonial peripheral State in the socio-economic development/transformation or simply social change of the peripheral social formation. In this chapter an attempt is therefore being made to develop such a theory at least insofar as Tanzania is concerned. The main thrust of our argument is that

the state in peripheral societies has little choice but to intervene directly in the economy if it has to guarantee expanded reproduction of the social formation.

4.2 The Post-Colonial State and Socio-economic Development

The state, in the context of this study, is regarded as "the constellation of apparatus and agencies (bureaucracy, army, police, etc.) through which political power and control are exercised by the ruling class in any given social formation" (Gittens, 1982: 21). This means that the roles and functions assumed by the state (i) mirror the contradictions and struggles between different social classes, groups, or factions; and, (ii) reflect as well as represent the interests both of the dominant class forces and the subordinated classes within the social formation (Ziemann and Lanzendorfer, 1977).

The "State" therefore expresses a unity of opposites (dominant and subordinated classes) and as a result it assumes contradictory functions. On the one hand the interests of all classes are, to varying degrees, deposited in (and mediated by) the State. On the other hand, the State has to legitimize, justify and sustain both itself and the rule of the dominant class. As Gittens (1982: 23) further observes,

the State's major role vis-à-vis social classes does not simply consist in mediating between fractions of capital but rather in controlling the class antagonisms between Capital and Labor thereby reproducing the social formation for the furtherance of capitalist exploitation.

Thus, every capitalist state has or enjoys a certain relative autonomy¹ as a constitutive essence rooted in its role in expanded reproduction of the social formation concerned. However, the extent and manner of state intervention may vary from one capitalist society to another depending on how much (in relative terms) state intervention is deemed necessary to keep the economy self-regulating or self-sustaining. In this sense, the post-colonial capitalist state in the periphery has a much more central role to play in the economy than has the capitalist state in the metropolis (Ziemann and Lanzendorfer, 1977: 149). In other words, the post-colonial state has to be much more directly involved in the economic processes and because of this it is inevitably involved in class formation. The reasons advanced as to why the post-colonial state is an interventionist one are varied (see Alavi, 1972; Saul, 1973; Shivji, 1976; von Freyhold, 1977; Leys, 1978; Gittens, 1982; etc.). But they all amount to the argument that the post-colonial state is interventionist because it has (i) the (economic) role of initiating and promoting economic development; and, (ii) to foster the development of an indigenous ruling class (e.g. bureaucratic bourgeoisie in Tanzania and industrial bourgeoisie in Kenya). The interests of the indigenous ruling class may coincide with those of the metropolitan bourgeoisie, thus, giving the impression that the economic role of the post-colonial state

is to guarantee the imperialist exploitative relationship with international capitalism (c.f. von Freyhold, 1977 characterization of the Tanzanian state).

At this juncture, there is need for one to recall that the colonial state in the peripheral social formation was externally imposed which imposed, in its turn, (on the colony) the dominant capitalist mode of production. The ruling class was also external (i.e. the metropolitan bourgeoisie) and the economy of the colony was externally oriented and restructured to serve the needs of metropolitan capital. This, however, necessitated the partial restructuring, and partial preservation (rarely complete destruction) of non-capitalist forms (or relations) of production provided, of course, that they made a positive contribution to capital accumulation. For example, peasant household/family units were compelled to produce a surplus product on a regular basis - usually in the form of cash crops. This surplus entered the circuit of capital via trade. In addition to this, some family members became (or were compelled to become) wage workers/labourers but the wages they received were usually so low that they were not even enough for their own reproduction (i.e. reproduction of labour). Consequently, the extended family of the worker was therefore obliged to subsidize his wage. Low wages were functional to capital in that they allowed the realization of super profits without capital having to pay the full costs required for the reproduction of the

worker. This arrangement also implies that the subsumption of labour under/by capital takes place both within and outside wage labour.

Once imposed, capitalism became the dominant mode of production in colonial social formations and the so called pre-capitalist modes of production, such as peasant production, ceased to constitute viable/separate modes of production as such, but they rather became and continue to be forms of production that exist(ed) and take(took) their historical character within the dominant capitalist mode of production. In other words, the dominant capitalism

subjects the elements of other modes of production to the needs and logic of its own functioning and integrates them, more or less, in the mechanisms of its reproduction . . . there is no question that the autonomy of the pre-capitalist modes or relations of production are preserved, nor any doubt that the law of motion governing the articulation is determined by capital (Bernstein, 1977: 35).

There is, of course, an ideological component to this process. The existing local institutions and hence non-capitalist forms of production that were preserved were deemed inferior although capital depended on them and/or used them insofar as the extraction of surplus and thence valorization of capital was/is concerned. The newly created institutions in the periphery such as schools, christian churches, etc. also served and inculcated values that (a) strengthened the subordination of local

institutions, (b) legitimized the colonial order and the methods adopted in the process of capital accumulation, and (c) created inferiority complexes on the part of the indigenous colonized peoples. This situation made it possible, after the early period of resistance, confrontation and pacification, for the colonial state to maintain law and order without having to rely on a huge military and police force.

However, the struggle leading up to the attainment of political independence was also a process of reasserting self-confidence. It was marked by a unity of purpose insofar as the indigenous peoples and social classes were concerned: to challenge the colonial order (colonialism) as perpetuated by the colonial state. The end of that struggle, that is, the attainment of political independence ushered in its own contradictions. The unity of the indigenous social classes was destroyed and as a result the class forces that were mute during the colonial era were emancipated. Independence therefore signaled the beginning and intensification of class struggles within the peripheral social formation. In addition to this, although capitalism was the dominant/dynamic mode, large areas of economic activity were still under non-capitalist relations of production yet producing both for subsistence and to serve the needs of metropolitan capital. Thus the post-colonial state finds itself in a situation whereby it has to guarantee the

expanded reproduction of a social formation characterized by, among other things, the following:

- a) an intensification of class struggles;
- b) capitalist and non-capitalist economic structures;
- c) external dependence;
- d) low level development of productive forces; and,
- e) low level of political democracy.

There are contradictions inherent in these characteristics insofar as the process of economic development is concerned. The slogan and ideology of the independence struggle was "unity is strength and division is weakness" or "united we stand divided we fall". For a young and poor nation just emerging from colonial rule this unity is needed and necessary for the complex task of building a new nation and/or promoting social and economic development. The intensification of class struggles not only threatened and/or destroyed that unity but was also perceived as a force inimical to the "national interests": unity and stability. The (new) nationalist regime regarded this process as a challenge to its authority, a sign of its weakness and disastrous in its efforts to promote socio-economic development. If the ideology of the colonial state was "divide and rule" that of the post-colonial state was the opposite - "unite and rule". The post-colonial state therefore had to take measures to contain these class struggles.

Everyone who participated in the struggle for independence (both as individuals and as social groups/classes) expected to enjoy the fruits of independence - i.e. improvements in their well-being. But most of the surplus extracted during the colonial period aided capital accumulation in the metropolis. The little surplus that was inherited by the post-colonial state needed to be reinvested in order to bring about the desired rapid economic development which everybody hoped would follow the attainment of independence. The major contradiction here is that the hope/expectation of enjoying the fruits of independence implied higher wages for workers and other employees as well as higher prices for agricultural commodities produced by the peasants, etc. The expectation and desire of achieving rapid economic development implied the tightening of belts, i.e. keeping prices and wages paid to direct producers down so as to extract surplus necessary for accelerating economic development. This contradiction was deepened by the fact of external dependence which perpetuated surplus drain out of the peripheral social formation. This situation demands an interventionist state to resolve these contradictions in one way or the other.

The low level of development of productive forces, in general, is not conducive to rapid economic development. This situation not only requires heavy investments in education and training facilities (whose positive impact on the economy is not immediate) but it also runs against the expectations of workers

and other employees who had hoped to get accelerated promotions to higher positions previously occupied by non-indigenous persons..

It is also important to recall that the process that cleared the way for capitalist development in the metropolis was preceded by the process of primitive accumulation of capital. The capital so accumulated (not as a result of capitalist relations of production) made not only the emergence of capitalism and its future development possible but also was decisive in making the destruction of non-capitalist economic structures possible on a large scale. The situation was different insofar as the newly independent peripheral societies were concerned. There was simply not enough capital within the social formation to destroy on a large scale non-capitalist forms/structures of production. As a result there is a tendency by political leaders to romanticize the past, to associate colonialism with capitalism and thence to be skeptical about capitalist development. Yet, in reality what is dominant and expanding is the capitalist mode of production. The inherited economic structures and major institutions including the constitution upon which independence was granted, all guaranteed the development of capitalism. But left to develop on its own logic there was, and still is, a danger of deepening external dependence and surplus drain, intensifying further class

struggles, creating instability, and as a consequence fettering the very process of economic development.

The above situation and contradictions inherent in the characteristics of peripheral societies suggest that in order to guarantee the expanded reproduction of the social formation, it is imperative that the post-colonial state must actively intervene and also play an essentially central role in economic activity.

If it opts to pursue a development path within the parameters of the International Capitalist System... it must ensure that the expanded reproduction of the social formation fits it... for its continued role. Again if it opts for an independent, "autonomous" course of development, the state must intervene to direct the course of production in the desired direction (Gittens, 1982: 30).

One of the implications of this intervention is that the state has to increase its efficacy² in terms of controlling the class struggles which have intensified during the post-independence period and guarantee expanded reproduction of the society. To accomplish this expanding role, the state increases its bureaucratic and coercive apparatus. Indeed, as Gittens (1982: 27) further observes, "since post-colonial states have been known to sedulously further the interest of classes or fractions of classes", it is much more valuable to increase its efficacy rather than making itself independent of any class, classes or fractions of classes. With these observations, we now turn to the Tanzanian situation.

4.3 The State and Development in Tanzania

The struggle for independence in Tanzania was led by the petty bourgeoisie - teachers, civil servants, professionals, clerks, shopkeepers, etc. (see Shivji, 1976: Part Two). Thus this class became the most dominant (politically) during the struggle for *uhuru* (independence). Economically, the most dominant indigenous classes were (i) the peasantry (as food and cash crop producers, hence a major source of foreign currency); and, (ii) the commercial bourgeoisie. The former actively supported the *uhuru* struggle; the same cannot be said of the latter.³ The indigenous capitalist farmer class (kulaks) was very weak and insignificant. The same was true of the local industrial bourgeoisie. Thus, independence saw members of the petty bourgeoisie dominating the post-colonial state bureaucratic apparatus. Given the above situation, the post-colonial Tanzanian state within its role of promoting economic development adopted policies which would or seemed to identify itself with, and promote the interests of, the broad masses of the peasantry.⁴

But, at this juncture one must recall that at independence (in 1961) Tanzania was virtually without industry - as was pointed out earlier (in chapter three) she was a periphery of the East African periphery. In addition to this a sizeable part of her agriculture had already been transformed into the production of export cash crops: sisal (mainly in plantations),

coffee, cotton, and cashew nuts (mainly by household peasant producers). The tiny manufacturing industry consisted, almost entirely, of processing agricultural raw material for export (Rweyemamu, 1973; Chambua, 1982: Chapter Three). It was apparent that such an economic structure, which certainly perpetuated dependence and surplus drain had to be destroyed and/or transformed if economic development were to be achieved. But the government lacked adequate resources (manpower, money capital) to undertake this task of transforming the economy. It thus found itself seeking assistance from the world capitalist system. But it did so with the promise or intention to "try to achieve in ten years most of the things our colonial rulers failed to achieve during the whole of the time they governed our country" (Nyerere, 1962). This view, it seems, has affected policy formulation/planning and its implementation throughout the first ten years of political independence. Emphasis was on visible and short term benefits without serious scrutiny as to the long term implications. Furthermore, this sense of urgency made the country an easy prey of international capitalism in that it also followed the economic policies/path of dependent development designed by the departing British Colonialists.

At this point, one must recall that TANU (the political party) was formed in July 1954. Seven years later in December, 1961 Tanzania became independent and TANU became the ruling

political party. The struggle was, therefore, a short one partly because of the huge support TANU received from the masses and partly because by 1960 Britain had decided to grant political independence to her colonies as quickly as was possible. "Tanganyika was to be the test case, the first in which the steps to independence that had been followed in India or Ghana were speeded up" (Coulson, 1982a: 120). Thus, the British did what they could to ensure the continuation of their policies. Indeed, the independence agreement implied, inter alia, the following:

- a) the continuation of the existing institutions which were heavily overstaffed by expatriates⁵;
- b) serving British civil servants to continue to stay on in Tanzania after **uhuru** (independence) and gradually hand over to Tanzanians;
- c) no nationalization of plantations or industrial firms (Coulson, 1982a: 120, 139).

In addition to this, the British colonialists left behind a series of reports on virtually every aspect of the economy. One of them, "The Economic Development of Tanganyika" produced by the World Bank in 1960, recommended that if the country were to develop her agriculture quickly, it would have to adopt the transformation approach, "which meant the use of machinery and irrigation, large capital expenditure, a total transformation of the traditional agricultural systems rather than their improvement" (Coulson, 1982a: 120). Insofar as industrial growth

was concerned, there was a study carried out by Arthur D. Little Consultants and financed by the U.S. Agency for International Development (published in 1961)⁶ which argued for the establishment of industries processing agricultural products for export. The report also called for the provision of suitable incentives: monopoly over local markets; tax holidays; government involvement but with guarantees against nationalization, etc. so as to attract foreign investment into the country. Actually, these two reports formed the basis of the first post-colonial Development Plan - 1961/62 - 1963/64 which can best be described as a shopping list of projects designed to or which were hoped would attract foreign capital (see Government of Tanganyika, 1961).

It was hoped/planned that for the entire period of the Three Year Development Plan (1961/62 to 1963/64) external finance would amount to about 85% of the total capital expenditure (Table 13). However, things did not work out exactly as planned.

Firstly, although the nationalist independent government adopted and extended the colonial policy of "settlement schemes", later to be known as the "transformation approach" after uhuru,⁷ and the programme absorbed a very large percentage of the resources devoted for rural development,⁸ by 1966 the policy as a whole proved a failure and it was abandoned (see Cliffe and Cunningham, 1973). These post-colonial supervised settlement

Table 13
Government Development Budget, 1960/61 - 1963/64*
(millions of Shs.)

Year	(a) Capital Expenditure	Domestic Finance	(b) External Finance	(a/b) x 100%
1961/62	146.82	3.78	143.04	97%
1962/63	113.48	12.52	100.96	89%
1963/64	145.26	44.66	100.06	69%
TOTAL	405.56	60.96	344.06	85%

Source: Based on Nnoli (1978:98, Table 11)

Notes: * Compare this table with Table 6 of this study.

schemes ran into a lot of difficulties including low productivity despite over-mechanization in some of them, poor planning, failure to repay loans, etc. (Cliffe and Cunningham, 1973). Failure to repay loans was also a consequence of the fall in prices of the export cash crops which was the main emphasis of these settlement schemes - especially from 1963 (Table 14).

Secondly, the government designed a tax incentive structure to attract foreign investors who were also assured that their business in Tanzania would not be nationalized. This deliberate government policy helped to attract few foreign investments into the country (Rweyemamu, 1973: 122-124). Investments made were in the fields of textiles, sugar processing, cement production, radio assembly, aluminium sheets

Table 14

**Export Prices of the Principal Cash Crops of Tanzania
1961 - 1966 (in Shs./Ton)**

Year ¹	Sisal		Coffee		Cotton	
	Price Shs/ton	Index 1963=100	Price Shs/ton	Index 1963=100	Price Shs/ton	Index 1963=100
1961	1431	66	5522	105	4580	102
1962	1472	68	5129	98	4538	101
1963	2179	100	5255	100	4481	100
1964	2167	99	6726	128	4445	99
1965	1394	64	6155	117	4420	99
1966	1232	56	6045	115	4127	92

Source: Background to Budget 1966-67, Dar-es-Salaam.

Note: In 1962 sisal, cotton, and coffee accounted for 55% of total exports. By 1966 they accounted for 53%.

(for roofing), oil refining, rope manufacturing, and coffee extraction (see Chambua, 1982: 47-49). The new industries established were mainly concerned with producing/manufacturing those products (mainly consumer goods) which would otherwise have been imported into the country. This was certainly in line with the ISI strategy for which, as mentioned earlier, the government had opted.

But despite this upsurge (from a very weak base) of industrial activities during the first five years of uhuru, the structure of the economy as a whole remained unchanged. Even within East Africa, the country was still a periphery of the periphery (see Table 15).

The Trade Deficit with Kenya and Uganda continued to grow

Figure 3

Composition of Tanzanian Principal Exports
1962, 1966, 1970, and 1980 (Includes Zanzibar)

Source: Economic Surveys, 1970-71, Table 12; 1977, Table 10; and 1982, Tables 10 and 13.

Note: Calculation of percentages made by author.

Figure 4

Destination of Tanzania Exports - 1962, 1966, 1970, and 1980
(Includes Zanzibar)

Source: Economic Surveys, 1979-71, Table 13; 1977, Table 15B; 1982, Table 13.

Notes: EEC = European Economic Community Countries excluding United Kingdom (U.K.)

Table 15

**Value of Tanzania's* Inter-East African Trade
1962 - 1966 (Millions Shs.)**

	KENYA			UGANDA			TOTAL		
	Imp. from	Exp. to	Trade Bal.	Imp. from	Exp. to	Trade Bal.	Exp.	Imp.	Balance
1962	207	56	-151	35	9	-26	65	242	-177
1965	285	94	-191	52	27	-25	121	337	-216
1966	269	81	-188	63	17	-46	98	332	-234

Source: Economic Survey 1970-71.

Note: * Includes Zanzibar; Imp.=Imports; Exp.=Exports;
Bal.=Balance

from a trade balance of -177 million Shs. in 1962 to -234 million in 1966 (Table 15). Furthermore, the Tanzanian economy as a whole remained tied to its traditional markets or trading partners - as an exporter of traditional cash crops (see Figures 3 and 4).

Between 1962 and 1966 the composition of exports remained essentially the same with sisal, cotton, and coffee accounting for 55% of all exports in 1962 and 53% in 1966. Between 1970 and 1980 we see a decline in the importance of sisal and its place being taken by other cash crops - cashew nuts, cloves, tea and tobacco, which together with cotton and coffee accounted for 52% (in 1970) and 53% (in 1980) of all exports respectively (Figure 3). The destination of exports also remained the same except that although in 1962 there were no exports for (or imports from) China, in 1966 about 4% of all exports went to China. The U.K.,

Table 16
Sources of Tanzania* Net Imports (Percentages)
1962, 1966, 1970, and 1980

	1962	1966	1970	1980
United Kingdom (U.K.)	33	30	21	17
E.E.C.	14	22	24	28
North America	7	7	9	7
India	7	5	3	3
Hong Kong	2	3	1	-
Other Sterling Area	8	2	4	n.a.
Japan	13	7	7	9
China	-	6	14	1
African Countries	n.a.	n.a.	n.a.	2
Other Countries	16	18	17	33
VALUE (Millions of Shs.)	885	1,359	1,939	10,210

Source: Economic Surveys, 1970-71, Table 11; 1977, Table 15-A; 1982, Table 12.

Notes: Includes Zanzibar.

* Percentages calculated by author.

the European Economic Community, North America, India, Japan, and Hong Kong continued to be our major trade partners (Figure 4 and Table 16).

Thirdly, although new industries implied new employment opportunities, the total wage population remained below that of 1962 even up to 1970. The major cause of this performance was the severe fall in sisal prices (Table 17) a plantation crop, which forced some plantations to be closed. The ISI strategy also meant low levels of employment creation as compared to those

Table 17
Total Wage Employment in Tanzania
1962 - 1980

Year	Total No. of Wage Earners	Index 1962 = 100
1962	397,028	100
1963	340,490	86
1964	351,257	88
1965	333,755	84
1966	336,000	85
1967	347,000	87
1970	375,000	94
1973	472,502	119
1976	480,724	121
1980	603,193	152

Source: Based on Employment and Earnings in Tanganyika/Tanzania (various years).

who lost their jobs in agriculture (Table 18).

Fourthly, worsening terms of trade which began in 1963 and have continued ever since implied that the country (i) had less money than anticipated to finance its development projects, and, (ii) a deterioration in rural income (Nnoli, 1976: 99). The peasants (as we noted earlier) had hoped that *uhuru* would mean, among other things, higher prices for their crops and perhaps less state interference in their own affairs. These hopes were, however, frustrated partly by the fall in world prices of Tanzania's export cash crops and partly by the policy of settlement through close supervision.

Fifthly, there was a general dissatisfaction with the

Table 18

Distribution of Wage Employment in Tanzania, 1962-1966 (in '000 of Employees)

Sector	1962			1963			1964			1965			1966		
	no.	%	Index	no.	%	Index	no.	%	Index	no.	%	Index	no.	%	Index
Agriculture	203.8	51	100	165.5	49	81	163.6	47	80	139.2	42	68	126.2	36	62
Manufacturing	23.4	6	100	22.2	7	95	23.6	7	101	25.7	8	110	29.9	9	128
Construction	41.2	10	100	28.3	8	69	33.7	10	82	31.5	9	76	37.4	11	91
Mining	8.8	2	100	7.4	2	84	7.8	2	89	7.2	2	82	6.2	2	70
Other	119.8	30	100	116.9	34	96	122.5	35	102	130.2	39	109	136.8	41	114
Total	397.0		100	340.3		86	351.2		88	333.8		84	336.5		85

Source: Based on Nnoli (1976:101, Table 15); Background to the Budget, 1967-68; and Table 16.

government on the issue of wages and promotions/Africanization among the labour unions in the country. The workers demanded higher wages and they staged several strikes. In 1962 alone, the number of man-days lost amounted to 417,000 (Rweyemamu, 1973: 48). The government responded by suppressing and limiting the powers of the Trade Union as Coulson (1982a: 139-40) observes.

By 1962 many of the moderate union leaders ... were cabinet ministers. Those elected in their place ... campaigned for immediate nationalization of the sisal industry, and for a much more rapid Africanization of the civil service. Nyerere's deal with the British made all these impossible ... The result was the suppression of the movement. In 1962 three acts were passed, one limiting the right to strike, another preventing civil servants from joining unions (though they were allowed to join the Party), and a third giving the Tanganyika Federation of Labour increased powers over its constituent unions. Its General Secretary, Kamaliza, was brought into the cabinet as Minister of Labour, and in September 1962 a Preventive Detention Act⁹ was passed, soon to be used against trade unionists. At the same time, the minimum wage was increased, so that the average earnings of those in wage employment doubled between 1960 and 1963.

January 1964 saw an army mutiny: the soldiers demanded wage increases and the Africanization of their officers. The government response was to seek help from Britain, and British Marines forcibly crushed the mutiny. After this episode, the army was rebuilt and consisted almost completely of new rank and file. The British Officers were replaced by other officers from Canada and the Netherlands (Pratt, 1976: 157). About 500 people were detained, including all the trade union leaders in Dar-es-

Salaam and up country who were suspected of being against the Party. "Under a National Union of Tanganyika Workers Act, only one trade union was to be allowed, affiliated to TANU and with its General Secretary appointed by the President. Membership of this new union, NUTA, was made compulsory for workers" (Coulson, 1982a: 140).

Finally, conflicts with Western governments also led to a much smaller and inadequate flow of external resources than was earlier anticipated. These conflicts included the clash with West Germany in 1964¹⁰; the severing of diplomatic relations with the United Kingdom in 1965¹¹; and the conflict with the West¹² over the Tanzania-Zambia Railway (for details see Nnoli, 1976: Chapter 4; Rweyemamu, 1973: 38-57; Pratt, 1976). These conflicts led to reductions in financial assistance to Tanzania, especially from the U.K. and from West Germany (FRG). The U.K. and the FRG reduced their aid from shs. 23 million (UK) in 1964/65 and over shs. 16 million (FRG) in 1963/64 to shs. 5.5 million (UK) and about shs. 4 million (FRG) in 1966/67, a drop of 76% for each of them (Table 19). Consequently, external finance became increasingly inadequate to finance the Development Plans. Indeed, the First Five Year Development Plan was such that 78% of all government investment was to be financed from external sources but in actual fact something like 70% of the total investment spending came from within Tanzania (Nnoli, 1976: 97, 98; Second Five Year Plan, 1969: X Vol. 1).

Table 19

**Sources of External Loans and Grants to Tanzania
1963/64 - 1966/67 (Figures in '000 Shs.)**

Source	1963/64	1964/65	1965/66	1966/67
1. Foreign Governments	43,990	64,626	43,920	84,780
U.K.	22,080	23,000	17,000	5,500
U.S.A.	5,440	19,966	29,960	29,940
West Germany	16,400	7,220	4,320	3,980
Israel	70	8,460	6,340	-
Sweden	-	-	1,600	17,900
Netherlands	-	-	-	5,780
China	-	5,980	-	16,680
U.S.S.R.	-	-	-	5,000
Other	-	-	-	-
2. Private Trustees and Funds				
British	880	800	420	530
Nationals	1,940	760	480	-
3. IDA	3,260	12,980	18,700	51,920
UNESCO	-	-	4,020	460
Refugee Service	180	-	120	-
Nordic Council	-	-	-	1,200

Source: Background to the Budget (1967/68:90); also in Chambua (1982:50-51, Table 5).

The picture that emerges from our discussion so far is that the post-colonial state in Tanzania adopted policies which integrated the country further into the international capitalist system. However, by 1966 the country found itself in a socio-political and economic crisis. Not only had the "transformation approach" proved a failure¹⁵, but also wage employment was below the 1962 level; and hence it was difficult to finance even industrial projects. Conflicts with Britain and West Germany,

forced the government to turn to socialist countries, Canada, Scandinavian countries, and the World Bank, so as to augment foreign resources. It is against such a background that we should view the Arusha Declaration of February 5, 1967 which committed the country to the path of **Ujamaa na Kujitegemea**.

Clearly, this policy was a genuine attempt to break away from dependence on the world capitalist-system. However, it is clear that the policy was not championed by a state controlled by the "workers" nor was it aimed at creating a "dictatorship of the proletariat". Thus the Arusha Declaration was simultaneously a nationalist response by the post-colonial state to the problems it was encountering in its role of guaranteeing expanded reproduction of the social formation as well as an attempt to follow an autonomous course of development (i.e. challenging the capitalist system) thereby legitimizing itself. Indeed the majority of Tanzanian masses (peasants and workers) supported the Arusha Declaration. But because there was no dictatorship of the proletariat nor can one argue that workers, and, or peasants controlled the state, the nationalizations that followed the Arusha Declaration created simultaneously a "new class" comprised of managers and controllers of state owned enterprises; senior civil servants; directors or heads and controllers of state agencies - the "bureaucratic bourgeoisie". Although individual members of this class do not own the (major) means of production, they nonetheless manage and control them (e.g. economic

enterprises) and/or perform planning and allocative functions (c.f. the government bureaucracy). Furthermore, in a situation whereby the dictatorship of the proletariat (and/or peasantry for that matter) does not exist how is one to interpret state/public ownership of the means of production? We think there is need, as Poulantzas (1973: 28) quoted in Gittens (1982: 32) to make "a distinction between 'economic ownership' defined as control of the means of production; and 'possession' defined as the capacity to put the means of production into operation . . . juridical ownership is not the determining factor but de facto control". In other words, it is (de facto) "control" as opposed to (juridical) "ownership" of the means of production that structurally defines the bourgeois class and the working class in modern societies (see also Miliband, 1969). The implication of this is that by merely doing away with juridical private ownership of the means of production it does not necessarily follow that class exploitation has been abolished. This may indeed be a necessary condition but not a sufficient condition. To abolish class exploitation requires the abolition of real economic ownership, that is control of the means of production by the direct producers themselves. "Where the above conditions are not met, and where juridical ownership is vested in the state, as in Tanzania, it seems to us justifiable to speak of a bourgeoisie of managers and controllers (Gittens, 1982: 33).

Nineteen sixty-seven was only four years away from 1971, the date set for inviting former colonial administrators into the country to see for themselves what the nationalist government had accomplished in 10 years (of political independence). Thus, no time was wasted. The same sense of urgency characteristic of decision making before the Arusha Declaration also prevailed after 1967. As a matter of fact, on February 7, 1967, two days after the Arusha Declaration, the government (i) nationalized all commercial banks and all insurance companies which were then organized and put under the National Bank of Commerce (NBC) and the National Insurance Corporation (NIC) respectively; (ii) nationalized (all) eight major import and export firms; (iii) acquired up to 60% of the shares (through the National Development Corporation, NDC) of seven major industrial firms in the country by compulsory measures (Chambua, 1982: 52; Rweyemamu, 1973: 60). These developments shocked many western governments and observers. As far as the British were concerned, Tanzania was a test case/model state pursuing (non-racial) orthodox economic policies. The Arusha Declaration, nationalizations, and rhetoric that followed appeared to indicate that the results of the experiment (or rather test) were contrary to expectations if indeed Tanzania was turning to the East. Ironically, it was partly because of the actions of some western block governments (including Britain) which led to the Arusha initiative (c.f. pp. 143-45).

Table 20

High Level Manpower Situation in Tanzania in 1967

Occupation	Total Number	Tanzanians		Non-Tanzanians	
		No.	Percent	No.	Percent
Engineers	596	107	18.8	462	81.2
Doctors	514	85	16.5	429	83.5
Teachers	867	223	25.7	644	74.3
Professional Accountants	169	36	21.3	133	78.7
Economists	86	37	43.0	49	57.0
Directors & Managers	542	162	29.9	380	70.1
TOTAL	2747	650	23.7	2097	76.3

Source: Second Five Year Development Plan (1969:16, Vol. IV).

To western scholars and observers, the Arusha Declaration ushered in yet another experiment: a poor peripheral state trying to build a socialist society without undue reliance on external resources nor even help from or close ties with the Soviet Union. As Nursey-Bray (1980: 57) puts it,

Here lies the fascination of the Tanzanian experiment. It lies in this attempt by a newly-independent, weak and vulnerable African state - one of the poorest 25 countries in the world - to develop on a socialist theory that while opposing capitalism, eschews Marxism.

It is precisely this, rather than anything else, that accounts for the hold that Tanzania has exercised over the minds of intellectuals, both Marxist and non-Marxist, with a sympathetic interest in socio-economic development in Africa.

Now we have already pointed out that the nationalization measures seem to have been hastily made. The government was

faced with the same old problems, lack of resources (financial and manpower). Consequently, the government was compelled to negotiate or arrange for loans and managerial assistance from the very firms whose subsidiaries had been nationalized. Strangely, however, the parent firms "agreed to lend the NDC compensations of up to 12 years at 7.5% interest while the parent companies would continue to supply the management of their nationalized firms under management agreements drawn up for the same period" (Rweyemamu, 1973: 60,61).¹³

This situation had two important implications. First, most of the nationalized industrial firms and those established after the Arusha Declaration became joint ventures between the government and foreign firms - the government owning the majority of the shares while the foreign partners supplied the management for a specified period of time.⁴

Second, contrary to what might have been expected external dependence (and not self-reliance) and even the flow of funds abroad seem to have been built into the nationalized firms. This is to say that the benefits of the nationalization measures (e.g. to minimize external dependence, control, and the transfer of surplus abroad) were not as self-evident and automatic as they were thought to be. The attempt to cut down foreign dependence/control found a contradiction not only in joint ventures with subsidiaries of/or giant multinational corporations

but also in seeking loans from them to pay for compensations or for establishment of new industrial firms in the country. These corporations actually ran the joint ventures (or nationalized firms) since they supplied the (top) management. The attempt to cut net outflow of funds found a contradiction in the signing of expensive "Blood-Sucking Contracts" (Coulson, 1976) and, or, management agreements with foreign firms. The attempt to be self-reliant was a contradiction due to the lack of local experts in many fields. Viewed in this manner, we think it is fair to conclude that the policy of self-reliance was (or has been) deprived of any history. Tanzania's desire to have quick and visible results implied continued and even intensification of her relations with the international capitalist system.

Furthermore, the country's rural development (through Ujamaa Villages) policy of the post-Arusha Declaration era seemed to be in line/harmony with the rural development programmes of the 1970s - the Integrated Rural Development which became a vital focus of efforts in bilateral and multi-lateral development assistance programmes during the early 1970s (Rutlan, 1984: 394).

The rural development programmes of the 1970s placed greater emphasis on the achievement of greater equity in the distribution of gains from economic growth between urban and rural areas and between economic and social classes within rural areas (Rutlan, 1984: 398).

As we saw in chapter three of this study, these are exactly the things emphasized by the Arusha Declaration. No wonder therefore

that even insofar as the establishment of villages - Ujamaa or otherwise - in Tanzania, the country received external aid from both multilateral and bilateral sources. Clearly, "the achievement of greater equity..." needs an interventionist state to effect just that. In the eyes of aid donors, as Tsharnnel correctly observes (see chapter three of this study) Tanzania, even before the early 1970s met this criterion, and became once again a model case. By 1980, the world capitalist countries were in a severe economic recession; which implied, among other things, reduced financial assistance to third world (peripheral) countries. Tanzania, like any other peripheral capitalist country found herself in severe economic problems. Ideologically, for those observers skeptical of state intervention - and hence to the right of the ideological/political spectrum - this was in line with their initial (or a priori) theoretical stand. Economically and politically they had to oppose the choices and policies followed by Tanzania by/or labelling them socialist. For Leftists, the tendency has been to assert that socialism was/is not even in the agenda (in Tanzania) and thence the difficulties are a consequence of dependence on the world capitalist system. Politically and economically this implies opposition to the policies and choices made by Tanzania. The question, however, still remains: Is Tanzania on the road of transition to socialism or that of dependent capitalist development? Or, to

put it differently, what steps have been taken (apart from nationalization) since 1967 that indicate that the Tanzanian state is promoting socialist construction?

Here we must insist that things should not be taken at their face value, including verbal or written rhetoric from governments; that actions speak louder than words; and that one must, therefore, distinguish between (i) what people or governments say they are doing (ideology), (ii) what they think they are doing (consciousness), and (iii) what they are actually doing (Foster-Carter, 1973).

A state is not socialist simply because its means of production and exchange are controlled or owned by the government, either wholly or in part. For a country to be socialist, it is essential that its government is chosen **and led by the peasants and workers** themselves socialism cannot exist without **democracy** also existing in society (Arusha Declaration, Part II (c) in Nyerere, 1968: 16, 17 **our emphasis**).

Before 1967 the Tanzanian government took measures to forge national unity at the expense of coopting, and, or, dissolving autonomous institutions:

- 1962 the Preventive Detection Act and the Act limiting the right to strike.
- 1964 the Tanganyika Workers Union Act which allowed only one trade union (NUTA) affiliated to the ruling party.
- 1965 the bringing together of the many and separate cooperative unions in the country with the party and

government - i.e. "the separate unions were brought into a government-sponsored national union, the Cooperative Union of Tanzania" (Pratt, 1976: 192).

- July 1965 the introduction of the democratic one-party state constitution, which implied that all members of parliament had to be members of the sole political party TANU (now) CCM (see Pratt, 1976: 201-15).

Although Pratt (1976) discusses the above measures under the heading: "The search for appropriate democratic controls", he nonetheless arrives at the following conclusion:

However in addition to this search for new structures there have also been strong oligarchic and authoritarian tendencies . . . Whatever the long term democratic potential of the new structures. . . their immediate consequences have been to consolidate power in the hands of the present leaders, to silence their critics and to **lessen the autonomy of previously independent institutions** (p. 194 - our emphasis).

This trend of lessening the autonomy of previously independent institutions continued even after the Arusha Declaration.

- 1969 the Ruvuma Development Association (RDA) was disbanded (see Coulson, 1982a: 263-71; de Gennero, 1981).
- 1971 "the Tanzanian government decided to scrap the local governments" (Pratt, 1976: 199). The local governments in each region and district were replaced by an arm of the central civil service, under the Prime Minister's Office. Although the slogan used was decentralization -

"Power to the Regions" - in effect the appropriate word should be "centralization" (Coulson, 1982a: 254). Local governments were reintroduced again in 1982.

- 1976 the cooperative unions were nationalized and replaced by Crop Authorities - para-statal/government corporations (Coulson, 1982a: 180). These unions were also revived in 1982.

However, there have been regular general elections (after every 5 years) to choose members of parliament (MPs) and the President. Yet since no independence is allowed (i.e. all MPs have to be members of the sole political party) and given the fact that the parliament is an organ of the party with the role of assisting and implementing party policy, it is plausible to argue that this arrangement does very little insofar as ensuring that elections provide a democratic control upon oligarchic tendencies within the leadership (Pratt, 1976: 214). People (the masses) may well choose their government but they do not lead it. "Freedom only for the supporters of government . . . is no freedom at all, Freedom is always and exclusively for the one who thinks differently (Luxemburg, 1918: 69).

Socialism, therefore, calls for the democratization of all aspects of social life and an unparalleled extension of the actual enjoyment of democracy by those previously oppressed by colonialism and/or capitalism. But democracy and its freedom

(including the so called bourgeois freedoms) are won (through hard struggle) not given. For Tanzania - the struggle continues.

It is also important to note that the post-colonial state, far from being overdeveloped (c.f. argument by Alavi, 1972) is actually underdeveloped in the sense that apart from being an object of class struggle - as is the case in ACs - it is also an active agent of class formation. The individual persons who dominate its structures, are members of the petty-bourgeoisie. This class has the following characteristics:

- i) tendency to rely heavily on the military;
- ii) tendency to vacillate, i.e. change of heart and fence sitting as between the working people and the bourgeoisie (Thomas, 1978: 21);
- iii) tendency to feel that they alone can, and do, represent the interests of the "whole nation" (Thomas, 1978: 21);
- iv) its ideology develops with a strong admixture of non-class ideas and nationalism (Thomas, 1978: 22).

These characteristics help to explain not only the tendency towards nationalizations but also the contradiction between policy and its implementation. The nationalization measures and expansion of the state sector in Tanzania, for example, were aimed at minimizing external dependence and capitalist development. In practice, however, this is contradicted by the fact that the state did remain oriented towards the international

capitalist system. Thus far, our analysis points to the conclusion that Tanzania is still a (peripheral) capitalist society. However, the struggle/articulation of the logic of capitalism and that of socialism is still going on. Ideologically, the former is supported by policy documents since the Arusha Declaration, in practice, the latter is still dominant. This struggle, as we are going to see has and continues to affect both the choice of industry and that of production techniques. These choices are both political as well as bureaucratic. In the remainder of this chapter therefore we discuss how these decisions are made and the organizational constraints affecting the choice of technique in Tanzanian public enterprises.

4.4 Planning, Decision Making and Organizational Constraints

Tanzania is a one political party state. The executive power of the country is vested in the President who is the Head of State as well as the leader (or Party Chairman) of the political party - Chama cha Mapinduzi (CCM). The President is advised by the Central Committee of the Party, by a Cabinet of Ministers, and by experts within the Office of the President. The Ministers are responsible for different sectors of the economy (sectoral ministries) and different government services. There is also a Parliament with legislative powers which also constituted (up to 1982) the National Planning Commission.

Figure 5 below shows the most important institutions insofar as planning and making decisions leading to investments are concerned. Thus the figure also offers a skeleton of the Tanzanian technology system. The lines show the channels of communication between the different institutions which are involved in different ways in planning and technological decision making. Since the Tanzanian technology system consists of many institutions (over 300 organizations), we will only mention the dominant ones.¹⁷

1) Chama cha Mapinduzi - CCM

The party (CCM) is supreme in that the government is there to implement party policy and in that all political activities and functions of the State are the responsibility of the party. Within the party considerable power is vested in the National Executive Committee (NEC) whose delegates (40) are elected by the National Conference of the party for a term of five years. In its turn, the NEC elects 18 members to form the Central Committee (of CCM) in which considerable power and decision making responsibility is concentrated. The party Chairman/Leader, who is also the president of the country, is the chairman of the National Executive Committee (NEC) and of the Central Committee.

The Central Committee can and does exercise considerable influence in technological decisions in that one of its tasks is

Figure 5

**Major Decision Making/Planning Institutions
and Their Inter-Relationships in Tanzania**

Source: Adopted from O'Brien (1981:Figure 5) with modifications.

Notes: ECC = Economic Committee of the Cabinet
EAU = Economic Affairs Unit
UTAFITI = National Scientific Research Council

n.b. The lines show channels of communications between the various institutions.

to formulate guidelines for both medium and long term plans for social and economic development of the country. From the party, these guidelines are passed on to the government apparatus by are sent first to the Economic Committee of the Cabinet (ECC) for discussion. That is, CCM formulates the policy and the Cabinet executes the work.

ii) The Economic Committee of the Cabinet, ECC

The ECC is chaired by the President and is a key forum for the discussion of socio-economic (including technology) policy. It examines all important policy proposals and decisions, investment or otherwise, reached/taken by other government institutions. The ECC also discusses the policy guidelines formulated by the Central Committee of the Party (CCM). Once adopted, they are used by the Ministry of Planning and Economic Affairs in the formulation of the country's development plan(s).

iii) Ministry of Planning and Economic Affairs

This ministry serves as the secretariat of the National Planning Commission. It reconciles and coordinates policies and programmes formulated by other ministries (which receive planning guidelines from it). The allocation of both foreign and local funds as well as the task of monitoring programme/policy implementation is the joint responsibility of the ministries of Planning and Economic Affairs and of Finance respectively helped

by the Economic Committee of Parliament. After formulating national development plans its proposals are sent to the National Planning Commission.

iv) The National Planning Commission

The National Planning Commission was (up to 1982) composed of all members of parliament and experts from different fields. It was chaired by the Prime Minister. It examines the plans (and different alternatives in them) formulated by the Ministry of Planning and Economic Affairs. The alternatives it chooses are sent to the parliament for approval. The parliament must also approve annual plans (including the budget) which are submitted to it by both the Minister of Finance and of Planning and Economic Affairs.

v) Ministry of Finance

The ministry has financial control over all imports, technological and otherwise. It is also one of the main participants in discussions with aid agencies and coordinates, together with the ministry of planning, all international assistance programmes. Furthermore, there is need to stress that all projects that involve foreign exchange from any ministry, including those from the Prime Minister's Office, must first pass through and be approved by the ministry of finance.

vi) Sectoral Ministries

These are responsible for the implementation of national development plans, the main sectors of the economy and parastatals which fall under them. Notice that the term "parastatal" applies to all institutions owned by the government or with majority government participation, run on commercial/business principles or otherwise, including those giving services and training (see also chapter two of this study). The Office of the Prime Minister, operates as a ministry and is responsible for the regions - which in turn send their proposals to and through it.

vii) The President's Office

This operates above the ministerial level. One of the units within it, the Economic Affairs Unit (EAU), advises the president on economic matters. Consequently, the unit is able, through the advice tendered, to exert considerable influence not only on economic policy but also on technological decision making. The EAU has the task of reviewing and evaluating the country's overall economic policy, problems and options available. The most important and powerful tool used by the President's Office is a "Presidential Directive". These directives are issued for matters (considered by the Office to be) of great national importance, economic and otherwise. The EAU, of course, plays an important role in drafting such

directives on economic policy. It is important, at this point to emphasize the fact that "Presidential Directives" once issued overrule all other (counter) decisions reached or made by other institutions. That is, they must be implemented by those concerned as matters of highest priority.

viii) The Parastatals

As we mentioned in chapter two of this study, parastatals play a very important role and are very influential insofar as investment decisions are concerned. They, especially the holding corporations, can (i) initiate projects subject to review, elaboration and approval by the parent ministry; (ii) seek and, or, identify sources of finance both for projects already under implementation and for new projects; and (iii) they are required to submit to their respective ministries periodic (annual) reports concerning their activities, plans, and progress of ongoing projects. Notice that UTAFITI and Bank of Tanzania are parastatals. The former is directly under the Ministry of Planning and Economic Affairs. It was established in 1968 by an act of Parliament and was given the task of promoting, monitoring, and coordinating scientific and technological research in the country. The latter controls foreign exchange, export trade, and import licensing. The Bank therefore can guide the importation of technology through these instruments. Its

actions also affect those industries which depend on imported inputs.

The above institutions describe both the Tanzanian Technology System and the environment within which parastatals operate. Investment proposals can either start from the bottom (within parastatals) or from the top (political). Those emanating within the parastatals are subject to approval by the relevant institutions higher up in the decision making process/hierarchy. The resulting investments and choices of technique will be described as **bureaucratic** choices - in this study. Those emanating from the top are **political decisions** and parastatals being government owned institutions have no choice except to implement them. The Tanzanian system, however, does not as yet function as a proper system. According to O'Brien (1981) it should rather be seen as a network of institutions because of the following salient features:

- the various integrating and coordinating mechanisms act independently;
- there is little sharing of information even among those institutions entrusted with the task of gathering and disseminating information;
- poor and weak linkages between parastatals, education and production;
- considerable overlapping of institutional mandates; and,

some ministries are weaker than the parastatals they control.

In addition to the above features we should also take notice of the fact that the environment within which parastatals operate implies that they compete not only among themselves but with other institutions in the environment over the allocation of scarce resources by the planners - i.e. all investment proposals must be sent to and approved by the planners, including those from their own generated funds. This situation coupled with the fact that Tanzania is a poor country affects the choice of technique (indirectly) since a project is more likely to be approved or accepted if it involves external financing - foreign aid. The aid donor may as well be the one who makes the decision on the choice of technique.

For example, both the Urafiki Textile Mill and the Ubungo Farm Implements Factory were established as a result of political decisions. The decision to go for Chinese aid and technology was political and the choice of technique was left to the Chinese government.

The decision to build a fertilizer factory in Tanzania was bureaucratic (i.e. taken by NDC) and approved by the Planners. However, Coulson (1977) notes that political factors were decisive in situating the plant in Tanga (far away from the oil refinery in Dar-es-Salaam). Furthermore, the decision to award the contract to a West Germany firm - Kloeckner - was

CHAPTER FIVE

CHOICE OF TECHNIQUE BY TANZANIAN PUBLIC ENTERPRISES

5.1 Introductory Remarks

This chapter deals with the factors influencing the choice of technique by Tanzanian public enterprises and the social economic implications arising thereof with special reference to the current problems facing industrial firms in the country. The preceding chapters were mainly concerned with the development debates surrounding the nature of Tanzania's development, especially after the announcement of the Arusha Declaration in February 1967. The debates have offered considerable background information on the factors which, according to the author, exercise considerable influence on technical choices made in LDCs in general and Tanzania in particular. These factors are: (i) national development objectives and/or the dominant and expanding mode of production; (ii) the particular type of state-economy relationship existing in the particular social formation under consideration; and, (iii) external interests (i.e. interests of aid donors, sellers and suppliers of machinery and other artifacts).

In the case of Tanzania, the analysis led us to characterize the dominant and expanding mode of production as **peripheral state-capitalism**. Virtually every major industrial investment made by Tanzania had involved substantial external aid in the form of financial (i.e. loans and/or grants) and technical

entirely left to the foreign partner. Actually NDC demanded and insisted that TRAMCO must be equipped with a mechanical workshop for the manufacture of a variety of products apart from the manufacture of freight wagons (this was hotly debated and accepted). KVAB was also asked and agreed to produce a timetable for the total localization of all components - the amount of technical fees payable to KVAB was made to be a function of the local value added (for details see Broden and Mattsson, 1981). Clearly, the project promotes self-reliance and was perhaps the best/or one of the best contracts negotiated by NDC. But it was also special in the sense that: (a) it was made with another state owned corporation rather than with a private firm. Perhaps, as a state owned institution KVAB was under political pressure to invest abroad; and, (b) at the time of the negotiations, Canadian Engineers were working with the Tanzanian Railway Corporation under a CIDA grant. This meant that some of the needs of the Railway Corporation had to be purchased from Canada and hence had the negotiations failed there was a good chance the contract would have gone to Canadian manufacturers.

These examples indicate that the market within which technology is being sold and bought is very imperfect and as a consequence bargaining is a very important aspect of this market. Dependence on foreign aid reduces the strength and shrewdness of bargaining teams. This is especially the case when (a) the supplier of technology is also asked to supply loans for its

purchase (b) the decision has already been made as to whom or firms from where the contract is to be awarded. The internal environment in which parastatals operate (i.e. wage and price control by other institutions, non-competitive markets, etc.) also affect the bargaining and hence choice of technology made by Tanzanian public enterprises. This is because, they tend to compete not over markets (and its implications) but over getting many projects approved and hence started. This as we have argued is dependent on the securing of external financing - which in most cases, tends to push towards choices beneficial to the aid donor.

The mode of production (peripheral/state capitalism), wage controls, and the control by the petty bourgeoisie (the bureaucratic bourgeoisie) all tend to bias the choice towards large scale and labour saving production techniques. The sugar factories, for example, have had problems recruiting labourers to cut/harvest the sugar cane, partly because of the low wages offered. This problem forced the Mtibwa sugar factory to mechanize this operation by importing two sugar cane harvesters. As we shall see in the next chapter, the imported harvesters failed to do the job properly and they are now used for other operations.

Another example is that of the Automated Bread Factory discussed in some detail by Coulson (1979: 179-83). The decision

to build an automated bread factory was taken by the National Milling Corporation which was under pressure to make new investments in food processing. The choice of product (bread) seems to have been influenced by the perception that existing private bakeries in Dar-es-Salaam were providing short-weighted, adulterated bread to the city residents. This view was held by a number of people - "including the then Minister of Agriculture, an elected MP for one of the urban workers' constituencies" (Green, 1982: 95). Other decision makers agreed and the factory was seen as an attempt to end exploitation. A fully automated factory was therefore built because it was perceived to meet several objectives: (a) to produce high quality bread; (b) to end exploitation - in the sense that the bakery had a capacity of producing enough bread for the entire Dar-es-Salaam population daily, thus it could easily kill the other private bakeries deemed to exploit the workers; and, (c) it was easier for the Milling Corporation to control one large scale factory than many small-scale ones given the resources human and otherwise at its disposal.

4.5 Summary/Concluding Remarks

In this chapter we have argued that the peripheral post-colonial state (i) is imperatively an expanding state precisely because it has to control and/or suppress the class struggles which have been freed and intensified with the attainment of

political independence - although they were mute for much of the colonial era; (ii) its relative autonomy is a constitutive essence of the state in capitalist societies which does not mean that the state is neutral insofar as class struggle/rule is concerned; (iii) it is imperatively central (and interventionist state) to the process of economic development and expanded reproduction of the social formation due to the distorted economic structure it inherits from colonialism. The Tanzanian state definitely fits the above assessment.

We also argued that because of the above features the post-colonial state is both an object of class struggle and an agent of class formation. Of course, the major question we sought to address was the nature of Tanzania's development - is it following an autonomous course of development or simply a different path of peripheral capitalist development? From 1961 to 1966, the answer is obvious, the country was developing along the capitalist path of dependent development. By 1966 this type of development had caused her considerable trouble: worsening terms of trade; wage employment below the 1962 level but the number leaving schools and seeking employment had increased; failure of rural development programmes; lack of foreign investments and exchange to finance development programmes, etc. It was against this background that the policy of socialism and self-reliance was announced early in 1967.

But this new policy came at a time when the power of the

trade unions had been suppressed and the unions coopted (through the formation of one government sponsored trade union) by the government due to labour disputes which occurred after independence. Under these circumstances, state ownership of the means of production implied simultaneously the creation of a new class, the "bureaucratic bourgeoisie" since the workers in reality did not own the means of production. That is, this new class possessed the means of production and as such became the dominant and, hence, the ruling class. The type of socialism preached by the Tanzanian state therefore was socialism that rejected class struggle (unite and rule), Marxism and, of course, capitalism. Partly because of this it attracted a lot of attention from scholars on all sides of the political/ideological spectrum and also external aid from the world capitalist system - as a test/model case. Actually our analysis suggests that this was the case throughout the 1960s and 1970s, though for different reasons.

There is no doubt that insofar as the Tanzanian state was concerned the Arusha Declaration was a genuine attempt to break away from dependence on the world capitalist system. It is also obvious that both internal and external factors compelled the state to make that attempt. Yet, it is equally plausible to argue that there is no adequate evidence to suggest that at any time, since the Arusha Declaration to date, was this attempt

realized in any significant way. It is also difficult to assert that the attempt ever took root, apart from nationalization which, as we saw earlier, was not very effective in challenging the country's position in the world system. By now, the answer to our question is obvious. That is, leaving intention behind, Tanzania after the Arusha Declaration continued to develop as a satellite on the chariot wheel of dependence on international capitalism; not by design but by default. As a result of this the struggle to build socialism and self-reliance continues to be supported ideologically and politically by major policy documents but contradicted in practice by the continued dependence on loans and grants from the world capitalist system.

This form of development coupled with state ownership of the means of production together with the fact of control by the "bureaucratic bourgeoisie" tends to bias the choice of production techniques in several directions depending on the logic of the dominant mode of production (to expand state involvement), the form and source of external aid sought and thence made available, and on the criteria implied by the national development objectives. These constraints of choice of technique in Tanzania are discussed in detail in the next chapter. Suffice it to mention that the chapter shifts the focus of our attention to two cases: the manufacture of hand and animal drawn farm implements and that of sugar processing.

FOOTNOTES

Chapter Four

¹We are therefore not agreeing with Alavi (1972) who argues that the relative autonomy of the state is rooted in its mediatory role between different fractions of capital. For a detailed critique of this view see Saul (1974); Zienann and Lanzendofer (1977); and Gittens (1982).

²Notice that it is actually this phenomenon of increasing efficacy that Alavi (1972) refers to as "over-developed state".

³The "commercial bourgeoisie" was mainly composed of people of Asian origin who were favoured by the British colonialists. Actually many of their members were simultaneously citizens of Tanzania as well as Britain.

⁴For example the state was committed in waging a war against poverty, ignorance and disease. Hence, the emphasis was on education (including adult education), rural development, and provision of health facilities.

⁵Their continued existence therefore implied that Tanzania will, for a long time to come, depend on imported manpower.

⁶For details see Arthur D. Little, Inc., Tanganyika Industrial Development, Dar-es-Salaam: Government Printer, 1961.

⁷According to Cliffe and Cunningham (1973: 134) this form of rural development was backed up by the following assumptions about its economic rationality: (i) a means of improving the provision of rural services, i.e. it is much cheaper to provide schools, medical facilities, etc. if people are grouped in clusters than otherwise; (ii) a way of making mechanization possible thereby making peasant farming more productive; (iii) to facilitate the introduction of innovations (e.g. new crops) and bring other new factors into production such as new land and unemployed labour in towns; (iv) allow the sharing of equipment.

⁸For example, the First Five Year Development Plan proposed to settle almost half a million people on 70 schemes at a cost of £12 million or 13.5% of the total development budget (Cliffe and Cunningham, 1973: 132).

⁹Under the Preventive Detention Act (No. 60 of 1962), "the President can detain anyone whenever he is satisfied that the person to be detained is a danger to peace and good order, or is

acting in a manner prejudicial to the defence of the country or the security of the state. The President may also detain anyone if he is satisfied that this is necessary to prevent that person from becoming a danger to peace and good order, to the defence or to the security of Tanganyika The period of detention is unlimited rather than specified. There is no requirement that the names of those detained should be made public. Judicial review of the exercise of the power of detention is carefully excluded and there is no alternative appeal procedure" (Pratt, 1976: 185, 186).

¹¹N.B. The West German government accused Tanzania's plans to allow the East German (GDR) government to open a Consulate-General in Dar-es-Salaam - the capital - as a gesture of hostility and unfriendliness. Tanzania saw the GDR position as an act of interference with her internal affairs. Each side stood its ground, hence the withdrawal of aid by West Germany (Nnoli 1978: 115).

This conflict emanated from the Unilateral Declaration of Independence (UDI) by Rhodesian (now Zimbabwean) white settlers led by Ian Smith in 1965. Since Britain was the colonial ruler, an OAU meeting in Addis Ababa Ethiopia passed a resolution condemning the act and called for all OAU member states to sever diplomatic relations with the U.K. unless she took measures to restore its rule and that independence would mean "majority rule". Britain failed to do that and Tanzania - including four other African independent states - broke diplomatic relations with Britain.

¹²N.B. Many western governments, including U.S.A., U.K., West Germany, etc. were approached and asked to build a railway from Dar-es-Salaam harbour in Tanzania to Zambia (a land locked country) but they refused arguing that the project was economically unfeasible. But Tanzania and Zambia regarded the project as a matter of highest national priority. The People's Republic of China was approached by Tanzania and agreed to undertake the project.

¹³For details on some of the socio-economic effects of management agreements between multinational corporations and Tanzania see Chambua (1982), Coulson (1976), and Shivji (1976b).

¹⁴The NDC which was involved in most of the negotiations, defended the use of management agreements on the grounds that they were necessary due to the following considerations: (i) the difficulty of building up a competent management team to operate a technically complex industry - a management agreement makes such a team available; (ii) the difficulty for Tanzania of hiring

the best qualified foreign experts from the open market because these people are already hired and will be unwilling to cut off their contracts for several "exotic years in Tanzania". The managing agent can afford to second staff to Tanzania for the additional experience they acquire while at the same time guaranteeing their future; (iii) it is dangerous for a technically extensive and complex industry to rely on directly hired staff because the country lacks the expertise in certain crucial fields to completely judge the qualifications of an expert - if hired he/she may prove unable to cope with the job adequately; (iv) it is often a team as opposed to a single person that is needed, and, (v) management agreements will give Tanzanian firms access to the most up-to-date technical information, the use of foreign patents, well established brand names and trademarks, markets and trade arrangements of world-wide established corporations (see Rommicianu, 1971).

¹⁵Villages of the Ruvum Development Association (RDA) which were self-initiated without government financial (and otherwise) support were doing well. These, formed the basis or provided the rationale of the new "Ujamaa Villages Policy" of 1967 (see de Gennaro, 1981: 127-37; Hyden, 1980:100).

¹⁶In his booklet "The State and Revolution", Lenin (1932) also argued that autonomous representative institutions must be allowed to remain and flourish under socialism. "Without representative institutions we cannot imagine democracy, not even proletarian democracy" (Lenin, 1932:41).

¹⁷The materials contained in the first part of this section (sub-section (v) to (viii)) have been mainly drawn from O'Brien (1981) and from the researcher's own observations.

CHAPTER FIVE

CHOICE OF TECHNIQUE BY TANZANIAN PUBLIC ENTERPRISES

5.1 Introductory Remarks

This chapter deals with the factors influencing the choice of technique by Tanzanian public enterprises and the social economic implications arising thereof with special reference to the current problems facing industrial firms in the country. The preceding chapters were mainly concerned with the development debates surrounding the nature of Tanzania's development, especially after the announcement of the Arusha Declaration in February 1967. The debates have offered considerable background information on the factors which, according to the author, exercise considerable influence on technical choices made in LDCs in general and Tanzania in particular. These factors are: (i) national development objectives and/or the dominant and expanding mode of production; (ii) the particular type of state-economy relationship existing in the particular social formation under consideration; and, (iii) external interests (i.e. interests of aid donors, sellers and suppliers of machinery and other artifacts).

In the case of Tanzania, the analysis led us to characterize the dominant and expanding mode of production as **peripheral state-capitalism**. Virtually every major industrial investment made by Tanzania had involved substantial external aid in the form of financial (i.e. loans and/or grants) and technical

and/or managerial assistance. Consequently, when we speak of external interests we refer to these aid donors. The supplier of machinery and other artifacts used in the transformation of raw materials/inputs into products will also be considered as an "aid donor" if he is asked (i) to provide managerial assistance; (ii) to be a minority shareholder by contributing to equity; and, (iii) to provide financial assistance (loans) for the purchase of machinery and other equipment. With these brief remarks we now proceed to elaborate on how the above factors affect the choice of technique in Tanzania. After this we shall discuss the particular cases of the manufacture of hand/animal drawn farm implements and sugar refining.

5.2 Factors Influencing the Choice of Technique in Tanzania

5.2.1 Peripheral State-Capitalism and National Development Objectives

The dominant and dynamic mode of production in Tanzania is peripheral state-capitalism. In other words, the state has acquired the ownership of the major means of production and the country is developing as a satellite on the chariot wheel of dependence of the international capitalist system. This is at the level of the basic structure (i.e. the economic base). At the level of the super-structure, the ideology propagated by the state is that of *Ujamaa na Kujitegemea* which is opposed to (private) capitalist development. There is, therefore, a non-correspondence between the basis (the economic base) and the super-structure of the (Tanzanian) social formation. This lack

of correspondence (or simply contradiction) between the two structures of the social formation entails the following contradictions and implications.

- lack of correspondence between national development objectives as articulated by the state and the actual socio-economic practice. These contradictions between policy and its implementation have already been discussed in chapters three and four of this study;

- the choice of technique will be situationally specific. That is, in certain situations the choice is more determined by the development objectives and in some cases the choice is more influenced by the dynamic mode of production. However, the criteria for making technical choices (as implied by the national development objectives) is not specific or categorical; and,

- as a result of the above situation, the technical choices made by Tanzanian public enterprises are much more a function of the logic of the dominant mode of production than of the national development objectives. That is, the contradictions between the economic base and the super-structure manifest themselves at the level of actual choices made.

The logic of capitalism is reproduction and accumulation of capital - thence perpetuation and/or creation of relevant conditions including counteracting the tendency of the rate of surplus value to fall. This logic has led to the labour saving techniques in the ACs (simply because labour is not cheap there) and to industrial re-deployment to LDCs. In the former case the

motivation is to lower and to minimize production costs. In the latter case the motivation is to counteract the tendency of the rate of profit to fall. Yet, and as a result of this, the logic of capitalism, in LDCs, is modified by the external dependence relationship. This dependence tends to push technical choices in the same direction - i.e. towards labour saving techniques despite the fact that labour is cheap and capital is scarce in many LDCs.¹ For individual investors, all this is rational as the real motivation is the extraction of surplus value and/or remaining competitive. For the economies of the countries concerned, there is an element of irrationality in that the result may well be growing unemployment in both ACs and LDCs.

To understand why this situation exists in LDCs such as Tanzania, it is essential to recall that low wages were a consequence of the rationalization of the process of capital accumulation in the periphery during the colonial era. These low wages continue to aid capital valorization in the metropolis, even in the case of nationalized industries, simply because without them it is hard to see how "unequal exchange" between the two zones can continue to survive. Thus, insofar as the sellers of machinery, equipment, etc. from the advanced capitalist countries to Tanzanian parastatals are concerned, their main objective is to sell and make a profit - irrespective of whether they sell labour or capital intensive techniques. Yet, the sale of modern capital intensive techniques may have added salient advantages: the technique can be patented, expensive, and

complex in its installation and operation. This may require the hiring of expatriates for machinery and equipment installation as well as for managing/running the factory for an initial period of several years. Additional profits can therefore be made through patent, technical and management fees. Furthermore, such a transaction is not only likely to perpetuate the dependence relationship but also the technique chosen certainly corresponds with existing production processes in the ACs.² Indeed, the researcher's own observation indicates that in the case of joint ventures between foreign firms and Tanzanian parastatals, the former try/tend to maximize their benefits through the sale of machinery and management/technical agreements rather than from profits accruing from the joint firm (Chambua, 1982).³

Now, in the case of Tanzania (the buyer) the decision makers - the bureaucratic bourgeoisie - lack both experience in industrial production and a full knowledge of all the possible technical alternatives open to them. But many of them have been trained in the metropolitan countries which put more emphasis on technically "efficient techniques". Hence, by education, they are more likely to opt for "modern" efficient techniques than for those which are considered to be inferior and/or obsolete in ACs. This choice can be defended by the fact that spare-parts and other crucial components have to be imported, hence the need to be in pace with the latest technical developments in advanced countries.⁴ All these considerations tend to bias the choice towards modern capital intensive techniques.

National industries in Tanzania such as the Mwanza Textiles Mill (Mwatex) and the Kilombero Sugar Company are designed to produce both for the domestic (Tanzanian) and external markets so as to earn much-desired foreign exchange. Tanzanian decision makers seem to have taken the decision to compete in export markets on the basis of better quality but low priced products.⁵ The above objective of production coupled with the perception that competition on export markets has to be waged on the basis of better quality products bias technical choices, for such industries, towards modern capital intensive techniques. However, there are other factors which can bias the choice towards labour intensive techniques: national development objectives.

As was pointed out elsewhere in this study, the technology as implied by Tanzania's national development objectives is the one with the following characteristics:

- (i) low cost - mainly because of capital scarcity;
- (ii) surplus (or profit) generating - so as to get funds for other investments and other expenditures;
- (iii) standardized - so as to avoid dependence or "commercial lock-in" on one source insofar as spares, component parts, etc. are concerned; and,
- (iv) simple, small-scale, and labour intensive - so as to generate employment and also allow quick mastery by local personnel.

Even so, modern large scale capital or labour intensive techniques of production were not ruled out. Actually, the tasks of establishing small-scale labour intensive units of production were left to district corporations, co-operatives, village governments, and individual persons. The criteria as a whole are therefore not categorical. As a matter of fact, no specific weights were put on each of the above criteria. Yet, as we pointed out in chapter one of this study, contradictions can arise between the individual criteria - for example between simplicity and labour intensiveness, etc. These contradictions, of course, can be resolved by the planners who must review and approve all investment decisions made by the parastatals. Whereas this review might correct the bias towards the capital intensive, it is unlikely to correct the tendency towards large-scale establishments mainly because "national" industries are supposed to be large scale. However, since the main concerns of the planning system seem to be product choice and budget management, then there is bound to be a clear relationship between the national development objectives and the choice of product.

In summary, the dominant mode of production in Tanzania tends to bias technical choices towards large scale and/or capital intensive production techniques. This tendency is (slightly) corrected by the national development objectives which point to both small-scale and large-scale, labour and capital intensive techniques. This situation and the contradiction

between the basis and the super-structure implies that the national development objectives will have more influence on the choice of product than on the choice of technique. The mode of production, in turn, will have more influence on the technical choices made by Tanzanian public enterprises.

5.2.2 The State-Economy Relationship

The economic power base of the ruling bureaucratic bourgeoisie in Tanzania is their control and possession of the major means of production in the country. The more the bureaucratic bourgeoisie acquires control over production the greater their power. Consequently, large-scale establishments are favoured in the sense that they further extend the control and power over production by the ruling class.

As a matter of fact, many parastatal officials tend to see their corporations as given the task of or expected to concern themselves with large-scale establishments (national industries). Furthermore, since the market is growing or expanding for most of the products they produce or intend to produce, excess capacity for the initial period is defensible and preferred (hence large scale) on the understanding that the market is going to inevitably expand. Notice should also be made of the fact that in many cases we are dealing with single or several factories in a given product sector producing for the entire Tanzanian market, but their combined capacity (assuming 100 percent capacity utilization) is far from meeting the national demand.

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The system of price and wage control can also affect the behaviour of managers depending on how wages and prices change. For example, all the sugar companies registered substantial surpluses in the 1980/81 season mainly because the government raised the ex-factory price of sugar by 40 percent. Before this move, the sugar factories were operating at fluctuating annual losses. In addition to this all of them (sugar factories) have a problem of high labour turnover (i.e. low retention) and inadequate supply of cane cutters partly because of low wages. This situation compelled the Mtibwa Sugar Company to import two sugar harvesters to aid in cane harvesting.

At this juncture there is need to point out that all NAFCO (state) grain farms are highly mechanized and, on average, large scale. Insofar as the corporation's officials are concerned, this arises because of two factors. One, they are supposed to achieve national self-sufficiency in its grain needs (wheat, maize, and rice). Two, labour is expensive and uneconomical while the government expects the corporation to generate profits. Since the government sets both the wages and prices, and since the main customer of NAFCO is the government through another parastatal (the National Milling Corporation) it is hard to dispute the above two claims. The decision to encourage large scale state farms was also influenced by the failure of the villagers (the Tanzanian peasants) to produce agricultural surplus. We have already discussed the reasons behind this in the previous chapters.

To sum up, the state-economy relationship in Tanzania, the control by the bureaucratic bourgeoisie, and the organizational procedures and constraints emanating thereof, all tend to work in the same direction. That is, to push technical choices towards large-scale and capital intensive techniques. In the next section, we discuss how external interests are likely to affect the choice of technique by Tanzanian state enterprises.

5.2.3 Interests of External Institutions

Tanzania has, and continues to, receive aid from many diverse sources: bilateral and multi-lateral; socialist countries and capitalist countries; advanced countries (ACs) and less developed countries (such as India). External aid: financial, technical, and managerial is a matter of self-interest. Various institutions have given aid to Tanzania with various motivations as we argued in chapters three and four of this study. Usually strings are attached to the aid in order that the interests of the aid donor may be met. These interests may be in harmony with those of Tanzania. In such cases there is no problem. In some instances the interests may clash, hence, become a subject of heated arguments in the negotiations leading to certain investments.⁶ Whatever the case, it is certain that the final decision on such issues as the appropriate technique to be employed will either be determined by both internal (Tanzanian) and external interests or it may simply be the one most familiar to the foreign partner (the supplier). Since different external institutions have different interests, biases,

and experiences then there are bound to be different types of techniques employed by Tanzanian public enterprises.

In addition to this, since most of the aid has been from advanced industrial capitalist countries, then it is most likely that the choices made will be influenced by capital valorization concerns as perceived by the different external institutions involved. The implication of this is that, since labour in Tanzania is considered to be expensive (high minimum wages) by these outside institutions, then their motivation to invest/enter into joint ventures with Tanzanian public enterprises is not likely to be to take advantage of cheap labour. This consideration may have the following effects.

First, it may tend to bias technical choices away from labour intensive techniques insofar as national industries and state farms are concerned. Second, the foreign partner may tend to make money (extract surplus created in Tanzania) through the sale of machinery and other artifacts, through technical and management fees rather than from surpluses (profits) to be generated by the company under establishment. After all, under conditions of administered markets, the supplier may not be certain of profits. Consequently, he might prefer to supply expensive, complex, and even protected (by patents) production techniques thereby guaranteeing that his managerial and technical services will be needed for a long time. In other words, he will try to guarantee his return on his investment in areas under

which he has some control. Needless, to say, this is good business for them.

The actual influence of each of the above three factors on the choice of technique is not fixed. The influence will vary from project to project depending on the objective of production and the particular internal and external interests/forces involved. However, our analysis tends to imply that although a wide range of techniques is bound to be observed, there will be a bias towards large-scale and/or capital intensive insofar as parastatal investments are concerned. In the next section we examine the cases of hand/animal drawn farming implements and sugar refining.

5.3 The Case of Ubungo Farm Implements Manufacturing Co. Ltd. (UFI)

5.3.1 Historical Background

In 1966, J.K. Nyerere, the President of Tanzania, during a state tour of China visited a number of small-scale industries manufacturing farming tools and implements. He was so impressed that he personally requested the Chinese government assist Tanzania in establishing similar firms in Tanzania. The Chinese government agreed.

In 1967 the National Development Corporation (NDC) approved the formation of a company to deal with the manufacture of "hand and animal drawn" farm implements. However, in that same year 1967, before any feasibility studies were made an agreement was signed between the Chinese and the Tanzanian

governments. This agreement included and provided for the following:

- (i) the construction of a farm implements factory by the Chinese government at Ubungu, Dar-es-salaam;
- (ii) a long term, 20 year, interest free loan of Shs. 7.8 million as financial assistance by China;
- (iii) on-the-job training of Tanzanian technical and managerial staff; and,
- (iv) the factory to be wholly owned by the Tanzanian government.

There was no feasibility study made, nonetheless, construction work began in 1967. About 300 Tanzanians and 26 Chinese experts formed the construction team. Construction work was completed a year later and the factory was handed over to the Tanzanian government in 1968. The government placed UFI under the NDC - as one of its subsidiaries. The NDC was however reluctant to accept this responsibility arguing that there was no feasibility study made and that it was not involved in the construction work. Consequently, NDC conducted its own feasibility study which revealed that there was indeed a big demand for the various farm implements to be produced by UFI (Table 21).

In addition the study also revealed that the Chinese had recruited all of their Tanzanian technical personnel (including the Engineers: Maintenance, Mechanical, Production, etc.) from primary school leavers. The corporation was skeptical

Table 21

**Annual Installed Capacity for Different
Farm Implements at UFI and National Demand in 1970**

	Capacity	Demand	Short-fall
hoes	200,000	2,000,000	1,800,000
axes	80,000	900,000	920,000
matchets	200,000	600,000	400,000
ploughs	100,000	200,000	100,000
plough parts	40,000	400,000	360,000

Source: UFI Records

about this and it therefore recommended that before the factory could start operating, it must first be equipped with a training centre. Even so, a presidential order was issued commanding UFI to start production as a subsidiary of NDC.

Trial production was made between August 1969 and March 1970. The factory became fully operational in April 1970 with only four Chinese experts: the Maintenance Engineer; the Mechanical Engineer; the Production Engineer; and, the Design Engineer. These posts were completely localized by 1974 when all the Chinese experts to UFI left the country - their positions were filled by their Tanzanian trainees.

However, the factory was forced to operate below capacity because of competition from other imported hoes and ploughs which were more preferred by most people than the UFI products.

Capacity underutilization was so severe in 1973 (Table 21) that the government decided to make UFI sole importers of finished hand and animal drawn farm tools into the country. UFI

used this monopoly to limit the volume of imports and capacity utilization improved greatly (Table 22).

In 1976 UFI proposed and planned for a major expansion programme, with valid reasons - not only was the factory producing above installed capacity but also sales from local production were only 21% of the total sales by UFI (Table 22). That is, imported farm implements accounted for 79% of all the sales made by UFI. The proposal was approved and in 1979 the Chinese government agreed to undertake and finance the expansion programme under a 20 year low-interest loan. The programme included the following:

- the addition of two more lines of production;
- the building of a carpentry workshop; and,
- the extension of the Administration Block.

The Chinese government also financed the building of a factory dispensary within the premises of the factory. The construction work was completed in 1980 and UFI's capacity was increased, as a result, from 1030 tons/year to 3,700 tons/year of different farm implements. The production technique is similar to the original one. Thus, there were no Chinese experts in Tanzania after construction work was completed in 1980.

The total cost for the 1979/80 expansion programme was shs. 49.066 million. About 86% of this amount (shs. 42.266 million) was a long term 20 year soft loan from the government of China to the government of Tanzania.

Table 22

**Capacity Utilization, Volume of Production and Sales During
UFI's First Ten Years: 1970 - 1979**

Year	Total Implements (tons)	Capacity Utilization (%)**	Hoes ('000)	Ploughs ('000)	Value of of Sales (Million Shs.)	Sales of Imported Implements*	Total Sales by UFI (Million Shs.)
1970	455	44	273	3.1	1.7	-	1.7
1971	840	82	493	3.1	2.0	-	2.0
1972	855	83	148	9.4	5.5	-	5.5
1973	640	62	232	8.0	3.5	10.1	13.6
1974	860	84	328	5.8	4.9	19.4	24.3
1975	975	95	358	3.8	8.4	47.5	55.9
1976	1280	124	346	10.0	12.8	48.0	60.8
1977	1220	118	440	3.8	11.3	42.3	53.6
1978	1140	111	502	2.6	17.8	59.4	77.2
1979	1360	132	411	7.3	17.3	84.6	101.9

Source: Compiled from UFI Records

Notes: * in million shillings

** Production above the installed capacity is possible depending on the product mix.

UFI started with about 126 employees in 1970; by early 1972 the number had grown to 230 and the number of shifts increased from one to two. Early in 1974 the total number of employees increased to 349. This was mainly because of the added responsibility of importing, distributing, and, of course, the manufacture of farm implements. In 1979 during the construction work the number was 420. The number of employees rose to 600 in 1980 after the completion of the expansion programme and reached 623 in July 1984.

Table 23

Sales, Operating Costs and Profits by UFI, 1980 - 83
(Figures in Million Shs.)

	Factory Maintenance	Factory Labour	Raw Materials	Operating Costs	Total Sales	Profits
1980	1.3	4.3	8.9	93.0	116.1	12.4
1981	2.5	5.5	13.8	80.5	78.1	-0.6
1982	2.3	5.8	13.7	126.4	130.6	3.9
1983	2.3	6.2	17.3	n.a.	205.1	n.a.

Source: Cost Accountant/UFI Records

Notes: n.a. = not available

The performance of UFI has been very impressive (see Table 22). However, the basic raw material used, steel bars and plates, are all imported since the country has no iron and steel production of its own. Changes in profits (Table 23) are mainly caused by changes in turn over (sales) which in turn depend on the availability of foreign exchange to purchase raw materials and/or finished products to supplement local production.

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5.3.2 Choice of Technique in the Manufacture of Farming Implements

UFI is a good example of political decisions. The decision to establish the factory was political and so was that of seeking Chinese financial and technical assistance. Although the NDC approved the establishment of UFI, it was not involved in the actual negotiations let alone issues of technology choice. As a matter of fact the corporation hesitated to accept UFI as one of its subsidiaries.

This political decision however, was made before the announcement of the Arusha Declaration. During this period, the promotion of import substituting industries was one of the main national development objectives in Tanzania. Since before the establishment of UFI the country had to import virtually all the farm implements needed in the country, then the project was certainly influenced by that objective. That is, product choice was influenced by national goals.

The choice of technique was left to the Chinese government which undertook the project and also gave a soft interest free loan to finance the "entire" project. It is therefore apparent that the choice of technique was determined by the source of foreign aid. The state-economy relationship in this particular case ruled out completely the consideration of alternative techniques. To that end, the state-economy relationship affected the choice of technique.

But the choice was appropriate in that the technique chosen was medium scale and labour intensive. It was also simple and easy to learn simply because local Tanzanian (ex-primary school leavers) personnel were able to master it within a very short period of time. Consequently, in the 1979/80 major expansion programme the decision was taken to seek Chinese assistance once again. A similar technique was employed. There was no need to consider other different production techniques since the original one worked very well and the same supplier was involved - the Chinese government. As was mentioned earlier, there was a rapid transfer of technology from the Chinese to the Tanzanians. The factory is now being run and managed by local personnel.

At this point, there is need to point out that the basic raw material used is imported steel. In this sense, the factory is import dependent and an inadequate supply of imported raw materials in 1981, for example, forced the factory to operate at about 67% of its installed capacity and to incur a loss of shs. 593,756. Another problem is the lack of formal training qualifications (apart from on-the-job training) characteristic of most of UFI's technical personnel. Both the NDC and UFI management saw this as a big problem since they cannot send their experienced technical personnel and engineers for higher/further studies because they lack the necessary formal education background.

To deal with the above problem, the company offered and continues to offer some courses in physics, chemistry and workshop technology. There are also plans to establish a Training Centre - mainly for UFI's technical personnel.

In addition to this, in 1978 the company recruited one Tanzanian with a masters' degree (from USSR) in Mechanical Engineering. He is now the Design Engineer. In 1983, the company received two graduates (in Mechanical Engineering) from the University of Dar-es-Salaam. They are being recruited to the posts of Mechanical and Maintenance Engineer respectively. The engineers who held/hold these posts on the basis of on-the-job training are therefore, slowly but surely, being replaced by university graduates.

In the case of Mbeya Farm Implements Manufacturing Co. Ltd. (MFI), which was incorporated in 1974 within the NDC group of companies, the investment can be characterized as bureaucratic. That is, the idea and decision to build MFI originated from the NDC. The corporation invited tenders from foreign firms interested in supplying machinery, equipment and their installation on a turn key basis. However, when Tanzanian government officials managed to secure financial assistance from India for equipment and construction of the factory, NDC was forced to look for and award the contract to an Indian firm.

The NDC holds 100% of the share capital of shs. 35.0 million of MFI. The total initial investment was shs. 84.0 million, about 40% of which was supplied by the government of

India as a soft loan to Tanzania. Trial production started in September 1982. The factory has a capacity to produce 2,815 tons of hand tools, 730 tons of animal drawn implements, and 565 tons of tractor drawn implements per annum. The plant is therefore more large-scale than that of Ubungo factory. Furthermore, according to NDC officials, the Mbeya plant is also more machine intensive than the Ubungo one.

Hand, animal drawn, and tractor drawn tools and implements are the basic implements of labour used by the majority of the Tanzanian masses - the peasants. The choice of product was therefore in line with the country's Basic (Needs) Industry Strategy. NDC has also been given the task of promoting the manufacture of the above tools to meet 75% of the country's total requirements. At present, MFI and UFI's combined capacity is 2.5 million hoes per annum. NDC estimates that the national demand is 3.5 million hoes per year. Thence, there is a shortfall of about 1.0 million hoes. Half of this short-fall is expected to be met by small-scale units of production - village and/or district industries. The corporation is planning to build another factory at Mwanza, Tanzania, to bridge the gap between local supply and local demand. Seen this way, the Mbeya project was also influenced by national goals.

But, the choice of technique was influenced by organizational constraints/state-economy relationship. Once the political decision was made to accept Indian assistance and thence technology, NDC as a state-owned institution had no choice

but to comply. The Indian aid was project specific - to cover machinery and equipment (foreign exchange aspects) of the project - about 40% of the total cost. In this case, the source of foreign aid had considerable influence on the technical choices in that the supplier had to be an Indian firm. However, the mode of production, state peripheral capitalism, biased the choice away from small-scale establishments. Indeed, if this were not the case, they could as well have found ways and means of aiding small-scale industries in the country to increase labour productivity and production. These units make use of such things as car frames, etc. in making hand tools. But this option was ruled out and was not even considered despite the fact that India is also famous for small-scale units of production.

The choice was proven to be inappropriate in that MFI has been hit by various problems and production has stopped. According to UFI and NDC officials, the design of the plant was faulty. The first hoes that were produced not only failed to cultivate but they were also very heavy - about 3.5 lbs. in weight. The performance of the other tools was also inadequate. Consequently MFI has failed to sell its products. The production process is also cumbersome. There is unnecessary zig-zagging of inputs before the final process is reached due to poor machine layout. There have also been a number of machine breakdowns. In short, the design was faulty, tools were inappropriate, and the production process cumbersome.

UFI experts who visited the plant claim that there is high technology equipment but the supplier seems incompetent to operate them. NDC has now decided to cancel the technical and management agreement with the Indian firm. The corporation is looking for a new management agent. There are some rumors that a Zimbabwean firm might be awarded the contract. At the same time, another subsidiary of NDC (UFI) is planning its second major expansion programme. It has proposed a British firm, Chillington Tools Ltd., undertake the project. The technique proposed by the British firm is going to be more machine intensive, more efficient technically, and will have a higher production rate per shift than the Ubungo plant. It is actually the last two properties which have interested the Tanzanian officials. (Personal Interviews)

5.3.3 Problems Facing the Farm Implements Industry

A number of problems seem to afflict this farm implements industry, notably:

- a shortage of highly trained experts especially engineers;

- a scarcity of imported raw materials and spare parts due to foreign currency constraints; and,

- the variety of sources is bound to result in slow mastery of the technologies involved in this sector.

The Ubungo factory, for example, has got Chinese technology and by 1976 the total labour force was localized. All technical problems in the factory are handled and managed by local

personnel. But when the Indian designed Mbeya factory (MFI) had technical problems, UFI experts could not correct them. Perhaps if they had had better technical training before they joined UFI they might have been able to handle the problems of MFI. What is certain, however, is the fact that the production process was different and from a different source - hence the major cause behind their failure.

UFI is now planning a major expansion programme to be undertaken by a British firm. MFI probably will be managed by a Zimbabwean firm which will have to provide a new design for the production process. This situation, though aimed at minimizing dependence on one source, has two major problems. It makes the mastering of the different techniques by Tanzanians slow and expensive. The problem of spare-parts is also aggravated if each plant requires its own unique parts or components.

5.4 The Case of Mtibwa Sugar Company Ltd.

5.4.1 Historical Background

The estate was opened in 1939 by a German settler - William Kurge - as a sisal plantation. After the Second World War, the plantation was taken over by John Lee (a British subject) but he failed to run it. As a result, the British colonial government intervened, took over the estate, and entrusted it to a Greek settler (Mr. Stephen) who in turn converted the estate for the growing of paw paw, beans, and sunflower. The estate was registered for the growing of sugar-cane in 1958.

In 1960 peasants from the villages surrounding the estate were encouraged to grow sugar-cane to feed the sugar refining plant which was being constructed within the estate. By 1963, construction work was completed and the milling of sugar-cane for sugar production commenced. The installed capacity was 35 tons of cane per day.

In 1965 the factory's capacity was doubled. In 1966, however, the owner (Mr. Stephen) incurred heavy losses due to operational problems. As a result of this, he sold the estate and factory to an Indian businessman - Mr. Patel, a resident of Nairobi-Kenya.

In 1967, Mr. Patel also sold the factory and estate to Madhvani Company after failing to run it successfully. The company by the time was operating 30 sugar plantations in Uganda and had already invested in sugar refining in Kenya. Consequently it was determined to capture the Tanzanian market as well (Coulson, 1982a:170).

At this juncture we need to point out that between 1963 and 1967 the factory was operating at only between 16-35% of installed capacity mainly due to shortage of cane at the factory. Thus, one plausible explanation as to why different companies failed to run the estate and factory successfully is poor crop husbandry, thence, inadequate supply of sugar-cane.

Madhvani ran the factory through a management wing known as East African Management Company. The new owners found out that most of the factory machinery and equipment were very old.

They decided to replace them. But before doing so, Madhvani entered into partnership with the National Food and Agricultural Corporation (NAFCO), perhaps to safeguard its investment against nationalization. Thus, in 1969 NAFCO bought 50 percent of the company shares, making Mtibwa sugar factory/estate a joint venture between a public corporation and a private company. The management, however, remained that supplied by Madhvani - the East African Management Company - EMCO. NAFCO and Madhvani decided to replace the old equipment, to build a completely new factory, and to expand the estate.

In March, 1971 NAFCO entered into a financial agreement with Williams and Glyn's Bank of U.K. under which NAFCO received a loan of £2.5 million for the construction of a new sugar refining plant at Mtibwa. The loan was made at 5.5% repayable over 10 years. The new factory was built by Booker McConnell, a subsidiary of Fletcher and Stewart of Derby UK (see Financial Times, London - 11/3/1971).

The new plant was commissioned in September 1973 and had an installed capacity of crushing 1,500 tons of sugar-cane per day or 270,000 tons of cane per season.⁷ One season lasts for seven months, June to December. But despite the fact that the estate was expanded from 2,354 hectares to 3,203 hectares the factory continued to operate below the installed capacity. According to the present Mtibwa company officials, this poor performance was due to:

- (a) poor management by the managing agent - EMCO;

(b) out-growers failed to grow the required quantity of cane expected of them; and,

(c) lack of enough capital which forced the company to borrow about shs. 32.5 million from various local banks.

Due to these problems, up to the end of June 1974, Mtibwa Sugar Co. Ltd., had an accumulated loss of shs. 31.4 million (Table 24).

Table 24

Profit and Loss Account for Mtibwa Sugar Co. Ltd.
(million Shs.)

Year	Profit(+) Loss(-)	Cumulative Loss or Profit*
Carried Forward	-7.9	-7.9
1971/72	-4.0	-11.9
1972/73	-4.3	-16.2
1973/74	-5.8	-22.0
1974/75	-9.3	-31.3
1975/76	-21.2	-52.5
1976/77	-5.4	-57.9
1977/78	-10.6	-68.5
1978/79	-12.1	-80.6
1979/80	-13.1	-93.7
1980/81	-0.5	-94.2
1981/82	+21.9	-72.3

Source: SUDECO and Mtibwa Sugar Company Records

Notes: * Figures calculated by the author.

In 1974, a new parastatal - the Sugar Development Corporation (SUDECO) was formed to specifically promote sugar production so as to make Tanzania self-sufficient in sugar requirements by 1980. All the sugar estates and factories originally under NAFCO were transferred to SUDECO.

Insofar as the Mtibwa Sugar Company was concerned, the situation at the time of SUDECO's take over was as follows:

- Share Capital shs. 48.774 million
- Loans/Debts shs. 71.087 million which was split as follows:

Tanzania National Bank of Commerce (NBC)	shs.12.5 m.
Tanzania Investment Bank (TIB)	shs. 7.0 m.
Tanzania Development Finance Co. Ltd. (TDFL)	shs. 3.0 m.
East African Development Bank (EADB)	shs.10.0 m.
Williams & Glyns Bank (of UK)	shs.38.587m.

Sudeco bought all the shares of the company at a cost of T shs. 11.7 m. on a loan basis. By March 1980 the corporation had repaid all the money. The corporation also took a number of measures aimed at improving the performance of the estate and factory.

First, it changed the EMCO management and contracted a new Management Agent, H.V.A. International of Holland.⁸ This could have cost the corporation a lot of money in terms of foreign exchange. But this was not the case. Management and consultant fees including expenses of H.V.A. staff/personnel working with the company were paid by the Dutch government through its "Technical and Co-operation Assistance Programme" to the government of Tanzania.

Second, it embarked on an Irrigation Project at a cost of about shs. 63 million. This project was financed through a soft

loan from the government of Holland to the government of Tanzania.

Third, rehabilitation work for the factory and the tractor workshop (TWS); tractors, trucks, and grabbing equipment was carried out at a cost of shs. 17.7 million. The estate was also expanded from 3203 to about 3240 hectares.

Fourth, the new management agent was asked to arrange for the purchase of modern equipment for harvesting sugar-cane. This measure was taken because the Mtibwa Sugar Co.Ltd., had had problems recruiting sugar-cane cutters in sufficient numbers. Two sugar-cane harvesters were purchased from and supplied by Can Machinery Company (USA). They, however, failed to do the work properly because the harvesters were designed for short sugar-cane while the cane at Mtibwa is basically long. The choice of the equipment was therefore inappropriate, they are now used for cutting seed-cane.

Lastly, the corporation also decided to expand all the state owned sugar companies in the country and to build new ones so as to make the country self-sufficient in its sugar requirements. Thus, in June, 1976 SUDECO awarded a contract to Tate and Lyle Technical Services (UK) in collaboration with Booker Agricultural International - a subsidiary of Booker McConnell (UK) - for carrying out a feasibility study on the country's sugar industry. The main objectives of the study were (i) to study current sugar production in the country; (ii) to consider market opportunities (including export markets) for

future development; and, (iii) to make recommendations for the future of the industry up to 1990. The study was financed through a World Bank loan.

As a result of this study and its recommendations, SUDECO approved a ten year expansion programme, which was estimated to cost about shs. 5,000 million (see Daily News - Tanzania, October 1st & 2nd, 1979).

Table 25

**Financial Performance of Mtibwa Sugar Co. Ltd. 1978 - 1983/84
(Million Shs.)**

Year	Factory Costs	Administrative and Finance Costs	Total Operating Costs	Value of Sales	Profit(+)/ Loss(-)
1978/79	23.587	20.704	44.291	29.984	-12.073
1979/80	55.589	23.787	79.376	63.249	-13.135
1980/81	56.233	32.741	88.974	82.332	- 0.541
1981/82	78.011	41.107	119.118	136.414	+21.844
1982/83	70.570	37.493	108.063	105.935	+ 1.115
1983/84*	-	-	130.266	131.633	+ 7.167

Source: Chief Accountant (Mtibwa Records)

Note: * Not audited.

Prior to 1980/81 the company incurred a lot of losses (Tables 24 and 25). NAFCO took over an industry already in trouble and with no working capital. By 1971 accumulated losses were about shs. 8.0 million. By 1979/80 the accumulated losses were shs. 93.8 million - more than ten times the 1971 figure (Table 24). The period between 1971/72 to 1979/80, therefore, inflated the losses by shs. 85.8 million. According to company

officials, the main reasons behind this poor performance included the following.

First, there was under-utilization of the capacity of the factory due to an inadequate supply of sugar-cane at the factory. This was mainly caused by an inadequate supply by out-growers, drought (especially in 1977) and floods (after the drought in 1978). For example, in 1975/76 the factory was operating at 41% of installed capacity and produced 11,227 tons of sugar. In 1976/77 capacity utilization increased to 50% and sugar production increased to 13,476 tons of sugar. The drought of 1977/78 caused the factory to operate at only 27% of installed capacity and sugar production fell to 7,426 tons only (Table 25). The factory managed to make its first profit in 1981/82 and since that time, production and capacity utilization have increased steadily (Table 26).

Table 26

**Employment, Production, and Capacity Utilization
at Mtibwa Sugar Company 1979/80 - 1983/84**

Year	Employees (Number)	Sugar-Cane (Tons)	Sugar (Tons)	Renderment (Sugar Recovery)	Capacity* Utilization
1978/79	2695	-	14,856	-	55%
1979/80	3025	233,867	18,253	7.8%	95%
1980/81	3486	296,600	25,700	8.7%	113%
1981/82	3373	281,000	27,312	9.7%	107%
1982/83	3275	256,210	23,360	9.1%	106%
1983/84	3300	299,240	25,610	8.5%	105%

Source: Chief Chemist (Mtibwa Records)

Note: * Based on the actual capacity of crushing 1565 tons of cane per milling day.

Second, there was an explosion of the Turbine Alternator set used to generate electricity. This was replaced at a cost of shs. 4.50 million.

Third, improper financial management before the company was nationalized. Remember that, at the time the company was nationalized there was no working capital.

Lastly, the fact that the company registered its first profit in 1981/82 when the government increased the ex-factory price of sugar by 40% suggests that another problem was the government's price policy. Low sugar prices also led to low wages and as a consequence inadequate supply of cane cutters.

5.4.2 Choice of Technique and Other Technical Issues

The decision to enter into partnership with Madhvani Co. Ltd. and later to wholly nationalize the Mtibwa Sugar Company was political. It was influenced by the state-capitalism mode of production. Actually, it was government policy to nationalize private firms, estates, and plantations. The aim was not to save a troubled private company so as to protect jobs and so forth although most of the machinery and other equipment were old and out of order.

The government had no money to invest in a new factory. Yet it approved NAFCO's plan to build a completely new factory and to expand the sugar estate. The U.K. was approached and it arranged the agreement between NAFCO and the Williams Glyn's Bank - the agreement was covered by the U.K. Export Credits Guarantee

Department. Consequently, NAFCO (or Tanzania) secured a loan from U.K. to cover both local costs and other cost involving foreign currency (Financial Times - London, 11/3/1971). U.K. on the other hand won the turn-key contract to supply Tanzania with its first major sugar refining plant. Although NAFCO officials had some influence on the choice of technique, that is, they requested for a modern large scale plant, there is no doubt that the U.K. firm, Fletcher and Stewart of Derby, which undertook the project, chose a technique most familiar to it. Thus, the source of finance, had a considerable influence on the choice of technique. The interests of the U.K. bank (an external institution) were met in that it made money through interest payments and of course some other conditions (normally related to economic viability) had to be fulfilled before a bank lends out money.

The deal was also beneficial to Booker McConnell (UK) in that in 1976 Booker Agricultural International (another subsidiary of Booker McConnell) was awarded by SUDECO another contract to carry out a feasibility study of the sugar industry in Tanzania. This time, however, the source of finance was the World Bank. The original deal therefore had led to yet another business deal. Of course Tanzania also benefited in that it got what it wanted.

From 1975 to-date, the managing agent has been Handles-Vereniging Amsterdam (H.V.A.) International, a business and trading company of Holland. This company also acts as a

consultant agency for the Tanzanian (Mtibwa) Sugar Company. Its role includes the following:

- (a) to give technical and managerial advice;
- (b) to manage the factory and estate; and,
- (c) to offer consultant services.

The Mtibwa Sugar Co. Ltd. has five major departments and three of them are headed by expatriates. These are (i) Farm Machinery and Transport, (ii) Factory, and (iii) Finance respectively. The Field department and the Personnel and Administration departments are under Tanzanian managers. As of July 1984, there was a total of 14 expatriates: seven were in the factory department, four in Farm Machinery, and three in the Finance department.

The first Tanzanian General Manager was appointed in 1983. He has set himself the goal of achieving complete localization of all technical staff by 1991. Now, since the various managing agents were employed to give, among others, technical and consultant services, it is obvious that they exercised considerable influence on the technical choices that were made. Indeed one can argue that they actually made most of the technical choices, albeit indirectly through the advice tendered. Furthermore, since they were foreign private business firms, it is naive to assume that the choices made did not correspond to their interests. The technical and management agreement with H.V.A International is for two years - subject to renewal if both parties agree. Since it has been renewed after

every (two years) review, this shows that both parties are happy with the arrangements. The Dutch government has, in turn, continued to meet fees Tanzania is supposed to pay to H.V.A. International. It appears that this also constitutes yet another reason why Tanzania has and continues to favour the services provided by H.V.A. International. Holland, though assisting Tanzania, it is actually losing nothing since in practice the money is just transferred from the Dutch state to a Dutch private corporation.

Insofar as meeting the specific criteria of capital saving, small-scale, and labour intensive is concerned, the choice was inappropriate. This was especially the case with the cane harvesters which, as it were, failed even to perform the job they were supposed to do. However, in another sense, the choice was appropriate if only because of the fact that it was the type preferred by Tanzania. Furthermore, so far, there have been no machine breakdowns or major technical problems with the plant. But the company has and continues to face a number of serious problems. It is to such a discussion that we now turn to in the next section.

5.4.3 Major Problems Facing the Mtibwa Sugar Co. Ltd.

According to the Tractor Workshop and Transportation (TWS) Manager's point of view, the company is faced with the following problems.

First, drivers and operators of equipment are careless in handling vehicles and equipment. One possible explanation is

lack of experience, since, as was mentioned earlier, there is high labour turn-over. In any case, the consequence of this situation is frequent breakdowns and many unnecessary damages to vehicles and other equipment.

Second, mechanics (most of them Grade 2 and 3) do not perform their duties well due to (what he termed) low morale, interest, and commitment. He observed further however, that foremen and other senior technical personnel are not only more committed and motivated to do their jobs but they are also better trained.

Third, there is high technology equipment but there are inadequate funds available for spares. The TWS tries its best to make some spares locally such as bolts, nuts, and shafts for pumps. But these are just very small inexpensive items.

Fourth, many of the tractors are old (8 years and over), because of this, the maintenance costs are high.

According to the General Manager and the Personnel and Administrative Manager the company is, and has been, faced with problems surrounding the provision of services:

(1) Transportation - the area is too remote and during the rainy season transport in and out of the factory almost completely comes to a stand still. This creates problems for the transportation of the following inputs: 1200 tons of fertilizer, and other farm inputs; 750 tons of lime; 300 tons of gunny bags; 100 tons of lubricating oil; 25,000 tons of sugar; 8,000 tons of molasses; 520 tons of various food stuffs and other goods for

estate shops; 1.7 million litres of fuel for vehicles⁹, etc. About 8,000 tons of molasses worth shs. 6.5 million in foreign exchange are thrown away annually due to transport problems;

(2) Communication - telephone services were only installed as recently as 1982. This meant expensive journeys which could have been avoided if telephone services were available. Before 1982, the company relied on an unreliable radio call service; and,

(3) Banking - the nearest bank, as recently as 1983, was at Morogoro town about 104 km. south of Mtibwa. The National Bank of Commerce (NBC) opened its branch within the company premises in 1983.

Partly because of these problems the social environment is not attractive, hence, labour turnover is high.

In addition to this, the company has been beset by other social problems. For example, there are not enough sugar-cane cutters because of the low wages offered and the resistance on the part of the surrounding peasants who do not want wage employment. Since 1983-84 there have been frequent fires, generally deemed to be malicious, and costly to the out-growers. As a consequence considerable burnt sugar-cane has been rejected by the factory.

It should also be noted that wages and prices are controlled by the government and they are not necessarily related to production or productivity. For instance, (a) the price of sugar is the same regardless of whether it is refined or semi-refined or whatever its quality may be. (b) Last year, 1984,

during the parliamentary budget session the Minister of Finance announced that the government had raised the minimum wage effective from 1st June, 1984 from shs. 600 to shs. 810 per month for all workers in rural and urban areas. Some managers like that of Kilombero Sugar Company started to pay sugar-cane cutters according to this new wage. But on June 29, 1984, two weeks later, a government circular was issued by the Ministry of Agriculture (the parent ministry for sugar factories and estates) to the effect that agricultural/plantation workers should receive a minimum wage of only shs. 621 and not the shs. 810 announced by the Minister of Finance. This circular created confusion and frustration among managers and their *shamba* workers. At Mtibwa, the cane cutters threatened to lay down their tools and leave the General Manager and his wife to do the work. They did not, however, carry out this threat. Nevertheless, this example shows how decisions taken by other institutions can affect the performance of the production parastatals.

Lastly, only about 40% of the foreign currency the company applies for is approved by the Bank of Tanzania. As a result, there is not enough money to purchase all the necessary inputs, spares, new vehicles to replace the old ones, etc. from abroad. The factory was essentially meant for the production of "Plantation-white" sugar using the sulphitation and liming method. Lime is produced locally but sulphur has to be imported. Foreign currency constraints have forced the company to use lime only and consequently the sugar produced is brownish instead of

white. Even so there have been no problems in marketing it since supply is far from meeting demand.

5.5 The Case of Kilombero Sugar Company Ltd.

5.5.1 Brief History

The Kilombero Sugar Company Ltd., consists of two factories: Msolwa Factory in Kilombero District and Ruembe Factory in Kilosa District. The two districts are in Morogoro Region and they share a common border. The Msolwa factory became operational in October 1962 and the Ruembe factory started to produce sugar on September 5, 1976.

The original idea to build a sugar refining factory at Kilombero was conceived in 1957 by the British colonial government. By the end of 1959 three international agencies had agreed to finance the building of the Msolwa sugar refining factory at the Kilombero Valley (Table 27).

Table 27

Sources of Initial Investment for Msolwa Factory (Million Shs.)

Source	Amount	Percent
Colonial Development Corporation	30.6	38
International Finance Corporation	29.5	37
Netherlands Overseas Financiers	15.0	19
The Standard Bank of East Africa	4.1	5
Individual Tanzanians	0.8	1
Total Initial Investment	80.0	100

Source: Factory Manager (Kilombero Sugar Co. Ltd.)

The building of the factory started in 1960 and the sugar refining plant became operational towards the end of 1962. The Netherlands Overseas Financiers, were given the task of managing the factory and the sugar estate by the financiers (the owners) and they appointed V.K.C.M., a Dutch private organization as managing agent. In 1966, however, at the request of the Board of the Company, H.V.A. International of Amsterdam, formally connected with the scheme as consultants, took over the responsibility for the management of the company.

The Msolwa factory has a capacity of crushing 2,175 tons of cane/day which can produce about 200 tons of sugar daily or 40,000 tons of sugar per season. Initially, about 2833 hectares of land were developed for sugar-cane cultivation. This was also owned by the company and produced about 75% of the cane required in the factory. The remaining 25% of the sugar-cane requirements were to be met by out-growers - who had 1214 hectares of sugar-cane under a government sponsored settlement scheme.

In 1964, the Tanzanian government entered into an agreement with the major investors (owners) in which the latter guaranteed an ex-factory price of shs. 1,100 per ton of sugar produced by the company. In 1968, in accordance with the price agreed on an East African basis for sugar of shs. 920 a ton - the government informed the major investors that - it would no longer continue to pay the 1964 guaranteed price after September 1, 1968. Under these circumstances, the investors responded, they would stop production. But they would, nevertheless, be willing

to sell their entire interest in the company to the government if they got a reasonable offer. By April 1968, an agreement had been reached between the government and the investors. Under the terms of the agreement, the government would (a) buy all the ordinary shares owned by the overseas investors at a cost of shs. 1.825 million; (b) pay a total of shs. 72 million in respect of the debenture stock and income notes; and, (c) make an initial payment of shs. 12 million and the remainder to be paid over a period of 16 years (The Standard, Kenya: March 29, 1969).

As a result of the above agreement, the company became wholly owned by the government and placed under NAFCO. However, NAFCO entered into a management agreement with the former managing agent H.V.A. International. Under this 1969 agreement, H.V.A. International would (a) run and manage the company; (b) become sole consultants for the company; and, (c) all management and consultant fees would be paid by and through the Dutch government Technical Assistance Programme to Tanzania.

In 1970, the Board of Directors of the Kilombero Sugar Co. Ltd., approved an expansion programme which would double the factory's capacity of sugar production and increase the land (estate) under sugar-cane. A feasibility study and a soil analysis/survey at Kilombero Valley was made by a Dutch company (ILACO). The expansion work started in October 1974 and it involved the building of a new factory (Ruembe) with the capacity of producing 45,000 tons of semi-refined sugar per annum (or season) and the expansion of the sugar estate by about 2900

hectares. The main contractors, machinery and equipment suppliers were Stoik Werkspoor Sugar B.V. Hengelo (of Netherlands). The fact that the contract went to a Dutch firm tends to suggest that although the Dutch management (i.e. that of H.V.A. International) was free in the sense that fees were met by their own government, they nonetheless were in a position to reap significant benefits from Tanzania.

Table 28

Total Investment for the 1974 - 1976 Expansion
Programme of Kilombero Sugar Co. Ltd.
(Million Shs.)

Source	Amount	Percent
Dutch Government	90.165	18.74%
Danish Government	135.558	28.18%
World Bank	122.845	25.54%
Tanzanian Government	<u>132.459</u>	<u>27.54%</u>
Total	481.027	100.00%

Source: Factory Manager (Kilombero Sugar Co. Records).

The expansion programme was financed by the Dutch and Danish governments (47%); the World Bank (26%) and Tanzania - 28% (Table 28). By July 1976, construction work for the new factory was completed and about 3,308 more hectares of land were under sugar-cane. The milling capacity of the new (Ruembe) factory is 2,400 tons of cane/day. Assuming renderment (i.e. sugar recovery) of about 10%, this can produce 240 tons of sugar per day or 45,000 tons per season. The Ruembe factory was officially opened by the Tanzanian President - Mwalimu Nyerere - on August

3, 1976. Sugar production started on September 5, 1976. The two factories and estates have a labour force of about 4500 permanent employees and during the milling season the total number of permanent and temporary personnel can reach 8,000. But this number is hardly ever reached because of lack of enough cane cutters (see Table 29).

Table 29

Manpower Position: Kilombero Sugar Co. Ltd.
Dec. 1976 - Dec. 1983

	Msolwa		Ruembe		Total	Expat.
	Skilled	Unskilled	Skilled	Unskilled		
Dec. 1976	966	1592	800	1342	4700	24
Dec. 1977	1149	2696	813	2674	7605	n.a
Dec. 1981	1367	2393	996	2875	7641	n.a
Dec. 1982	1408	2688	1234	1950	7250	15
Dec. 1983	1513	1634	1134	2069	6414	20

Source: Kilombero Sugar Co. Records

Note: Expat. = Expatriates

Before 1974/75 the company was making substantial profits and in 1973/74 it had a cumulative profit of shs. 5.3 million. But between 1974/75 to 1977/78 the performance pattern has seen fluctuating annual losses (Table 30). According to Kilombero Sugar Company and SUDECO officials, the main factors behind the poor performance between 1974/75 and 1980/81 include the following:

(a) low ex-factory sugar price fixed by the government which resulted in the situation whereby the cost of production of say 1 ton of sugar was higher than the ex-factory price offered;

(b) low capacity utilization for both factories (Table 31) due to lack of enough cane at the factory caused by droughts, transport problems, and inadequate supply of cane cutters; and,

(c) the so called teething problems (of the new plant) common in many new factories.

Table 30

Profit and Loss Account - Kilombero Sugar Co. Ltd., 1973 - 1982
(Million Shs.)

Year	Profit(+) or Loss(-)	Cumulative Profit or Loss
1973/74	+ 3.327	+ 5.269
1974/75	- 0.670	+ 4.599
1975/76	- 7.835	- 3.236
1976/77	-18.567	-21.803
1977/78	- 4.662	-26.465
1978/79	+ 0.149	-26.316
1979/80	-18.662	-44.978
1980/81	+ 6.754	-38.224
1981/82	+37.623	- 0.601

Source: SUDECO Records.

Note: 1974-1976 was a drought period.

The first Tanzanian General Manager was appointed in 1977 and from June 1977 to February 1981 the company was under local management. But after February 1981, the H.V.A. International was asked by the government to resume their work as managing agents. The reason behind this action was mismanagement of the company by the local management. No further details were given. However, the arrangements were as before. This indicates that perhaps the government opted for recalling the H.V.A. management instead of simply appointing another local manager because the

management and consultant fees would (and) continue to be met by the Dutch government. From 1967 to date, H.V.A. International has been the sole consultant to Kilombero Sugar Co. Ltd.

Table 31

Capacity Utilization, Kilombero Sugar Co. Ltd.
1976/77 - 1982/83

Year	Sugar Production (Tons)		Capacity Utilization*	
	Factory 1	Factory 2	Factory 1	Factory 2
1976/77	35,238	11,612	88%	**
1977/78	20,821	23,105	52%	51%
1978/79	33,145	32,890	83%	73%
1979/80	25,328	26,620	63%	59%
1980/81	19,504	28,566	49%	63%
1981/82	20,093	30,000	50%	67%
1982/83	14,712	25,394	37%	56%

Source: Factory Manager (Kilombero Sugar Co. Ltd)

Note: * Figures on capacity utilization are based on the annual sugar production capacity of 40,000 tons for Factory 1 and 45,000 tons for Factory 2 respectively.

** Just opened

5.5.2 Technical Choices and Issues in Kilombero Sugar Co. Ltd.

The two factories, Ruembe and Msolwa, use essentially the same sugar production process: the sulphitation and liming method. Even so, the new factory is more machine intensive (hence labour saving) than the old one. Consequently, despite the fact that the new Ruembe plant has a higher capacity (by about 125 tons of cane per day) than the old one, it nonetheless, employs a smaller labour force (see Table 29).

The Kilombero Sugar Company used to produce semi-refined sugar for industrial and domestic users. However, in an effort

to reduce production costs, from 1977 up to now, the company is producing two types of sugar: (a) semi-refined sugar - small colourless crystals mainly to feed the soft drink industries such as Coca Cola and Pepsi Cola Tanzania Ltd., and, (b) plantation-white sugar - mainly for domestic consumption (tea and coffee making). It should be noted that the production of "plantation-white" sugar reduces the costs of production (hence, the use of foreign exchange) by reducing the consumption of (i) lime - from 2.30 tons to 1.25 tons per 1000 tons of cane; (ii) sulphur - from 0.55 to 0.25 ton per 1000 tons of cane; and, (iii) cotton and jute filter cloth from 10 square metres (cotton) and 13 square metres (jute) per 1000 tons of cane to nil. The company first produces semi-refined sugar to meet industrial demand (and up to 1979 to meet export market of about 10,000 tons annually) and then the factory switches to the production of plantation-white sugar. To switch to the new process no additional costs are involved. The production of semi-refined sugar is now primarily to meet industrial specifications - so as to use foreign trademarks such as Coca Cola, etc.

The decision to buy all the shares of the company was political and influenced by the dominant mode of production - state capitalism. The decision to expand the factory was made in conformity with the national policy or development objective of making the country self-sufficient (or self-reliant) in sugar requirements. The management, technical and consultant agreement with H.V.A. International took advantage of the Dutch government

program of Technical Assistance to Tanzania. Yet, we have to recall that H.V.A. International was the former managing agent before the government took over the company. The firm was also connected with the sugar project from the very beginning as a consultant. The feasibility study for the building of the second factory was made by a Dutch firm and following this study a third Dutch firm, Stoik Werkspoor Sugar B.V. Hengelo, won the contract to supply machinery and equipment for the expansion programme. The effort was financed by the Dutch and Danish governments (47% of the costs), the World Bank (26%) and Tanzania government (28%). Under these circumstances, it appears to us that the choices of H.V.A. International as managing agents, of the Dutch firms to carry out feasibility study and to supply the machinery and equipment were heavily influenced by the source of foreign aid. Indeed it would be naive to suggest otherwise.

The technique chosen, however, was modern and large-scale. In this sense it met the concerns of Tanzanian (SUDECO). Another influence was the objective of production. As pointed out elsewhere in this study, Kilombero Sugar Company is designed to produce both for internal and export markets. Indeed, in 1976 an agreement was signed between SUDECO and Tate & Lyle (UK) for Tanzania to sell 50,000 tons of sugar to Britain over a period of five years (Daily News, Tanzania - 18/11/79). In 1979, it was also reported that SUDECO had agreed to export 1,800 tons to Seychelles (Daily News - Tanzania, 21/3/79). This indicates that the objective of production (export) also influenced the choice

of technique especially if we take into consideration the fact that Tanzania was also importing (during this period) low quality sugar compared to the one it was exporting.¹⁰

But, if we take the criteria of low cost, small-scale, and labour intensive one can argue that in this sense, the choice made was inappropriate since the technique employed falls short of these criteria. Even so, SUDECO officials told the researcher that in their own opinion the so called appropriate sugar refining technologies, meaning small-scale and labour intensive open pan methods are technically inefficient in that renderment (sugar recovery) is very low, very skill intensive (Tanzanians lack experience in this field), and leads to the production of low quality sugar. Their advantage is therefore less obvious.

At this juncture, there is need to point out that the company has a system of understudying with the expatriates. That is, for every expatriate there is a Tanzanian attached to and understudying him in order to take over his duties. The system however does not seem to work properly. The researcher got the impression (from some Tanzanians involved) that they were not given enough work and challenge. Furthermore, since the costs and salaries of these expatriates are paid by their own government, then this arrangement can easily lead to the following effects.

First, on a short term basis, the arrangement is certainly beneficial to Tanzania, a poor developing country faced with capital scarcity both human and otherwise. But, on a long-

term basis, the arrangement can easily perpetuate external dependence, hence, is contrary to the country's general development objectives. Bilateral aid almost always has, at least, one string attached to it: the consultant and/or the procurement of imported machinery, equipment, etc. associated with the project in question from the donor country. This condition ensures "commercial lock-in" of the recipient country and narrows the search both for alternative techniques and for potential suppliers. In this sense the arrangement is also beneficial primarily to the aid donor.

Second, in this particular case, there is a potential danger for the above arrangement to act as a disincentive for the training of local personnel to replace the expatriates, since management/technical fees are met through external aid. The mere fact that the agreement with H.V.A. International has been renewed every two years since 1969 and they have been sole consultants to Kilombero Sugar Company tends to reinforce this generalization. Of course, in another sense the arrangement can also allow experienced Tanzanians to go to other places where their services are equally needed but without the benefits of such arrangements of the kind to which we are referring.

5.5.3 Major Problems Facing Kilombero Sugar Co. Ltd.

The Kilombero Sugar Company Ltd., is faced with the following problems:

(a) there is an inadequate supply of imported spare parts mainly due to inadequate allocation of foreign exchange. This

problem, as has already been discussed in previous chapters is not unique to Kilombero. It is a national problem;

(b) most of the tractors and other vehicles are old (bought in 1975 or before). This problem not only aggravates the problem of spares but also compels the hiring of more people. More time is spent on servicing thus, leading to low efficiency. The expenditure on spares for vehicles and equipment was shs. 8.2 million; on tyres and tubes was shs. 870,000; and on sundries was shs. 370,000 in 1983/84 for the Ruembe factory alone. Furthermore, 75% of all the trucks are hired;

(c) the cane haul system is poor and sometimes there is shortage of sugar-cane at the factories. This problem is also aggravated by the first and second problems mentioned above. About 40% of the "down time" at the two factories is due to lack of cane at the factories; and,

(d) acute shortage of tires and batteries for vehicles. These products are locally produced but the firms producing them were also having difficulties in getting enough foreign exchange for buying enough inputs. The result was excess capacity due to supply as opposed to demand factors. Notice that it is not easy for the factory to import them since there is scarcity of foreign exchange to begin with and in addition to this the company has to get permission from the local producers (i.e. they have a monopoly over the local market). Foreign currency has also to be approved by the Bank of Tanzania;

(e) lack of enough sugar-cane cutters; and,

(f) lack of well trained and skilled workers.

The last problem is also aggravated by the fact that most of the vehicles/equipment are out-moded thus requiring highly trained technical personnel to fabricate spare parts locally.

As from 1977, however, the company has a workers training programme whereby evening courses within the premises of the factory are conducted and some of the technical personnel are sent to a nearby Kilombero Sugar Training Institute. The Netherlands made available over shs. 4.0 million to SUDECO for this establishment. But, most of the graduates of this institute became foremen and the problem seems to persist. Anyway, as many continue to graduate annually, the positions reserved for foremen will be filled and one hopes that the problem will be overcome.

5.6 The Kagera Sugar Company Ltd.,

According to SUDECO officials, Kagera is (as of August 1984) still an ongoing project and not yet an operating company.

Before the government involvement, Kagera Sugar Mills - a private company owned the Kagera sugar estate and factory. The factory had a capacity of producing 8,000 tons of sugar per year.

In July 1972, an agreement was reached between NAFCO and the Kagera Saw Mills Ltd., to jointly launch a shs. 200 million sugar refining plant with a capacity of milling 3,000 tons of cane daily. The new factory would create employment of about 2000-3000 people and about 40% of the sugar-cane to be processed by the plant would be supplied by outgrowers and Ujamaa villages

planned to be established in areas surrounding the factory (see Daily News - Tanzania: July 7, 1972).

In 1974 SUDECO, the new parent parastatal, commissioned a study to expand the estate and to build a new factory as agreed to earlier in 1972. The feasibility study was made by Booker Agricultural International of U.K. However there were few changes made in respect to the 1972 agreement. This time, the government (through SUDECO) would own 70% of the shares in the new project; the cost was expected to be shs. 400 million - twice that of 1972; and the estate would be extended from 10,000 to 30,000 acres. The supply of sugar-cane by outgrowers and Ujamaa villages was seen to be problematic and unreliable - hence the decision to invest in a 20,000 acre sugar plantation.

The contract to build the new factory was awarded to one of the leading sugar machinery manufacturing firms of India - Walchandnager Industries Ltd., in 1976. The contract included the supply and installation of the entire machinery/equipment, powerhouse, and all the auxiliary facilities on a turn-key basis at a cost of US \$38 million. The factory project was financed by India (80% of the costs) and the Abu Dhabi Fund (about 20%). The development of the estate (estimated at US \$29 million) is supervised by H.V. International. It is mainly financed by Tanzania and by the Dutch government through an Agricultural Management Consultant agreement with Tanzania. When the Kagera War broke out in October 1978, estate development and factory

construction were in full swing - work had started in October 1977.

During the war, everything came to a stand still. Furthermore, the old factory was bombed and some machinery and equipment were stolen or destroyed. The loss was estimated at shs. 36 million. Walchandnager Industries Ltd. suffered a loss of about shs. 7 million (Daily News, Tanzania: 1,2/10/1979). After the war, everything had to be started again. The construction of the factory and the Tractor Workshop (TWS) for the maintenance of vehicles have now been completed. By June 1984 about 4,800 hectares of land under sugar-cane were at various stages of development.

The new factory was commissioned in 1982. During the first trial milling season of 1982, however, the factory faced the following problems:

- (a) interruptions of power supply to the factory due to malfunctioning of generator sets;
- (b) overheating; and,
- (c) choking and boiler failure.

The above problems were also experienced during the second milling season. As a result, one boiler had to be replaced by the suppliers. In addition to this, two out of the three power generator sets failed to function (i.e. became out of order) thus causing power failure. The supplier has been asked to replace them.

Notice should also be made of the fact that the main suppliers of factory machinery equipment, and the power house were selected on the basis of least cost and the fact that the Indian government offered financial aid to assist in the purchase of factory machinery and other equipment. The implication of this aid is that the supplier of machinery should be an Indian firm. Nevertheless, there were five tenders submitted to SUDECO by various firms. The tender by Walchanager Industries, Ltd. was the cheapest and the firm was considered to be one of the leading manufacturers of sugar refining machines in India. Thus, low cost and foreign aid were the main factors behind the selection of the Indian firm and thence the production technique employed by Kagera Sugar Company Ltd. The H.V.A. (Dutch) team that manages the estate is also financed by its own (Dutch) government through financial and technical aid to Tanzania. Through the advice rendered, consultant work, etc. it can safely be concluded that most of the technical decisions are made by these external institutions. The implications arising from such arrangements are discussed in the next section.

5.7 Choice of Technique, Procedures, Problems and Implications

It has already been mentioned in chapter four of this study that the government (ministries) defines and specifies which industrial sectors on which a holding parastatal should specialize and develop. These sectors define what products the parastatal can plan to produce locally. The choice of which product to produce first and which ones are to come later is

usually left to the planners and the parastatals. Even so, the government can order the parastatal to invest in the production of a certain particular product deemed to be of vital importance to the country. For some parastatals the choice of product is very narrow. For example SUDECO's investments can only be in sugar estates and sugar refining. Whatever the case may be, the choice of product comes first. Once this choice has been made, usually the parastatal concerned employs a consultant to make feasibility studies, explore the different alternatives open to the corporation, and to help in formulating and putting the project together.

The consultant is assumed or supposed to (i) have no interest in the project insofar as the supply of machinery and equipment is concerned; and, (ii) have no interest in contributing to equity, i.e. becoming a potential joint partner. This being the case, his report is usually regarded as neutral, unbiased, and once submitted it becomes the basis upon which subsequent decisions and steps are based.

The main consultants for SUDECO have been Tate and Lyle Technical Services (Britain) and Booker Agricultural International, a subsidiary of Booker McConnell (UK). Their supposed neutrality can be questionable on the grounds that another subsidiary of Booker McConnell, Fletcher of Stewart of Derby was awarded the contract to carry out the expansion of the Mtibwa Sugar Factory. The NDC has mainly depended on UNIDO to provide short term consultants, funding for feasibility studies,

and to advise on such issues as who would be the best experts for a particular project.

After the feasibility study, thence, the consultant's report, an open tender system is supposed to be used in choosing the supplier of machinery, equipment, and so forth and, or, the foreign partner to undertake the project as recommended by the consultant. The invitation goes hand in hand with the search for funds to finance the project - selling the project abroad.

Parastatal officials admit, however, that they lack experts in evaluating the different techniques tendered. Of course they can question certain aspects such as the level of automation, the design and machine layout. For very complex projects a consultant can be hired to help in evaluating the different tenders. In this case his advice is very crucial. But before the selection of any one tender, funds to finance the project are sought first. Consequently, if in one tender there is an offer for financial assistance, equity contribution, or both then it has a very high chance of being selected. This seems to have been the case with the Tanga Fertilizer Company (Coulson, 1977). In many cases, however, external aid will be from either multi-lateral or bilateral source(s). Usually, the aid donor will either review the original study by the consultant or require a second study by his own experts be made. This delays the project and can and usually does escalate the costs (c.f. the Kagera Sugar Company Project).

Furthermore, the donor usually imposes conditions on the procurement of machinery, equipment, and other imported inputs connected with the project. Thus, and as a result of these conditions, even the choice of advisors on technical, construction/installation work, and management becomes subject to the approval of the financiers (Williams, 1984:141). These procedures have the following problems and implications.

First, the so called international open tendering is rendered ineffective. Negotiations only start after the source of financing has been identified. The source of funds, we have argued, tends to narrow the search for alternatives, potential suppliers of machinery, etc. or both. In the case of the truck assembly plant, even before the negotiations were concluded, "Scania was known to be the foreign partner by Presidential Order" (Broden and Mattsson, 1981:52).

Second, it tends to lead to a situation whereby external aid dictates the choice of technique, management, and, or, technical agents and not Tanzania.

Third, it creates or leads to the situation whereby the Tanzanian negotiators are placed, structurally, in a position of fundamental weakness. They may have less motivation to back away from bad contracts or be very shrewd in the negotiations. One SUDECO official made the observation that beggars cannot be choosers. Indeed Broden and Mattsson, (1981:53) observe that,

It is an advantage to the foreign partner to know that, NDC, so far, has always completed its negotiations ..., has never backed out even when not entirely satisfied with an agreement. This partly

depends on the fact that decisions on new investments are political.

Fourth, Tanzania has, and continues to, receive bilateral aid from various sources coupled with tied procurement. This situation has led to various sources of equipment with little standardization. Consequently external dependence seems to have been intensified rather than minimized. In the manufacture of farm implements we have Chinese and Indian technology. Plans are underway to get British technology, Zimbabwean and possibly another country will be approached to help in the establishment of the proposed Mwanza Farm Implements factory. In the sugar industry we have plants from Britain, Netherlands and India. This situation makes not only the mastery of the various techniques involved slow and expensive but also the supply of spares needlessly complex. Of course this problem is aggravated by the fact that the criteria for selecting various techniques (employed by Tanzania) are imprecise. There are simply no categorical policy guidelines to screen imported techniques.

Lastly, and as a result of the above situation every parastatal may choose to put more weight on several or one of the criteria emphasized by national goals: simplicity, low cost, surplus generating, small-scale, and labour intensive. As a matter of fact, all the parastatal officials said that they opt for large-scale establishments because that was the national policy. One SUDECO official further added that the decision was taken from the very beginning to go for big industries and highly machine intensive except for cane harvesting - this is a national

policy. For NAFCO, all their grain farms are, on the average, large scale (because that is the country's policy) however, they are also highly mechanized simply because labour is expensive and uneconomical. We therefore agree with those who see a tendency and bias towards large-scale and capital intensive establishments. This bias, we maintain does not necessarily contradict national development objectives as argued by Williams (1984). If anything, it is consistent with the dominant mode of production - state capitalism.

5.8 Conclusion

In this chapter, we have argued that the dominant mode of production in Tanzania (state capitalism), thence, state institutions; international capital; and, organizational arrangements especially those emanating from state-economy relationship affect and exercise considerable influence on the choice of technique. We also pointed out that the strength of the actual influence to be attributed to each, several, or all of these factors will be project specific - depending on the objective of production and other political considerations.

In some situations the dominant mode of production will exercise the greatest influence. This was more obvious with the case of the Automated Bakery Factory (chapter four). In the case of Ubungu Farm Implement Factory and the Kagera Sugar Factory respectively, the greatest influence seems to have come from the source of foreign aid. We also pointed out that due to contradictions that exist between the economic base and the super

structure (of the Tanzanian social formation), then there are bound to be contradictions or lack of harmony between policy formulation and its implementation. Insofar as industrial growth is concerned, this contradiction implies that the national goals do exercise their greatest influence on the choice of products. Their influence (except where product inevitably leads to a particular production technique - e.g. oil refining) on the choice of technique has been minimal. Technical choices are influenced and affected by the dominant mode of production and international capital.

Organizational constraints and international capital in the form of bilateral foreign aid has led to the situation whereby Tanzania has many plants and high technology equipment from various sources. Consequently, the mastering of the different techniques involved by Tanzanians becomes slow and expensive. Lack of standardization also creates problems insofar as the importation of spares and component parts is concerned.

We have also shown that parastatals in Tanzania prefer large-scale establishments. This is their perception of what is meant by "national industries" or "state-farms". Insofar as the sugar industry is concerned, the decision was taken from the very beginning to go for large-scale machine intensive techniques, except for cane harvesting. For other parastatals the bias towards machine intensive techniques is due to their technical efficiency, the need to keep pace with the latest technical developments, and labour is considered not only expensive but

also has little experience and lack necessary skills. This bias we have argued tends to lead to heavy reliance on expatriates through management and technical/consultant agreements - thence the perpetuation of dependence.

We agree that small-scale and labour intensive techniques can be skill intensive.¹¹ But there is need to point out that the problem of lack of experienced and skilled local personnel cannot be solved by resorting to expensive machine intensive techniques. Skills and experience have to be developed and, in the long term, Tanzania will benefit a lot by encouraging their development from the very beginning. It is therefore not by accident that Tanzania is faced with a serious problem of lack of foreign exchange. Her industries are dependent on imported resources (inputs and manpower). The cases presented in this chapter clearly lend support to this generalization.

This situation calls for a careful scrutiny of future projects and foreign aid so as to avoid and reject those which lead (in the long run) to the perpetuation of external dependence, surplus extraction out of the country, or both. The concentration should be on long term benefits, on a carefully selected sequence of industrial projects to reach national goals and to minimize dependence. For example, Tanzania now has a steel rolling plant, two farm implements manufacturing factories (a third one is on the pipeline), a metal box company, a truck assembly factory, a factory manufacturing railway wagons, etc.; all these use imported steel. Yet the country has known for a

long time now, that it has iron-ore and coal deposits in large quantities to warrant the establishment of an iron and steel industry. Had the decision been to start with this investment first despite (short term high costs, since the market was then narrow) the advantages would have been tremendous in the longer term. Furthermore, since agriculture is the main earner of foreign exchange the immediate solution to foreign currency scarcity seems to be to allocate more resources in the development of agriculture. In the longer term, however, the experience of other countries such as the Soviet Union, China, etc. tend to lend support to the generalization that high import content could have (or can only be) minimized by establishing from the very beginning a heavy capital goods sector. The researcher was delighted to learn that construction work for a "Machine Tools" factory in Moshi, Tanzania is in full swing (for the manufacture of different spare-parts and machines) while feasibility studies are being conducted for the establishment of an "Iron and Steel" complex - regarded to be the biggest industrial project in the country - using local iron-ore deposits at Liganga, Rudewa district, Iringa region (Shirika la Maendeleo, 1982:9).

The problem of import dependence can also be greatly reduced if more resources are to be made available for the promotion of small-scale industries using local resources than is the case at present. This would also help in overcoming transportation bottlenecks, assuming of course that, these units

will be near the local resources and markets. But, the promotion of small scale-units of production is also a political question. In Tanzania , although the political will to do so seems to be there, the problem according to President Nyerere is that, "We have talked a great deal about promoting small-scale and cottage industries; the problem is that we give it so little practical encouragement" (Tanzania Information Services; 1975:9).

Even so, the researcher is of the opinion that small-scale industries by and of themselves are not capable of transforming the economy of an LDC nor bringing about a viable solution to the liquidation of underdevelopment. If, however, they are linked with capital goods and/or basic industries, and if they make use of local resources, they can help (a) to relieve the problem of balance of payments; (b) to save foreign exchange by reducing imports; (c) to expand internal markets; and hence, (d) form the basis for further industrialization. If such small-scale units are established in the rural areas, then they can improve the quality of life there by providing not only work for the rural under/or unemployed people but can also promote the development of agriculture by producing agricultural tools. Thus the lesson we have to learn from Tanzania is that large-scale production should not be taken at the expense of (neglecting the promotion of) small-scale industries nor should industrial development be undertaken at the expense of neglecting the development of agriculture. Industry and agriculture should be developed together, small-scale and large-scale units of

production should be linked to one another and developed together. One of the implications of this is that the education system should also offer, among other things, programmes that emphasize the technical education necessary for promoting small-scale and cottage industries. In this way, and assuming that these units are skill intensive, then the problem of lack of experienced skilled manpower can be minimized.

But, we have already shown how international capital, the parastatals, and the dominant mode of production tend to bias technical choices away from small scale labour intensive techniques. We have also argued that technical choices are rarely socially neutral. Of course, the bureaucratic bourgeoisie lacks experience in production, financial, managerial, and technical capacity to invest and sustain production in the nationalized firms or the new projects it desires to establish. It also lacks full/complete information on the different technical alternatives open to it. Thus, the dependence on and cooperation with international capital or transnational corporations. The advice given by these corporations (say through feasibility studies, management, technical and consultant agreements, etc.) is biased towards the techniques currently employed by these corporations in the ACs - labour saving techniques. The consequence of such choices on the part of Tanzania is continued dependence, albeit in a different form - i.e. in the form of expatriates, spare-parts, sometimes even raw materials, patents, etc. The transnational firms involved

benefit from fees paid to them in the form of either royalties, technical fees, management fees, patent fees, etc.

In addition to this, the control of the state enterprises (the parastatals) by the petty/bureaucratic bourgeoisie reinforces the tendency towards the above bias. This class, as was argued in chapter four of this study, has certain characteristics -- i.e. (i) nationalism and non-class ideology and (ii) tendency to (a) rely heavily on the military (b) vacillate (c) feel that it alone can/do represent the interests of the whole nation -- which have, among other things, led to the cooptation or lessening the autonomy of independent organizations. The implication of this on the choice of technique is that in Tanzania there are no independent formal (worker's, and, or peasant's) organizations to exercise considerable influence on the planners, etc. to bias technical choices towards the 'so called appropriate techniques - considered to be in their best interests. Parastatal organizations in Tanzania can be regarded as carriers of modern large-scale and machine intensive techniques. Thence there are no independent carriers (with the necessary power and capacity) for the so called appropriate techniques/technology.

Of course, the workers and peasants have been, since the Arusha Declaration, heavily politicized and they are aware of their interests. Given this situation together with the fact that (even in the state-owned enterprises) the relations of production are still the employer-employee (capitalist) type of

relations then (i) the management, foreign and otherwise, is hesitant to allow real and effective workers control, and (ii) the relations between the state and the workers/peasants tend to be ambivalent. This is manifest in the manner in which the state has handled labour disputes (before and after the Arusha Declaration) and the rural question in Tanzania. This also constitutes yet another explanation towards machine intensive techniques even in state farms. Indeed, the results of rural development strategies pursued by Tanzania has or tend to make the state skeptical about programmes heavily dependent on the peasantry.

Furthermore, the national development objectives of achieving self-sufficiency in certain products (e.g. sugar, textiles, shoes, etc.) and also to produce excess of the same products for export markets have considerable influence on the choice of technique. That is, the implication of this production objective is to go not only for large-scale but also modern machine intensive techniques (with imported management) so as to ensure the production of good quality products to compete in export markets.

To sum up, the dominant mode of production (and with it the relations of production and the state-economy relationship), the objective of production, the control by the petty/bureaucratic bourgeoisie, and the interests of external institutions have exercised considerable influence on the choice of technique by Tanzanian public enterprises. In particular,

these factors, to a large extent, tend to be carriers of large-scale and/or machine intensive techniques, the consequences of which are high import dependence, thence, low capacity utilization and perpetuation of external dependence albeit in new forms. In spite of this, we need to stress that without state intervention and without the collaboration with international capital, the rapid industrial growth (establishment of new industries) which took place after the Arusha Declaration, would not have taken place. Seen in this light, the Arusha Declaration was a success that seems to have failed. That is, it was successful in attracting foreign capital into the country but as a result the declaration failed to achieve (at least up to now) its stated basic or main objective: to minimize dependence on the international capitalist system.

In concluding this study, therefore, there is a need to point out that foreign aid was not without significant benefits to Tanzania. Foreign aid, especially after the Arusha Declaration, enabled international capital to enter into those sectors and projects identified by Tanzania. Thus, it certainly helped in promoting national goals insofar as the choice of product(s) was concerned. Second, foreign aid has also led to close relations - for good or otherwise - between the donors and Tanzania. Hopefully, they now have a better understanding of the problems facing the country. Needless to say that Tanzania now knows much more about the problems of foreign aid. Finally, it is not far-fetched to suggest that foreign aid enabled Tanzania

to survive the economic problems and the drought of 1980-83 which brought about, inter alia, a serious food crisis. There are encouraging reports that the food problem, at least this year, is over, thanks to ample rains in the 1984/85 period.

Yet, to allow investment decisions and resource allocation to be dependent on and/or to be heavily influenced by external aid is tantamount to contracting out our development to others. The chances of them steering towards their own interests, and, or, being taken off course are very high. Indeed our analysis shows that this has been and continues to be the tendency, radical political ideology notwithstanding. This, above all, is the lesson to be learned from and by Tanzania. In the next and final chapter of this study, we present a summary of major issues discussed in this study, policy implications and recommendations.

FOOTNOTES

Chapter 5

¹Of course there are exceptions, especially those cases where industrial redeployment to LDCs is made specifically to take advantage of the cheap labour there because the operations involved are, by their very nature, labour intensive.

²The assumption here is that technical changes in the advanced countries had pushed most techniques towards labour saving processes. Thence, the seller is most likely to prefer to sell the technique with which he is most familiar.

³See also Bradshaw (1985:198) for similar observations.

⁴As a matter of fact, this is precisely the argument advanced by the former NDC financial director in connection with the need for management agreements (for details see Romnicianu, 1971).

⁵For example, high quality sugar used to be exported up to 1979 so as to get foreign currency at the expense of starving the home market (SUDECO officials). This has also been the case with other products such as textiles (see Mramba, Minister of Industries budget speech 1981).

⁶For example, conflicts of interest between Tanzania (NDC) and Saab-Scania AB (Sweden) led to long and heated discussions insofar as the establishment of the factory to assemble Scania trucks in Tanzania was concerned (for details see Broden and Mattsson, 1981).

⁷The installed capacity as rated by the manufacturer was 1,500 tons of sugar-cane per day, the actual - after performance test - capacity turned out to be 1,565 tons of cane per day (Factory Manager).

⁸H.V.A. International was and still is the management agent of the Kilombero Sugar Factory (Tanzania) since 1967.

⁹Lack of diesel due to transportation problems caused by heavy rains in August 1979 stopped the production of sugar for 9 days - a loss of production of about 1100 tons of sugar.

¹⁰According to SUDECO officials the government ordered the corporation to halt the export of sugar in 1979. In this year there was a serious shortage of sugar in the country and

reports that the country was selling sugar abroad simply did not make sense to most people.

¹¹ For example, Bhagavan (1979: 68 Table 14) noted that, the average percentage distribution of skilled manpower by category in manufacturing enterprises in Tanzania and Zambia in 1975 was - for Managers; Engineers; Technicians; Skilled Workers; and Semi-skilled Workers respectively as follows:

(i) Large Scale

Labour-Intensive: 0.3%; 0.7%; 2.4%; 10.4%; 86.2% Total=100

Capital-Intensive: 0.7%; 1.3%; 8.2%; 17.8%; 72.0% Total=100

(ii) Small Scale

Labour-Intensive: 1.2%; 6.2%; 6.2%; 49.4%; 37.0% Total=100

Capital-Intensive: 1.0%; 1.0%; 9.4%; 15.6%; 73.0% Total=100

This shows that large-scale labour intensive is the least skill intensive followed by large-scale capital intensive; small-scale labour intensive units were the most skill intensive.

CHAPTER SIX

SUMMARY, POLICY IMPLICATIONS AND RECOMMENDATIONS

6.1 Summary of Major Issues and Observations

6.1.1: There are many solutions which have been offered to the socio-economic problems which have and continue to face the less developed countries. During the last ten years or so, however, the use of appropriate technology for and the production of basic needs is deemed to be the panacea to the problem of underdevelopment.

6.1.2: This study has demonstrated that since the word appropriate connotes certain value judgements, the concept of appropriate technology has been subjected to different interpretations and definitions by various groups or person(s) none of which is categorical or universally adopted. To avoid this problem, this study has suggested that the word appropriate should be applied to the decision and, hence, choice leading to adoption and not the technology selected.

6.1.3: Furthermore, what has emerged from this study is the fact that technology or production techniques for that matter are seldom socially neutral. Certain techniques with certain properties tend to favour certain social forces. The implication of this is that socio-political factors and concerns of certain social groups or classes play a central role in influencing the choice of technique by decision makers. Consequently, the use of

the so called appropriate techniques for/or the production of basic needs, and indeed the problem of underdevelopment is largely a political question. To ignore this is to be out of touch with reality and tantamount to technological determinism.

6.1.4: There are many factors which affect, constrain, and influence decision makers in their choice among various technical alternatives. In this study we have argued that in LDCs the most important factors are those connected with the dominant or expanding mode of production, the particular type of state-economy relationship, and the external interests due to the external dependence relationship.

6.1.5: What has emerged from this study is that although there are elements of plausibility in each of the various explanations accounting for Tanzania's development and the current economic crisis, many suffer from the tendency to be mono-causal. The fact is that both internal and external factors are responsible for the situation in which Tanzania now finds itself.

6.1.6: Concerning the nature of Tanzania's development, this study has revealed that despite the country's ideology of socialism and self-reliance (c.f. the Arusha Declaration), Tanzania is still a (peripheral) capitalist state. But one in which, because of the ideology, the super structure does not correspond with the basis. The implications of this situation include lack of correspondence between policy (formulation) and implementation, between political rhetoric and practice.

6.1.7: The Arusha Declaration facilitated the strange alliance and coincidence of interests. This involved the alliance between the Tanzanian peripheral state, the metropolitan capitalist states, and international capital. The peripheral state needed but lacked capital (foreign exchange) to implement its own development programme, the metropolitan capitalist state(s) have the task of aiding/creating necessary conditions for capital accumulation (by private firms) at home and possibly abroad; the capitalist firms want to do business abroad to counteract the tendency of the rate of profit to fall at home (or simply to secure and maintain markets). Tanzania provided the market and the bulk of the labour force, the metropolitan state provided the financial capital/resources - via foreign aid to Tanzania, and the private firms provided the machines, equipment, management, and highly skilled manpower. Consequently, what was originally given the label foreign aid to Tanzania found its way back into the metropolis and ended up in the hands of private firms, thence, aiding capital valorization.

6.1.8: Furthermore, and regarding the factors influencing the choice of technique in Tanzania, this study has demonstrated that the dominant capitalist mode of production, the organizational procedures and constraints emanating from the state-economy relationship existing in Tanzania, and the external interests all tend to bias technical choices away from small scale, and labour intensive techniques. However, the national development

objectives have been very influential in determining the choice of industry or product.

6.1.9: Thus, this study has revealed that international capital has helped to forestall the development of socialism in Tanzania, helped to perpetuate the external dependence relationship by biasing technical choices towards sophisticated and complex techniques of production. In this way extraction of surplus value from Tanzania is achieved through royalties, management and technical fees, spare parts, and so forth. Surplus also finds its way to the metropole through relations of unequal exchange. However, since the peripheral state also has and/or enjoys relative autonomy vis-a-vis class forces (internal and otherwise) this tendency is and has sometimes been corrected, thence, the existence of a wide range of techniques. However, investments by parastatals in large-scale establishments predominate and, it seems, at the expense of small-scale units.

6.1.10: This study has also demonstrated that the variety of sources of machinery and equipment, largely due to tied procurement aid conditions tend to aggravate the problem of spares and the mastery of the techniques involved by local personnel. The mastering of the different techniques becomes a slow and expensive process.

6.1.11: The criteria for selecting different techniques are imprecise. Thus one of the major findings of this study is that

Tanzania lacks clear and precise guidelines to regulate the importation of technology into the country.

6.1.12: This study has also re-established that capacity under-utilization in Tanzania is mainly due to high import dependence of her industrial firms coupled with the foreign currency bottlenecks.

6.2 Policy Implications and Recommendations

6.2.1: The lack of correspondence between the basis and the super-structure is bound to result in confusion and problems. This calls for either the restructuring of economic institutions, thus, making them more capable of steering socio-economic development along the path implied by the super-structure or the other way round. This can be done by first issuing clear and precise policy guidelines to indicate which areas or sectors (products and services) are to be left to the private sector and what exactly will be the role of the state in such cases.

6.2.2: Regarding the procedures followed in choosing the foreign partner or machinery and equipment supplier, there is need to reduce the influence of the source of finance. This can be done by avoiding the current practice of seeking funds first and then negotiations to follow with the tenderer approved or suggested by the aid donor. Instead, negotiations should take place with several tenderers or potential foreign partners simultaneously and the one who meets Tanzania's concerns should be chosen or identified subject to the finding of funds. It is

therefore highly recommended that foreign aid should be sought only after the decision to whom to award the contract has been made. The implication of this is that aid should either be sought from multi-lateral agencies or from bilateral donors which would allow procurement outside their national economies. In other words, tied procurement aid should be rejected except of course in those cases where the supplier/or partner selected comes from the same source.

6.2.3: Concerning the problem of foreign currency and import dependence, there is need to stress that this problem can be reduced significantly by following a proper well-identified sequence of industrial establishments and investing in the capital goods sector. The researcher highly recommends that efforts should be made to study this problem carefully and develop the desired sequence. The guiding principle, however, should be long-term as opposed to short-term benefits.

6.2.4: At this stage of Tanzania's development there are many industries working at very low levels of installed capacity due to supply as opposed to demand factors. The implication of this is that the effort now should be directed at sustaining production in the already established plants and to discourage the establishment of industries which will use imported raw materials. Indeed the national goal ought to be to meet local demand from local resources.

6.2.5: Underdevelopment is one of the consequences of a specific development which was and still is closely associated with and derived from the development of the capitalist world market. Lack of indigenous (Tanzanian) capital and the low level development of productive forces (science, technology, and manpower) as well as the one-sided dependence relations with advanced countries are the product of Tanzania's underdevelopment rather than their causes. However, once formed, they tend to perpetuate underdevelopment. The implication of this is that, unless there is a careful scrutiny of foreign aid projects (so as to avoid those which despite their short-term benefits are more likely to perpetuate the above conditions) there is a high risk of international capital (in the form of foreign aid) leading to the perpetuation of underdevelopment via its role in the choice of technique rather than its demise. The researcher highly recommends that the Tanzanian government study this problem in depth and come out with clear and specific policy guidelines indicating under what conditions and with what strings foreign aid should be rejected. Aid per se is not the problem, the problem is rather what type and under what conditions.

6.2.2: Industrial growth should not be undertaken at the expense of neglecting agricultural development nor should the establishment of large-scale units be at the expense of neglecting the promotion of small-scale industries. Rather these two types of development should be pursued simultaneously and closely linked. Industrialization should promote agricultural

development and agricultural development should be the basis for further industrialization. On the other hand, small-scale industries should be linked with large-scale national industries, if need be through the system of subcontracting, in such a way that each stimulates and forms the basis of the further development and/or expansion of the other. The author therefore recommends a careful study of this issue and that resources be made available for promoting the establishment of small-scale industries and agricultural development.

6.2.7: Further research is needed to establish the general relationship between technique and social organization; and, on the problems and benefits to be derived through technological transfers between less developed countries. This latter recommendation is very important since on the one hand some of the findings of this study do suggest that large-scale machine intensive techniques imported by Tanzania from another less developed country (India) are faced with serious technical problems on the other hand those imported from China (another LDC) have allowed a rapid mastery by local personnel of the techniques imported.

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APPENDIX A

Questions which guided the discussion

A. THE HOLDING CORPORATIONS

1. How is a decision concerning the establishment of a particular type of industry (i.e. choice of product) arrived at in Tanzania in general and in this corporation in particular (steps involved)?
2. (a) After the choice of industry has been made, are there any specific policy guidelines which are used in selecting or choosing which production technique to be imported for the production of the product in question? Please elaborate on this.

(b) If the answer to 2a above is no, please describe briefly the current practice with regard to choice of techniques for your subsidiaries.
3. In your view what are the main factors one has to bear in mind while selecting appropriate production techniques to be imported into the country?
4. What problems is one likely to face in this task (you may pick particular projects)?
5. In which ways and at what stages are the following institutions, groups, etc. involved in negotiations, contract preparation, and choice of technology/techniques to be imported and used in a certain production unit?
 - a) Ministry of Industries
 - b) Parent Ministry (if different from 5a above)
 - c) This Holding Corporation
 - d) TISCO
 - e) Attorney General Chambers
 - f) Tanzania Legal Corporation
 - g) Investors and/or Donor Agencies
 - h) Bank of Tanzania
 - i) Tanzania Investment Bank
 - j) Others (please specify)

6. Is UNIDO or any other International/Foreign Organization or Agency involved in advising in any of the following?

- a) Feasibility studies
- b) Choice of technique, partners/ or collaborators
- c) Contract preparation/formulation
- d) Other issues (please specify)

7. In deciding on which production technique(s) to be applied for a given project, what weights -- if any -- do you put on the following factors? (If no weights are used please rank them in their order of importance.)

- a) Employment generation
- b) Linkages with other local industries
- c) Technical/engineering aspects, e.g. scale, complexity, power/fuel consumption, electricity or oil, etc.
- d) Social aspects such as system of control
- e) Environmental factors such as pollution
- f) Use of, or building on, indigenous technology
- g) Other factors (please specify)

8. (a) How many Engineers are there in your directorate and what are their specialties beyond first degree level?

(b) What is the composition in terms of specialties of your planning department (or unit) and nationality of its members?

9. (a) Do you have any specific objectives for your institution which you want to achieve: technical, economic, or organizational, etc.?

(b) If so, please name them.

10. Please give any suggestions and/or make some recommendations to improve the present system or practice of choice of technique in Tanzania.

B. THE PRODUCTION PARASTATALS OR FACTORIES

Below are some of the questions which guided the researcher in his discussions with various officials of the firms -- production units -- covered by this study.

1. How many different alternative techniques are you aware of were considered for the production of _____ in this factory?

2. (a) What are the production and employment capacities of each of these techniques?
(b) What are the capital and labour requirements of these techniques at the same fixed level of out-put?
3. On what basis were the techniques currently in use here selected?
4. In your view what other factors interfere with or constrain/influence the final choice of technique in any industry in Tanzania in general?
5. What major raw materials are used here? Please indicate which ones are found locally and which ones are imported.
6. Have operating costs and profits changed over the years? If so, what are the major causes for this?
7. What is the actual or estimated size of the Tanzanian market for the product(s) you produce?
8. If your firm now is operating at levels below full capacity, what are the main causes/factors behind this performance?
9. How many Engineers, Technicians, and Artisans are there in this factory? Please describe the system of training for each of these categories of technical personnel.
10. Does your firm now or in the past have any management or technical agreements -- or both -- with any foreign firm or organization? If so, what type of conditions does it involve and for how long?
11. What is the composition of your planning unit, if any?
12. What problems (socio-political, economic, and technical) do you usually face? What steps are being taken to solve them?

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