

INTERNATIONAL TECHNOLOGY TRANSFER:
THE CASE OF LICENSING
IN NIGERIA.

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TO MY FAMILY
<NWANNEKA>.

ABSTRACT.

This study is concerned with the issue of international technology transfer, particularly to developing countries through licensing. Given the imperfect nature of technology market, multinational enterprises (MNEs) wield considerable amount of bargaining power in the negotiation of technology transfer arrangements with both related and unrelated parties. However, the intervention of host governments in the negotiation processes increases the complexity of the bargaining power issue. This aspect of transfer negotiation which is largely ignored in the literature, stems from "perceived need" to increase the benefits flowing from the operations of MNEs in the host country. Therefore the relationship between foreign investors and host countries is one of bilateral monopoly : the foreign investor has control over capital, technology, management and marketing skills needed to launch a product successfully; the host country has control over access before investment is made and over conditions for operating afterwards.

Evidence from the literature show that bargaining power is a dynamic concept which incorporates a wide variety of variables. With developing countries, these variables are further complicated by the knowledge that neither the goals nor the relative bargaining strengths of the MNEs and host governments are static. They change over time.

Therefore this study assesses the bargaining power determinants in a "controlled market" in which conditions are determined by the political and economic aspirations of the host government rather than by market forces of demand and supply. It also reviews the policy

implications of the findings on the licensor; the licensee; and the host government.

The results of this research revealed that in Nigeria, two principal factors were decisive in the determination of bargaining powers of both the multinational enterprises and the country, and these were (i) technology and its perceived importance by the host country, and (ii) the host government control policies.

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CHAPTER ONE.

INTRODUCTION AND OUTLINE.

CONTENT.

- 1.1 Introduction to the Study.
- 1.2 Scope of the Study.
- 1.3 Organisation of the Study.

1.1 Introduction to the Study.

This study concerns the issue of international technology transfer through licensing and the evaluation of the relevance of the bargaining power model to the negotiation of foreign technology licensing arrangements in a "controlled economy". For the purpose of this study, controlled economy is defined as an economy where.

"marketing is strongly regulated by the government and operates on an "allocative priority" basis rather than on a free market basis. Marketing activities are therefore, severely restricted and often have to be adjusted to be in line with government priorities rather than market priorities".

(Carter, 1988).

Nigeria, like most developing countries, strives toward exercising greater control over the determination of its technology needs, and the desire to strike a balance between national objectives and the needs of private businesses, especially as it affects the acquisition of needed technology. Technology transfer to developing countries is an issue that generates great passion among the importing countries. It is particularly so because of the inevitable involvement of multinational enterprises (MNEs), and the general perception by host countries vis-a-vis their exploitative tendencies (see Biersteker, 1981). It is argued that MNEs may provide to the host countries, technology (product, process or managerial), capital, and through their foreign direct investment activities, create much valued employment. However, MNEs

seldom determine the terms of access to their markets and subsequent operating conditions. These are determined by the host government

In studies such as Poynter (1982); Fagre and Wells (1982); UNCITC Third Survey (1985), it has been shown that possession of certain advantages provide bargaining leverage for the possessor. It is argued that in certain nations, the size and wealth of the market can be sufficient to provide a large amount of bargaining power to the host country (see also Ndackson, 1987).

In Robock and Simmonds' geobusiness model of international business (1983), they argue that there are three major variables that influence the decision for international production namely (a) conditioning variables (product-specific, country-specific and inter-nation); (b) motivation variable (firm-specific and competitive); and (c) control variables (country-specific and inter-nation). It is also argued that it is the interaction of these three sets of variables that creates an incentive for business to cross national boundaries.

Of the three sets of variables, it is the control variables that indicate restricting or encouraging actions on the part of home and host countries to influence international business decisions. Even if the necessary conditions exist and specific firms are motivated to make a particular change in the location of production facilities, the change may be negated or re-directed by the actions of an individual country or countries working in concert.

Robock and Simmonds explained that :

"the potential match between a foreign enterprise and a local business opportunity may be motivated to exploit this potential. Yet the potential may not be realised because of national control policies in either or both home and host countries. National control variables consist of laws and administrative actions of both home and host governments intended to achieve national welfare goals. These control factors can act as incentives or constraints; they keep changing over time as national goals keep changing."

Host country control programmes are more numerous and varied than home policies as they affect international investments. They may proscribe certain business areas of foreign investors, (as in Nigeria, under the Nigerian Enterprises Promotion Decrees 1972 and 1977), restrict foreign exchange remittances, affect technology transfer agreements, require sharing of ownership with locals and so on.

In the eclectic theory of international production, Dunning (1980) argued that the possession of ownership advantages determines which firms will supply a particular foreign market, whereas the pattern of location endowments explains whether the firm will supply the market by exports (trade) or by local production (non-trade). Moreover, Dunning argue that the more the ownership-specific advantages possessed by an enterprise, the greater the inducement to internalise them; and the likelihood that an enterprise, given the incentive to do

so, will engage in international production through foreign direct investment (FDI).

Therefore the geobusiness model and the eclectic theory of international production are important in our understanding of ownership- and location-specific advantages. On the other hand, the Poynter and Fagre & Wells studies are relevant in our appreciation of bargaining power determinants particularly from developing countries' standpoint. Although these studies emphasised that access to developing countries' markets features as a bargaining power determinant only when the size of the market is sufficient to be desirable to MNEs. Consequently, where private enterprises negotiate with foreign technology suppliers, they do so on the strength of the market potential and invariably the sales potential of the technology in the host country market.

It is argued that inspite of the fact that developing countries depend largely on MNEs for much needed technologies, they have considered it necessary to regulate the activities of these MNEs in their countries (De La Torre, 1981, and Stoever, 1985). While licensing is seen as one of the cheap options of acquiring technology, most developing countries like Nigeria consider it necessary to assess the desirability of certain technologies that MNEs provide with restrictive conditions (Okono, 1987). It is argued that the realisation of the gains from the acquisition of technology depends upon the terms under which the technology is transferred, and also upon the suitability of the technology.

This study is agreement-specific and covers the concept of bargaining power in international technology licensing arrangements involving both unaffiliated or arm's length licensees as well as agreements with affiliated firms. It assesses the significance of majority equity interest of a licensor in a licensee company, during licensing negotiations within a controlled economy, and considers the applicability or relevance of the theoretical bargaining power model, as demonstrated in Root and Contractor study (1984), in a controlled economy. However, it is noteworthy that the Root and Contractor study was limited in scope in that the emphasis was primarily on the negotiation of price of technology, excluding other important conditions such as duration, termination, arbitration and other restrictive provisions. In their study, they argue that the licensor's compensation has to be allocated to three types of costs before determining pure rent accruing to the licensor from the technology.

The licensor's transfer costs are all the variable costs incurred in transferring technology to the licensee and all the on-going costs of maintaining the agreement (technical services, legal services, marketing assistance and other direct costs of executing the agreement). In addition to these transfer costs, two other kinds of cost are borne by the licensor namely (a) the R & D cost of the licensed technology and (b) opportunity costs arising from the foreclosure of other sources of profit, such as exports or direct investment in the licensee's territory or in other countries.

The economic rent of the licensing agreement is defined as the licensee's total revenue from the sale (or use) of the licensed product or process minus the sum of the licensee's production and marketing costs and the licensor's transfer costs (Root and Contractor, 1984). The agreement economic rent is divided into the licensor's share and licensee's share.

In a straight bargaining process, each party seeks to negotiate a price that increases its share of the agreement's economic rent. In a controlled environment where the host government provides guidelines for negotiation, the licensor's consideration for licensing in that kind of environment goes beyond the immediate benefits derivable from the economic rent, because in most cases, royalties from such licensing arrangements do not justify continued presence in such environments. Other wider issues come into play such as the licensors long term strategic plans for the host market, existing investments, and auxiliary businesses that will ensue from the licensing arrangements such as the sale of raw materials, components and parts.

This study considers the wider issues involved in technology transfer negotiation particularly with developing countries such as government interference with market forces, and long term strategic considerations of the firm. Studies such Poynter (1982) and Fagre and Well (1982) have considered some of these factors individually and in isolation. This study assesses the impact of each of these factors in order to determine their significance in technology negotiation as well as their influence on each other. The objectives of this study are well

discussed under research problems and methodology in chapter six. However, briefly, the objectives of the study are three-fold namely :

1. To determine the variables that influence the process of negotiation of technology transfer between a foreign licensor and a host country licensee in a controlled environment, on the terms and conditions of transfer;
2. To assess the degree of importance of identified variables in the negotiation process; and
3. To evaluate the policy implication of the findings on (i) the licensor, (ii) the licensee, and (iii) the host government.

This means that we have a wider coverage in scope of the variables affecting negotiations than the previous studies, in one study.

1.3 Organisation of the Study.

This study consists of two parts -

- (a) Literature review and
- (b) Methodology, analysis of results and conclusion.

The literature review section comprises of four chapters (chapter two - five). This section of the study examines the theoretical and empirical studies that have been undertaken in relation to international technology transfer.

Chapter two of this study deals with the definition and explanation of the term technology. It considers different types of technology, the transferability of technology and the various methods of international technology transfer. The chapter also evaluates the importance of multinational enterprises in the technology transfer process, the nature of technology vis-a-vis its role in a country's economic growth and development. It concludes with the discussion of possible host country constraints on the various modes of transfer.

Chapter three discusses licensing of technology as an alternative approach to exporting and foreign direct investment. It evaluates the extent of the use of licensing in industrialised countries as well as its use in developing countries by multinational enterprises. The chapter also reviews the factors influencing firm's decision to license; looking at it from three levels-

- (a) firm-level factors,
- (b) industry/product-level factors and
- (c) country/market-level factors.

It concludes with a discussion on some general problems of licensing such as the difficulties involved in determining the price of technology; difficulties in policing an agreement to ensure that proprietary know-how does not escape to unauthorised person(s); and the cost of managing a successful licensing relationship.

Chapter four reviews the concept of negotiation and bargaining power. It considers the bargaining power determinants from both the multinational enterprises and the host developing country's perspectives. It also evaluates the impact and/or influence of the

determining variables in the negotiation of technology transfer agreements. The chapter concludes with a review of Root and Contractor's (1984) normative configuration of licensing negotiation because of the particular relevance of the model to the study.

Chapter five discusses the economic and social condition of Nigeria, being the focus of the study. It makes sectoral analysis of the economy and discusses Nigeria's technology policy and the role of the government in technology acquisition. It then reviews the position of licensing in Nigeria.

The second part of the study consists of five chapters (chapters six - ten), and covers the methodology and field survey.

Chapter six is the methodology chapter and reviews the research problems, objectives of the study and the research design. It discusses the approaches adopted for field research and the analysis of the results.

Chapter seven deals with the analysis of the findings on a descriptive basis and it is divided into six sections, covering the characteristics of the companies in the sample, details of licensing agreements in the study, the bargaining process, bargaining power and the independent variables as well as the impact of licensing on the licensee.

Chapter eight of the study covers the second part of the research findings and it is analytical, presenting an in-dept analyses of the research findings. A comparison of the results is made against previous

research findings. The chapter concludes with an assessment of the relevance of the bargaining power concept in a controlled economy.

Chapter nine consists of a series of mini-case studies. These case studies cover the major findings of the study.

Chapter ten deals with the review of the study, conclusions derived from the study and its policy implications for the three principal actors in the technology transfer process, namely :

- i. The Licensor,
- ii. The Licensee, and
- iii. The Host Government.

The chapter is concluded with recommendations for future research.

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CHAPTER TWO

TECHNOLOGY.

CONTENT

- 2.1. Technology - Definition and Explanation.
- 2.2. Transferability of Technology.
- 2.3. The Multinational Enterprises, Technology Transfer, and Developing Countries.
- 2.4. Mode of Transfer - a. People
 - b. Literature
 - c. The Multinational Enterprises.
- 2.5. Host Country Constraints.

The term "technology" is probably one of the most misunderstood terms in the field of international business, and its everyday use has tended to restrict the meaning to the context of advanced engineering. The misconception stems from its lack of precise definition. Technology has been described (rather loosely) in various forms by academics to include capital goods that yield higher rate of output per unit of labour, capital or raw materials employed; information; knowledge (intangible); management organisational techniques, as well as marketing skills. Rugman, Lecraw and Booth (1985) argue that the value of a specific product or process technology usually seldom resides simply in some well defined entity, but in the complex expertise that surrounds this entity. It also resides in future improvements and innovations to both the specific technology and the surrounding support activities.

Because of this ambiguity, it is important to define clearly the term technology and describe the various forms which technology could take. The aim of this chapter is therefore to review the basic issue of technology, its transferability especially to the developing countries, and the role of multinational enterprises in the transfer process. It also considers the various alternative channels of transfer which are available to developing countries. The chapter concludes with the discussion of the constraints on developing host countries over transfer and assimilation of technology.

Reference to the Oxford Advanced Learner's Dictionary of Current English (Hornby, 1980) shows the definition of technology as:

"study, mastery and utilisation of manufacturing and industrial methods, systematic application of knowledge to practical tasks in industry".

Other definitions of technology include:

"Useful knowledge - anything that allows us to attain a greater amount of production or consumer satisfaction with the existing stock of labour and capital".

(Gladwin and Walter, 1980).

"the state of art in a socio-economic environment. In other words, the technology of a society represents the composite usable knowledge that the society applies and directs toward the attainment of cultural and economic objectives".

(Roman and Puett, Jr., 1983)

"Systematic knowledge and action, usually of industrial processes but also applicable to any recurrent activity".

(Mcgraw-Hill Encyclopedia of Science & Technology, 1987).

These definitions show that the application of technology is not limited to manufactured products or manufacturing process, but may also embrace consumer and industrial services, the administrative, financial and educational infrastructure. Rugman et al (1985) remarked that IBM's technology is not just in its machines and software programs, but in its sales force, production workers, service support, management, financial strength, and on-going research and development which brings a continuous stream of new products onto the market. In essence, technology can be summarised to mean how things are done. Therefore the common understanding running through all the definitions is that there are different types of technology. Tsurumi (1980) and Gladwin &

Walter (1980) contend that four distinct types of technology can be distinguished and that these are :

1. **Process technology**- applied directly in production activities to increase the efficiency of workers and machines. It is argued that a manufacturing firm comes to acquire its unique technological competence as a result of its own activities or purchase of the know-how from outside sources.
2. **Product technology** - is know-how embodied in specific products. It is aimed at industrial consumers for goods that yield higher rates of output per unit of labour, capital, or raw materials employed. This technology is often patentable as a proprietary right of the inventor.
3. **Application technology** - bridges products and processes by developing new ways to use existing capital or goods, or adapting these to different technical environments to yield improvements in economic efficiency.
4. **Management technology** - which includes the knowledge of how to combine different resources to efficiently produce goods and services, and how to distribute and market these outputs to the final consumers or users. Usually the organisational abilities of the firm to integrate its economic activities in market research, research and development work, marketing and manufacturing fall into this category. Sometimes "marketing

technology" is separated out as a possible fifth component of technology.

Technological skills may be acquired through (i) innovative activities generally focused on R & D, generation of ideas, the employment of ideas to develop new products, processes or additional information, and (ii) through other channels such as the licensing of others' technology or the purchase of capital equipment that embodies new technology. (see Link, 1983). The latter alternative is of considerable importance to this study and leads us to the next section of this chapter which deals with the issue of technology's transferability.

2.2 Transferability of Technology.

Knowledge and information are sterile until they are used. The use of knowledge information involves a transfer from the knowledge originator or information source to its application.

Studies such as Buckley and Pearce (1979), Contractor and Sagafi-Nejad (1981), Mascarenhas (1982), and others have shown that technology is transferable from individual to individual, and from firm to firm both domestically and internationally. Technology may be embodied in finished products or parts and components shipped between parents and affiliates, or between affiliates. It may be embodied in employees, such as production managers, quality control specialists or financial executives who have learned how to do things and are

transferred internationally within the MNE complex. Technology is indeed exportable but mostly after it has been embodied in exportable products or services. On the other hand, knowledge and information emanating from one environment directed toward a specific application can be applied to a similar situation with or without some modifications in another environment. This is technology transfer. The transfer process begins when it has been established that a technological advance has a significant relevance in a direct or different application and that a necessary adaptation can be made. This process occurs between parties who understand what has to be done to permit effective utilisation.

It has to be said that technology transfer cannot occur unless there is motivation for both the multinational transferor and the host country. In his study, Bernard (1988) indicated two possible types of motivation for transfer of technology and these are : (a) Corporate-based motivation and (b) Society-based motivation.

(a) Corporate-based Motivation.

The corporate-based motive for technology transfer characteristically depend on the corporate desire to achieve, expand or defend an advantage by instituting a presence in a host country to gain or retain access to materials, markets, manpower or other productive resources. This corporate-based motivation is explained by various theories of international production, well discussed in most standard texts in international business e.g. Robock & Simmonds (1983).

(b) Society-based Motivation.

Bernard (1988) explained that society-based motivation emanates from the awakening of national consciousness at worldwide basis and this carried with it two interrelated consequences, namely :

- i. the demand for political freedom and self-determination
- ii. the demand for economic improvement and enhanced material prosperity. (see also Fayerweather, 1970)

The economic development objective is underlined by the belief that the development and control of economic policies is a route to political influence and a justification of political control. The development of an economy capable of satisfying a broad range of consumer demands is seen as a matter of national prestige, and Bernard contend that the more advanced the product, the greater that prestige.

However, the process of technology transfer is very complex, and it is even more complex where there is international dimension to the transaction. Gladwin and Walter (1980) argue that the complexity is partly explained by the desire to guard the proprietary nature of technology. In addition, Rugman et al (1985) remarked that neither the buyer nor the seller can know the value of technology, once it is removed from the support activities that surround it within the MNE, and from the flow of future technology generated within the MNE. It is argued that these characteristics of modern industrial technology lead MNEs to centralise their R & D activities within the firm and to transfer their technology vertically rather than through the market.

Mascarenhas (1982) defined vertical transfer as a flow from basic or laboratory research, through developmental stages and ultimately to production and technology. Generally speaking, the internalisation of know-how within a firm or institution by transfer from one unit of a firm to the other either within a given location or across the frontiers of a country, to the exclusion of third parties, is known as vertical transfer of technology.

Horizontal transfer of technology is essentially the transfer of established knowledge or processes from one operational environment to another. In other words, horizontal technology transfer would involve transfer of know-how from one firm to another or from one country to another. The multinational enterprises (MNEs) are an extremely effective vehicle for horizontal technology transfers through foreign direct investment. It has been estimated that multinational enterprises are responsible for about one-third of the world's production. (see Lall and Streeten, 1977). It is argued that by nature of their operations, the multinational enterprises are deeply involved with horizontal transfers especially in developing countries.

Mascarenhas and Ghertman & Allen (1982) contend that it is this horizontal transfer that is more effective for economic development. This is largely due to the diffusion effect of such transfers (see the discussion in the following section).

2.3 The Multinational Enterprises, Technology Transfer and Developing Countries.

The importance of technology for economic development cannot be over-emphasised and has been an issue of considerable interest to writers in development economics. Studies such as Ghertman and Allen, Mountjoy (1982), Thirlwall (1983), UNCTC Third survey (1985), and others have shown that for most developing countries, foreign direct investment can make a positive contribution to the host economy through the supply of capital, technology, and management.

Gladwin and Walter (1980) argue that technology is viewed as the prime determinant of the efficiency in which labour and capital resources are used in the production process. Marton (1986) remarked that it is increasingly recognised in developing countries that an essential prerequisite to industrialisation is the rapid development of technological capability in the use, absorption and adaptation of foreign technology and in the growth of indigenous techniques and processes.

Although it is generally agreed that technology enhances growth and economic development, Emmanuel (1982) argue that the value of technology in quantitative terms is difficult to determine. He explained that factors of production (i.e. labour capital, technology, and other resources) are not interchangeable but complementary, and that the marginal efficiency of one of them cannot be isolated from that of the others - it depends on it. Emmanuel insisted that technology was a

complementary factor. *par excellence* since one of its essential attributes is to govern the proportion of the others. However, Hood and Young (1984) took a slightly different view contending that it is the technological application of labour and capital and not merely the presence of these factors of production which influences the rate of economic growth in an economy. They cited econometric studies relating to some industrialised countries during the period 1950-62 by Denison (1967) which indicated that between 60 and 85 per cent of measured economic growth resulted from increased output per unit of input (factor productivity) : only remaining 15-40 per cent was attributable to increases in inputs of labour, capital and land.

The multinational firm can have a catalytic role in a nation's economy. The establishment of a production facility in a host country involves the transfer of management, special skills and capital. The new enterprise provides local employment and the training usually necessary for indigenous labour to become productive. Such an operation can help the host nation in building an economic foundation. The effectiveness of foreign direct investment (FDI) as a means of technology transfer can be evaluated from four key areas (UNCTC, 1988), namely -

(1) The Transfer of Skills to the Employed Labourforce.

It is argued that the method for transferring and developing skills would, in principle, include formal in-house training programmes, an active promotion policy aimed at facilitating "learning" by nationals through exposure to progressively higher levels of responsibility, and sponsorships and support for technical and professional training

institutes. The transfer of skills is most complete from the point of view of host economy where the dependence on foreign manpower is phased out over time and full localisation of staff occurs. However in many cases, the transfer of skills is usually incomplete especially in the critical high level management and engineering functions due to unavailability of suitably qualified local personnel or due to deliberate decisions of the parent company to retain expatriates in key positions.

(ii) Stimulation of Local Technological Activities.

The impact of MNEs in this area could occur through undertaking Research and Development (R & D) activities directly within their subsidiaries and through contracting with local R & D institutes, manufacturers of machinery and equipment, and engineering firms for the supply of technological goods and services. Although it is generally known that MNE subsidiaries in host countries do little R & D work, it has to be said that market characteristics appear to have an impact on both the magnitude and the nature of local R & D efforts.

(iii) Diffusion of Technology Through the Economy.

Linkages to suppliers of inputs may result in the upgrading of product quality or reduction in cost. And the establishment of new foreign firms could lead to new investments in supplying industries. In countries with sufficient market size, a second channel for diffusion of technology is the effect of FDI on competition within the industry. Domestic firms already operating in the industry may be compelled to bring about technological improvements in their own operations. A third channel of diffusion is through the training of labour and management

personnel who may eventually take up employment in domestic enterprises or set up their own enterprises. A fourth possible source of diffusion is a kind of "demonstration effect" - The presence of MNEs creates the awareness of the existence of improved product or process technologies.

(iv) Appropriateness of Technologies Transferred.

Contrary to the general belief that MNEs transplant inappropriate, capital-intensive technologies developed in their home countries, studies on appropriateness of technologies transferred by the MNEs to host countries cited in UNCTC (1988) indicate that domestic factor price distortions, export orientation, the nature of industry, the stage of product development, the availability of skilled and disciplined labour etc. are probably more significant determinants in their choice of labour/capital ratio than ownership per se.

The nature of developing countries makes transfer of technology very crucial. Developing countries are generally characterised by a high degree of subsistence production with very little application of technology. Thirlwall (1983) argues that economic development implies change, and this change describes the process of economic and social transformation within countries. It is also argued that the major objective of economic development must be to raise people out of primary poverty and to provide basic needs simultaneously. Mountjoy (1982) explained that because of lack of technology, manufacturing industries are not developed well enough. More significantly, it has to be stressed that the problem is not simply that their economies lack substantial industrial sector, but that in many cases, even the

agricultural sectors are highly inefficient, and generally, social and institutional patterns make advancing in any field extremely difficult.

Economic development is not synonymous with industrialisation alone, but also applies to development in all sectors of the economy and implies a relative change in their order of importance, with the application of science and technology, raising productivity per worker and releasing labour and resources for yet other productive tasks. It has been shown in studies such as Denison (1967) and UNCTC Third Survey (1985) among others, that it is the availability of technology which enhances economic development. However, the acquisition of technology by developing countries often provides some problems, and the ability of a less developed country (LDC) to acquire the needed technology on favourable terms, depends on, among other things, bargaining power vis-a-vis the technology supplier.

The MNEs are probably the most important source of technology acquisition by the LDCs. MNEs occupy this unique position because of LDCs' almost total dependence on technology imports from the developed countries. (see Lall and Streeten 1977). Statistical evidence support this argument. Lall and Streeten argued that by 1967, the developing countries as a whole accounted for \$33 billion of estimated stock of investment of the MNEs - 32 per cent of the total. Moreover, there are indications that the significance of the transfer of technology in embodied and disembodied forms to the LDCs has been growing rapidly.

The high stock of foreign direct investment (FDI) by MNEs in developing countries in the late 1960s resulted in the LDCs as a whole

achieving a relatively strong growth performance in manufacturing industry during the 1970s. However, it is not a coincidence that the LDCs that account for the bulk of manufacturing and industrial growth in the developing countries, are also the largest recipients of foreign direct investment in manufacturing industry in the developing world, thereby underlining the relationship between technology and economic growth, as discussed in the earlier sections.

It is certainly noteworthy that investment by the MNEs has been attracted by the opportunities created by rapid industrialisation and has also made contribution to that process. Nonetheless, the actual extent of the involvement of these enterprises in the manufacturing sector varies widely from country to country. The share is generally highest in the industrialised or semi-industrialised Latin American countries where it varies between one-third and one-half for most of the indicators.

2.4 Alternative Methods of Technology Transfer.

Technology transfer can be direct as in the MNE activities or more subtle and indirect as in situations where knowledge derived from one environment in the form of literature information can be modified and adapted to a different use in another environment. There are three principal channels through which technology can be transferred and each of these transfer channels is worthy of separate treatment, hence the following discussion.

Reflecting the various definitions of technology, it is therefore not surprising that people are one of the most important methods of transferring technology. Exposure to different operations or similar operations in different settings can prove stimulating and lead to suggestions and subsequent technology transfer. This is, of course, technology manifested in human resources as in management technology (see earlier section on definitions). People may be information transferring vehicle within geographically confined operations, between operations that are geographically dispersed, or from outside sources to internal operations. Exposure of these people to information sources, different training programmes etc. are important part of the technology transfer process, since people's interactions are one of the most effective means of transferring technology.

Given that technology can be embodied in blueprints, designs, published data and product specifications, literature then becomes one of the most important vehicles for technology transfer. Books, specialised newsletters, technical and professional journals, and trade magazines are other useful information sources. Most high technology organisations maintain technical libraries for reference purposes. However the relevance, currency, and access to these libraries are for persons seeking the information to determine. The literature can provide valuable clues for the productive transfer of technology. In some instances, there can be a direct application of the information

extracted from the literature. On other occasions, information can be taken out of direct context and fruitfully transferred and employed in areas not directly related.

2.4.3 The Multinational Enterprises

The MNEs are potentially the most effective channel for technology transfer. Rugman et al (1985) argue that the technology contribution of MNEs is not only their major source of advantage, but it is also probably their most desirable attribute from the viewpoint of host countries. Technology transfer activities of the MNEs take a variety of forms and are carried out through a number of channels. A basic choice for the MNE will be between (1) investment in a wholly or majority-owned subsidiary, and (2) participation in minority joint ventures, or other alternative forms of transfer that involve transactions with unrelated parties such as licensing. In Dunning's Eclectic theory of international production (1980), he argued that foreign direct investment was a function of ownership-specific advantages, location-specific factors, and internalisation. It is therefore expected that MNEs will choose FDI (1) where ownership advantages are such that their competitors do not possess such advantages, and (2) where it is profitable to exploit these assets in conjunction with the indigenous resources of foreign countries rather than those of the home country. It is also argued that the more ownership-specific advantages possessed by an enterprise, the greater the inducement to internalise them.

Where the decision for FDI is made, a further choice will be between greenfield investment and acquisition of existing venture. Recent trends in international investment have shown that the latter is becoming increasingly the preferred mode of foreign investment in the developed countries. Although this cannot be said of less developed countries (see Hamill and Crosbie 1988; and McDermott and Gray, 1988). Also the choice between equity and non-equity forms of participation is influenced by the value that the firm and the host country government respectively place on the firm's marketable ownership advantages, and by the costs and benefits of the options that are available for capitalising these advantages.

The evidence is that where the technology is relatively new and/or highly firm-specific, the MNEs place a high premium on retaining absolute control over their technology-based advantage through the establishment of wholly or majority-owned subsidiaries and their bargaining strength to insist on this, vis-a-vis host government is at its highest (Poynter, 1985). This is evident in predominance of such industries as electrical and non-electrical machinery, and chemical products, in direct investment made by foreign firms in the manufacturing sectors in the LDCs (UNCTC Third Survey, 1985).

Intra-firm transfers of technology by definition, do not involve locally owned enterprises in developing countries as direct recipient of the transfer. In this case, the degree of effectiveness of the transfer would have to be evaluated in the light of the rate and extent of the diffusion of imported techniques from the subsidiary to other companies.

In the past, host countries have shown concern regarding the impact of limited diffusion on reducing competition and strengthening concentration in the market structure of the industries, which could imply that the benefits of technical progress are not passed on to the consumers in the form of lower prices but are rather internalised by the enterprises in the form of higher profits. Limited diffusion as well as lack of local R & D activities also limit local participation in the technology transfer process, thereby inhibiting assimilation.

Nonetheless, intra-firm transfer remains the predominant channel of transfer of technology to developing countries. It is pertinent at this juncture to consider the alternative methods that are available to developing countries for technology acquisition on the one hand, and which the multinational enterprise would regard as alternative market supply strategy, on the other hand. The choice is of considerable importance to governments as well as to the enterprises involved in the transfer.

(1) Export/Import:

Export/Import is the most traditional and well established form of international business, as well as an avenue for the acquisition of knowledge, equipment and materials which either cannot be developed or have not been developed within the importing country. International trade (export/import) is usually the first phase of international operations of a firm. It is argued that trade leads to other modes of international operation i.e. joint ventures, foreign direct investment,

and licensing. Trade is crucial for countries for both foreign exchange and maintaining employment level. The expansion of trade is related to the economic growth of nations and the world economy itself. It is also argued that trade leads to structural shifts in the economic organisation of countries and consequently, the ability of a nation to seize export opportunities and respond to imports is a major determinant of its national economic performance.

Reflecting our earlier discussion on transferability of technology, export/import can therefore, be seen as an important vehicle for international technology transfer. Buckley and Pearce (1979) argued that exporting internally between a parent company and its foreign subsidiary has remained one of the important technology transfer mechanisms (in this case, vertically) since internal exports could be said to be technology flows embodied as intermediate goods transferred internationally within the firm.

However, the balance-of-payment effect of importation on developing economies has meant that host countries directly or indirectly influence importation e.g. through local sourcing requirement etc. (Biersteker, 1981). This influence, they have sought to exercise through what Robock and Simmonds (1983) described as negative controls. These controls restrict action on the part of the exporter. Under the control variable of the geobusiness model of international production, it is argued that the control element of the host country policies partly explain why firms go into international production rather than export. It is nonetheless important to appreciate exporting/importing as a channel for technology transfer and acquisition.

The term "licensing" covers a wide range of agreements relating to the sale or lease of industrial or commercial expertise by one party to another in return for valuable consideration (Millman, 1983; Contractor, 1985; and Btele, 1985). Given that the emphasis of the study is on technology transfer through licensing, a more detailed discussion on the subject is presented in chapter three.

Licensing of technology is a method of technology transfer and acquisition which has an extremely seductive appeal to both the foreign supplier and the LDCs. From MNEs' point of view, there are a number of reasons why this channel may be adopted for the commercialisation of technological assets. One major reason is the policies of host developing countries themselves, some of which have restricted foreign equity ownership in some sectors of their economy. Although MNEs are more likely to license unrelated parties in cases where the risks of losing control over the technology can be minimised, or if not, where the costs of losing it are low.

From the LDCs' point of view, licensing can be an effective channel for technology transfer and can contribute to the growth of industrial capacity where (i) the technology supplied is basic process know-how that is not generally available either in identical form or as close substitute, (ii) the licensing agreement provides for, or at least allows assimilation of the know-how by the user, and (iii) the recipient enterprise takes conscious and deliberate steps to bring about assimilation. Assimilation will be effected where recipient

enterprises see it as a specific objective of a licensing arrangement and the ensuing relationship.

Careful studies of successful transfer and assimilation by the United Nations Centre on Transnational Corporations show that the mastery over imported technology is acquired in the course of activities carried out by the recipient enterprise after the conclusion of the formal agreement. Government intervention in the negotiation of licensing agreement can be of great importance to the ability of the recipient firm to undertake technological efforts during the phase which follows the commencement of operations using the imported technology. State intervention in the negotiation phase enhances the bargaining position of the recipient firm.

The experience of countries which have made approval of licensing agreements conditional on compulsory registration shows that the position of domestic firms was strengthened in negotiation to secure terms that should fulfil the conditions governing approval (elimination of restrictive clauses, reducing royalty levels, and duration of agreement, etc.). Some of the countries that have compulsory registration are Mexico, Nigeria, India, among others.

(111)

Joint Venture.

Most developing countries encourage joint venture as a means of acquiring technology from abroad. The joint venture approach offers greater opportunities for the effective transfer of technology to the

host economy. It involves going into partnership with local enterprises by multinational enterprises. This method of technology transfer is a combination of vertical and horizontal methods of transfer.

Host governments and local partners can adopt strategies to increase local participation in the transfer process and enhance effective technology transfer. Some governments use the leverage provided by the right to grant or refuse access to the domestic market to insist on joint ventures, with local capital as a condition of entry of a multinational enterprise, and then regulate the terms of licensing agreements and other contractual arrangements in such a way as to strengthen the bargaining power of local partners vis-a-vis the MNEs (see Poynter, 1985).

In highly capital-intensive industries which use very complex technologies, governments of developing countries have also insisted on the participation of state enterprises in joint ventures with MNEs. An example is Brazil, which in 1981 had at least 69 of such ventures, the majority in the petrochemical, heavy machinery and heavy metallurgical industries (see UNCTC Third survey, 1985). Brazilian experience shows that the relative bargaining power of governments may be stronger in relation to firms, which are not established leaders in the industry concerned and which are anxious to gain access to new markets. Therefore reasons for joint venture operations could be classified as follows :

1. The host government may legislate or pressure the MNE into accepting indigenous partners,

- ii. The MNE may require a partner in order to obtain knowledge of the new and unfamiliar host country environment; and
- iii. The local partner may give the MNE access to channels of distribution otherwise denied it or can help to open up access to local raw materials and other resources.

It has to be said that the most important consideration in a joint venture is the selection of the partner(s). Sharing management is problematic, so careful consideration must be given to finding a partner that has complementary skills, and with whom the MNE can work. The MNE will have to decide whether a passive or active partner is needed. When protection of the MNE's firm-specific advantage is essential, a passive partner may be preferred. Generally speaking, joint ventures can be classified into three categories, namely (i) shared management, (ii) dominant management by one partner, and (iii) independent management from either partner.

(iv) Management Contracts.

Management contracts provide for the licensing of managerial expertise in specific areas. In a situation where there is capital and manpower availability, the less developed countries such as OPEC capital-exporting countries, may need the expertise of foreign management firms to set up operations in the most efficient way.

This is most common in the service industry. This method of know-how acquisition is in most cases, necessary because the relevant

technical and managerial skills are transferred to local managers, who at the end of the contract, continue with the operation of the industry. Management contracts may also help to ensure quality control and provide international experience for the licensee.

(v) Turnkey Contracts.

A turnkey project is a package deal and involves the sale of what will be fully operational production facility. In some developing countries where there are sufficient skilled manpower, invitations could be extended to MNEs to undertake the construction of specific projects on one-of-basis.

Under a turnkey contract, the contractor accepts responsibility for all the tasks associated with the design, construction and commissioning of a production facility. Generally, this responsibility includes the supply of complete plant and equipment, design and construction of civil works, complete erection of the plant and equipment and commissioning of the total plant facilities up to the stage of start-up, including the initial training of process operators.

The turnkey project can be an alternative to exporting. In addition, the host country's market may be too small or the risk of FDI too great to warrant investment by the MNE. An added benefit to the turnkey project for the MNE is that it can become the supplier of future factor inputs. The MNE can also expect to license additional managerial or technological expertise to the host nation.

Turnkey contracts grew rapidly after the oil-price increases of the early 1970s had generated huge capital surpluses in many oil-exporting developing countries, which they sought to invest in large scale industrial projects. U.N. survey data for the leading industrial countries for the mid-1970s show that the developing countries account for a high and sometimes a majority share in terms of the total value of contracts made (UNCTC, 1985). In addition, within the developing countries themselves, there is a relatively high concentration of turnkey contracts in the middle east and the rest of Asia, by comparison with other forms of involvement of the MNEs, such as licensing and joint ventures, as well as compared with foreign direct investment (FDI) itself. The socialist countries also account for a significant proportion of the total, while the OECD countries are relatively unimportant customers for these contracts.

(vi) Wholly-Owned Subsidiary.

Technology transfer through the wholly-owned subsidiary route is usually restricted to vertical transfer since it revolves around the company. Although the advantages to a developing nation are linkages to the local economy. Through the linkages, input manufacturers are stimulated and this produces multiplier effect within the economy. Moreover, a wholly owned venture provides opportunity for the absorption of surplus labour, creating market for available raw materials, training and development of local employees, as well as the supply of external capital and technology.

Nonetheless, the limited diffusion effect of wholly-owned subsidiaries as well as their perceived power and influence have necessitated most developing countries to force a dilution of the ownership of these subsidiaries with national institutions and entrepreneurs. Consequently, the incidence of international investments by multinational enterprises through wholly-owned subsidiaries in developing countries, has greatly reduced within the last twenty years or so. This has largely been due to pressure from the host countries. It is argued that total foreign ownership raises fears of "domination" of the economy and society from abroad. Therefore the issue of ownership and control of subsidiaries operating in host countries is determined primarily by economic objectives, aimed at increasing the benefits of the involvement of multinational enterprises in host country economies. In other words, the host country, tries to obtain for itself a greater share of a joint gains from MNE activities attributable to more efficient allocation of production and/or consumption activities (Gladwin & Walter, 1980).

In most developing countries, wholly-owned subsidiaries are banned. Other ownership combinations i.e. majority or minority ownership stakes are used to maximise the MNEs contribution to the host economy. In Nigeria, industries are classified into three schedules/categories (see appendix 111) reflecting their perceived importance and expected contribution to the economic development of the country. MNEs operating in industries with high technology inputs may be allowed to own up to 60 per cent of their subsidiaries. In India, different ownership rules apply. The introduction of the 1973 Foreign Exchange Regulation Act (FERA) effectively banned majority ownership of subsidiaries in India

unless classified as "priority" producer. This has resulted in long-established companies such as Coca-Cola and IBM withdrawing from the country. However, in certain developing countries high technology industries may be allowed to maintain/establish wholly-owned subsidiaries. Example is IBM in Mexico.

(vii) Fade-Out Arrangements.

In some cases, the LDCs do allow fade-out arrangements with multinational enterprises as a means of acquiring technology. Under the fade-out arrangement, although a 100 per cent or majority ownership may be allowed initially, a subsequent reduction in ownership to a minority or only contractual relationship eventually emerges in the long-run.

This alternative is attractive to MNEs when there is a short-term opportunity of recovering investment expenditures with substantial profits. To the host nation, it is appropriate when experiencing balance-of payment difficulties in the economic relationship with the parent company country. These balance of payment difficulties will normally be in the form of payment for dividends, profit repatriation, interests on loan, and possibly transfer pricing.

2.5 Host country Constraints.

There is a growing realisation, although with varying degrees of emphasis and initiatives, that an indigenous technology capability is a necessary condition for effective utilisation of the transferred technology. However, while some developing countries have achieved significant successes in building indigenous technological capabilities, and have even been able to offer competition in external markets, many continue to lag seriously in this respect - not necessarily on the account of any lack of awareness of the need for developing technological capabilities but rather on account of difficulties inherent in their situation. Mountjoy (1982) indicated that some of the difficulties stem from the fact that the social and institutional patterns make advancing in any field extremely difficult.

The extent of the contribution of multinational enterprises to the industrial performance of a host nation through technology transfer is affected by a number of factors. Much of the argument about the appropriateness of technologies transferred by multinationals revolve around the effectiveness of such transfers. It is argued that the effectiveness of the know-how and innovations depend upon the transfer to host country of appropriate technologies. Thus the technology transferred should be appropriate to the relative factor endowments of the country. However it is argued that technologies appropriate to conditions in the LDCs may not exist. Hood and Young (1984) explain that the smallness of markets does not encourage efforts to adapt technology to meet the needs of the individual LDCs, since gains may be minimal, and given the monopoly advantage accruing from the technology,

high cost production from large-scale plants may be little disadvantage. In addition, certain levels of skilled manpower may not be available in these developing countries to support labour-intensive processes that may require well-disciplined industrial workers and skilled supervisory personnel.

However as mentioned earlier, the performance of transferred technology depend among other things, on (i) the channel used for technology transfer; the level of development of the host country's technological infrastructures, (ii) the efforts made by domestic enterprises at assimilating the imported technology, and (iii) the nature of the host country's policies. Parent-subsidiary technology transfer keeps the technology under the control of the parent company and where this is associated with strong competitive advantages over domestic firms, the host economy's opportunities for assimilating foreign technology are limited. Similar limitations are evident when the terms and conditions of licensing agreements and turnkey contracts between MNEs and local firms maintain the former's control over technology and limit local participation in the transfer process.

In industries where the technology is complex, advanced and highly firm-specific, the bargaining position is weakest and the costs of assimilating the technology are greatest. The opportunities for developing countries are greatest where the technology in question is less complex and firm-specific and more matured. Effective assimilation of imported technology in these areas can offer the basis of learning process that builds up, capabilities and creates infrastructures for

acquiring the more complex types of technology, and for dealing more effectively with the multinational enterprises.

Conclusion.

This section of the study has shown that for the less developed countries, technology is indispensable for rapid industrialisation and economic development. Also, it showed that there are different alternatives available for the acquisition of technology (largely associated with NNEs). In the next chapter, the different alternative methods of technology acquisition are reviewed in relation to needs i.e. appropriateness, and cost factors.

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CHAPTER THREE.

LICENSING OF TECHNOLOGY.

CONTENT.

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INTRODUCTION.

This chapter explores licensing as a feasible alternative to the traditional strategy of exporting and foreign direct investment in the internationalisation process. It also reviews some theoretical explanations why licensing has become quite important and features prominently in the international strategy of multinational enterprises (MNEs). Finally the chapter considers the difference between intra-company licensing and the licensing of independent companies.

The growth of licensing in developing countries has been caused by a number of factors. Most significantly, the last two decades have seen changes in the host country attitude toward MNEs, particularly in developing countries. These changes range from open hostility and confrontation, to the provision of investment incentives. First, the developing countries' approach to the MNEs was confrontational in a bid to secure more benefits from the MNEs' investments in these countries. This was partly due to LDCs emphasis on import-substitution economic development policy. Predictably, MNEs resented the hostility and resorted to divestment from these countries. The LDCs, sensing that this approach has failed to provide the desired result, gradually began to change towards more tolerant and sometimes supportive approach, providing incentives to attract the much needed MNE investments.

By 1974, a pattern of limitations on types of technology relationship with foreign firms was clearly established. Before this period, the Andean common market (ANCOM) in 1968 had insisted that no new foreign capital could enter the Andean countries with ownership role

greater than 49 per cent, if these firms planned to take advantage of the ANCOM privileges. Within the market, countries such as Peru and Chile went further and required divestment into the economy of 50 per cent of the capital of all foreign firms, whether they wished to participate in the Andean common market or not. Argentina followed a similar pattern in requiring minority participation in new capital.

Consistent with this pattern in Latin America, the Korean and Indian governments also began to stress joint ventures and proscribed foreign participation in a variety of industries. Although the Koreans did not go as far as the Indian government, there was, nonetheless, a belief that foreign firms should have a diminished role in terms of the direct control of the operations within the country. However, by the mid-1970s, the extreme experiments of control over foreign firms were being reversed in a number of countries. Argentina and Chile revised their laws to establish more positive environment for foreign capital and technology. The Andean common market relaxed the draconian restrictions on remittances and re-investment but did not significantly alter its orientation toward foreign technology. The changes in these countries indicated a re-evaluation of the role of foreign capital and technology.

During this "trial" period, licensing of technology emerged as a possible alternative to exporting and foreign direct investment for servicing these lucrative markets without committing manpower and capital. It is in the light of the importance of this strategic role of licensing that this chapter is discussed.

3.1 Definition and Explanation

Licensing arrangements provide for the use of MNE's technology, patents, trademarks, or other firm-specific advantages by a firm in exchange for a fee. Explaining the structure of the fee, Oman (1984) contend that the compensation for a licensing arrangement may take a variety of forms : an initial lump-sum fee, a percentage of sales, royalties, shares of equity (and hence profits), or goods bought at a discount as in a counter-purchase or buy-back arrangement. Agreements may also provide for access to any technological improvements or adaptations the licensee may make. The licensee on the other hand, gains access to either "know-how" that is secret, unpatented technology, trademarks, copyrights or patents, or a combination of these, for a specified or unspecified duration.

In broad terms, international licensing include a variety of contractual arrangements whereby the transfer of intangible assets as defined above is accompanied by technical services to ensure the proper use of these assets. Root (1987) argued that in the case of franchising, the service element is particularly prominent because it includes general management and marketing assistance as well as technical assistance in operations. He explained that the core of a licensing agreement is the transfer of intangible property rights and that it is this transfer that distinguishes licensing from other contractual arrangements such as management contract and technical service agreements. Rugman et al (1985) regard these other contractual arrangements as sub-licenses. They defined these sub-licenses as follows :

- i. **Management Contract** - Management contract provides for the licensing of managerial expertise in specific areas. Management contracts allow the MNE to control the amount of knowledge that is divulged, and through its influence on the foreign firm's management, the MNE may obtain other benefits such as becoming the supplier of factor inputs.

- ii. **Franchising** - In a franchising arrangement, the MNE is a supplier of a package of goods and services and often a brand name to the licensee. A proven success formula in operations and marketing is also included. Franchising is most common in the service industry such as hotels. It is argued that since the licensee uses the MNE's brand name and international promotion, the risk to the MNE's reputation is particularly acute with this type of contractual arrangement.

- iii **Contract Manufacturing** - Contract manufacturing is the reverse of franchise as the MNE pays the license fee. In this case, the MNE may not perceive the host market as warranting FDI, so instead production is contracted out to a local firm and the product is marketed under the MNE's brand name. As in franchising however, quality control is essential to protect the MNE's reputation. Contract manufacturing is also used as a pre-FDI market test.

Different forms of licensing as discussed above are shown in table 3.1 below. However, it has to be said that the exploitation of a proprietary advantage normally involves either unrelated parties in a host country or a firm in two distinctive activities in the host

country, namely production and marketing. Casson (1986) argue that because of the nature of these activities (i.e. production and marketing), if necessary, quite separate contractual arrangements could be made for each of these activities, reflecting the broad definition encompassing basic license and sub-licenses. Available data on international licensing indicate that the incidence of licensing of affiliated firms have been on the increase (see e.g. Thunman, 1982(a); and UNCTC Third survey, 1985).

Table 3.1

Forms of Licensing

BASIC LICENSE	:	Contractual arrangements whereby the MNE, for a fee, allows its technology, patents, or trademarks to be used by another firm.
MANAGEMENT CONTRACT	:	Contractual arrangement whereby the MNE, for a fee, provides management expertise in specific areas to another firm.
FRANCHISING	:	Contractual arrangements whereby the MNE, for a fee, acts as a supplier allows another firm to sell its products or services.
CONTRACT MANUFACTURING	:	Contractual arrangement whereby the MNE will pay the fee to a local producer to manufacture its product under the MNE's brand name.

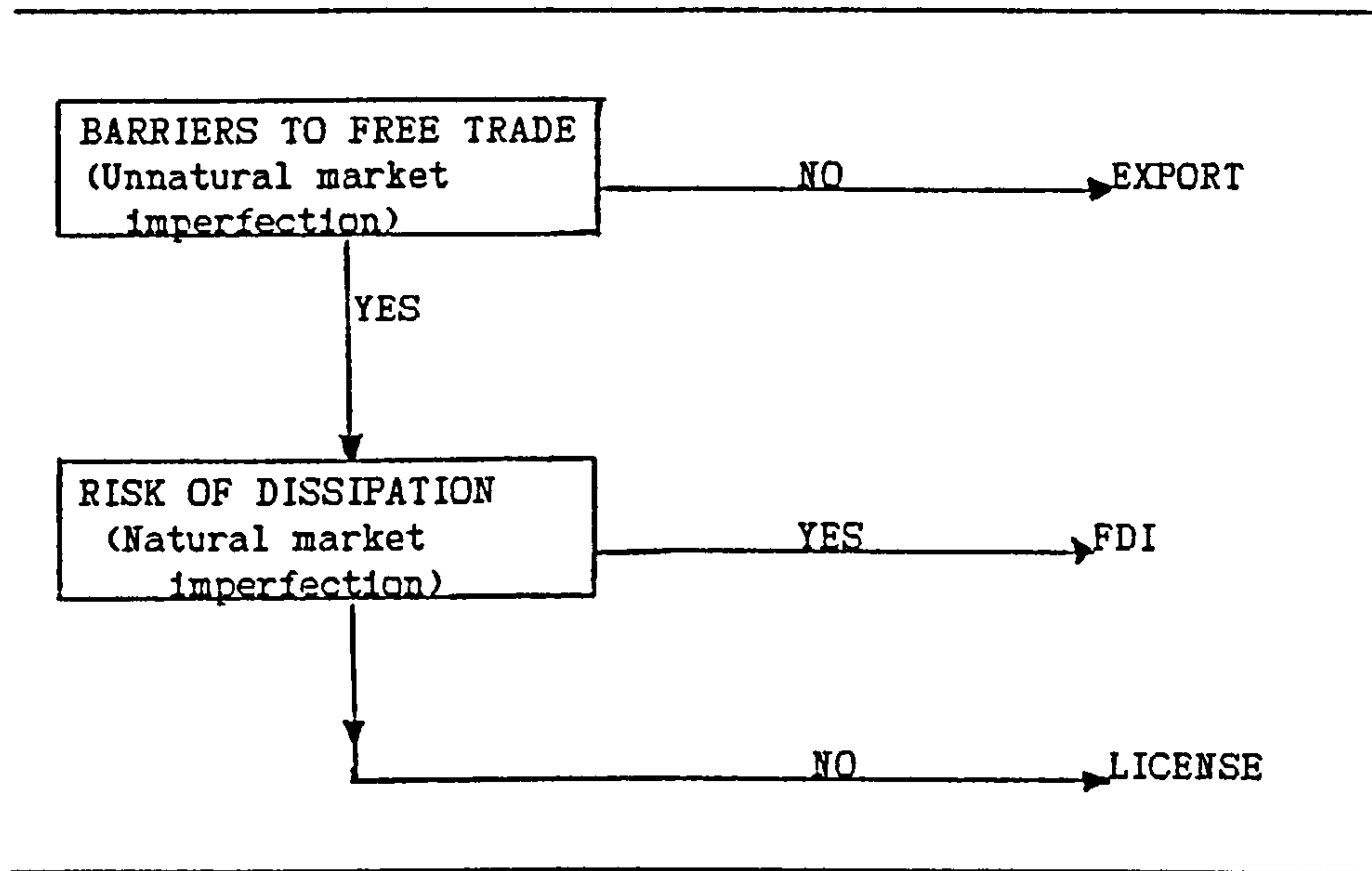
Source : Rugman, Lecraw and Booth, 1985, p.94.

Opinion is divided as to when it is most feasible to use licensing as an international business strategy in the internationalisation process. Given the various strands of argument relating to the issue, it

is worthwhile to consider some theoretical models of the foreign investment decision process. Rugman, Lecraw and Booth (1985) contend that the net profit from any one mode of entry changes at a rate different from that of others, and that MNE will choose the mode that will maximise the net present value of all future cash inflows. It is also argued that this choice will depend upon the length of time it is anticipated that the market will be serviced. Rugman et al explain that in a perfect world, exporting will be the first option. Yet when foreign nation imposes a tariff or erects other barriers to entry and there is the risk of dissipation to the MNE, the host nation can be best serviced by FDI rather than by host country production by a licensee. It is argued that only when the host nation imposes regulations on the MNE which are greater than the benefits of FDI will the MNE turn to licensing as a mode of entry into the host nation. If the costs of regulation are less than the benefits of FDI, the MNE sticks to FDI. This model is illustrated in figure 3.1 below. Given the conditions assumed here, the sequence of entry modes is most likely to be exporting, followed later by FDI and ultimately by licensing.

Figure 3.1

Foreign Investment Decision Process



Source : Rugman, Lecraw and Booth, 1985, p.130.

The Rugman et al model is buttressed by Dunning's Eclectic theory of international production. On the basis of the eclectic model (Dunning, 1981), it is argued that FDI is a superior strategy compared with the external sale of proprietary assets through licensing arrangements, *ceteris paribus*. The strength of the argument lies in the internalisation strand of Dunning's theory. The eclectic theory holds that :

"the basic incentive of a firm to internalise its ownership endowments is to avoid the disadvantages, or to capitalise on the imperfections of one or the other of the two main external mechanisms of resource allocation - the market or price system and the public authority fiat (order or decree)".

Dunning argued that market imperfections arise wherever negotiation or transaction costs are high, wherever the economies of interdependent activities cannot be fully captured, and wherever information about the product or service being marketed is not readily available or is costly to acquire. The concept of internalisation then becomes relevant to the choice between licensing and FDI. It is therefore thought that licensing is most likely to be used in the last stage of the technology cycle, consequent on the standardisation of the product or process.

On the other hand, there is school of thought that argue that licensing is likely to be the second stage in the internationalisation process. In their study, Johanson and Weidersheim-Paul (1975) observed that most firms without extensive knowledge of foreign markets adopt stages of development approach to international expansion. Each stage in the process represented successively larger resource commitments and also led to quite different market experience and information for the firm. The indication here is that licensing follows exporting before FDI as a sequential progression. i.e

EXPORTING -----> LICENSING -----> FDI

Thunman (1982(a)) also argued that licensing can represent a firm's first step out into a new market, where, for example, the licensor may at a later stage buy the licensee. He explained that this is of special interest for small firms from countries with small domestic markets (such as Sweden) since they may lack the broad spectrum of capabilities and resources required for successful international

marketing. Other considerations would include restricted access to a market through direct investment or where the size of a market does not justify substantial capital commitment for FDI.

It is important to point out here that whichever approach one finds convincing, there is evidence to suggest that licensing activity is a dynamic and growing part of international business transactions (see Buckley & Davies, 1979; and Dunning & Cantwell, 1982). Reliable data is somehow difficult to obtain on the extent of international licensing. However, a global figure of about £14 billion in international licensing payments has been cited for 1978. (see Young, 1988). Although this sum includes relationships between parents and majority owned affiliates as well as arm's length transactions. Young explained that some of the factors responsible for this trend include an expansion in the licensing of research results from the universities; the recent emergence of small high technology firms lacking resources to penetrate international markets by other means; rising R & D costs and shortening product life cycles again requiring rapid moves into markets overseas; the avoidance of duplication in research and development spending by licensing-in or cross-licensing; and the emergence of industries such as semi-conductors and biotechnology where licensing is recognised as a fact of life.

It is noteworthy that a great deal of licensing arrangements occur between developed countries, and has been increasing steadily in the recent years in the developing countries. As table 3.2 shows, while licensing is minor compared to FDI, it is a strategy which assumes greater importance for some countries than others.

Table 3.2

Licensed Foreign Production Propensities (1965-1975).

	<u>U.S.A</u>	<u>JAPAN</u>	<u>U.K.</u>	<u>SWEDEN</u>	<u>FGR</u>	<u>ALL</u>
OUTWARD						
1975	1.4	1.0	2.7	1.3	2.1	1.5
1970	1.7	0.5	2.9	1.6	1.6	1.6
1965	1.4	0.3	1.9	1.7	1.6	1.4
INWARD						
1975	0.4	2.7	1.6	1.7	1.2	1.1
1970	0.2	3.0	1.7	1.6	1.5	1.1
1965	0.4	2.8	1.1	1.4	1.1	0.8

Source : Clegg, J., 1987, p.75.

Table 3.2 shows that for Japan in its role as a technology recipient, licensing is the main source of foreign technology. The data also shows Japan as a continuous net inward licensee, with Sweden on the borderline. It has to be said that only Japan amongst the developed countries has formal control of licensing. Clegg (1987) explained that the rationale for this government control of licensing is the "failure" in licensing markets to reflect its external social policy goals. The effect of Japanese control was to modify the prices, terms, and conditions of agreements, to reduce the rent to the licensor, and to ration new technology to one selected Japanese company, which prevented the raising of prices and the "unnecessary" duplication of purchases of technology. The result was the creation of a Japanese monopolist in each particular product able to enjoy the benefits of a large domestic market size.

For the U.K., table 3.2 shows that outward licensing is appreciably higher than for other countries. Although not shown in the table, it is known that U.K. is the dominant licensor in the U.S.A market, accounting

for 40 per cent by value in 1975 (Clegg, 1987) reflecting the importance of licensing to the U.K. firms. This point was emphasised by the Base Technology Report (1986). The Base study indicate that for British industries, about 24 per cent of the companies studied (in a sample of 703 companies) have sold a license to another company. Also significant is the fact that almost 25 per cent have taken a license from outside (see table 3.3). It is noteworthy that 64 per cent of the companies in the sample have acquired technology from sources outside their group, and a breakdown of the methods used is given in table 3.4. It is interesting to know that licensing came out clearly as the most favoured method used when it comes to purchasing technology. The Base study also indicate that revenue from these licensing transactions amount to only a small proportion of the total income of the companies studied. However, it is significant that about 5 per cent of the companies said licensing arrangements contributed between 6 - 50 per cent.

Table 3.3

Technology Exchange Activities of U.K. Firms.

<u>Methods for Tech. Exchange</u>	<u>Responses</u>	
Licensing-Out	168	23.9%
Licensing-In	173	24.6%
Joint Venture	173	24.6%
Agreement with Contract Research Organisation	186	26.5%
Reciprocal Exchange Agreement	108	15.4%

Source - Base International, 1986, p.4

Table 3.4

Aquisition Methods by a Sample of 703 U.K. Firms
Involved in Technology Deals.

<u>Methods Used</u>	<u>Responses</u>
Licensing-In	25%
Contracting-out R & D	18%
Minority Interest in another company	5%
Complete Purchase of a company	17%
Joint Venture	14%
Acquire Franchise	10%
Reciprocal Exchange Agreement	6%
License from Research Organisation	8%
Other	8%

Source - Base International, 1986, p.5

On the Swedish front, Thunman in his study (1982(a)) demonstrated that licensing payments to Swedish firms in 1979 valued more than 10 per cent of the export of goods. Although this study showed that Swedish licensing trade with developing countries was significantly small for reasons Johanson and Weidersheim-Paul (1975) described as "psychic distance" - which they defined as factors preventing or disturbing the flow of information between firm and market (e.g. language, culture and political system). It is argued that common language creates affinity which makes the knowledge about markets high and the psychic distance

low, and thus decreases the obstacles to investment. Consequently the Swedish licensing trade is heavily concentrated in Europe.

3.2 MNEs, Developing Countries and Licensing.

The changes in international investment environment brings to the fore the alternative modes of international business transaction, for which licensing has become quite important. Multinationals are now servicing developing and host markets through "new forms of investment", notably non-equity resource transfer mechanisms which include a range of contractual arrangements such as licensing, management contracts, franchising, etc. (see Dunning & Cantwell, 1982). Among these non-equity contractual arrangements, licensing (taking into account the broader definition) has emerged as a possible alternative to the "traditional" exporting and foreign direct investment (FDI) for two reasons, namely -

- (a) The MNEs' reaction to changing environment, and
- (b) LDCs' preference for licensing.

(a) MNEs Reaction to Changing Environment.

1. Defensive Reaction of the MNEs

The wave of changes which occurred in a number of developing countries' foreign investment policies during the late 1960s and early 1970s (as mentioned earlier) were of decisive importance in bringing

about the growth, during the same period, of new forms of investment in these countries. Fayerweather (1970) contend that the desire for developing countries to assert sovereignty over their natural resources and market potential has invariably led to restrictive regulations on the activities of the MNEs in these host countries, particularly in ownership and control of FDI. These restrictive regulations which include the establishment of government boards for screening and registering foreign investment, the imposition of local-integration and export performance requirements, limitations on profit remittances, the demarcation of sectors or industries where foreign investment is restricted or forbidden, have resulted in a substantial increase of LDCs' ownership and control of significant areas of the primary sector, with corresponding reduction in foreign ownership. It is argued that these policies were a major cause of the shift to greater use of new forms of investment, and of course, the lucrative nature of these markets has meant that other alternatives will have to be used to service these markets.

2. Strategic Initiative

Oman (1984) contend that the rapid growth of direct foreign manufacturing investment in developing countries in the 1950s and 1960s was the result of large industrial or commercial firms taking advantage of opportunities for profitable investment created by the import restrictions and other policies implemented by many developing countries in their pursuit of import-substituting industrialisation. He argued that whereas conditions prevailing in the colonial territories and independent developing countries in the immediate postwar period were not generally conducive to forms of foreign investment other than those

based on whole- or majority-ownership, important structural changes brought about by political independence and/or induced by periods of rapid economic growth during the 1950s and 1960s in the developing countries in turn helped to create new or expanded opportunities foreign business involvement.

On the whole, Statistical evidence on the significance of licensing by multinational enterprises for servicing developing country markets is difficult to establish. However, to illustrate the extent of use of licensing in developing countries, data provided by the United Nations' Third survey (1985) is used to highlight the extent of the practice.

In India, there is widespread use of licensing by multinational enterprises. It is noteworthy that only about one-eighth of some 2700 inward licensing agreements entered into during 1970-1979 made provision for equity participation, generally minority holding. In the Republic of Korea, the number of licensing agreements grew from about four a year in the first half of the 1960s to an average of 70 a year in 1970-72, and to an average of 250 a year in 1979-1980. Over 90 per cent of the licenses concerned the manufacturing sector with Japanese firm accounting for about 60 per cent and the U.S. firms for a quarter.

The number of licensing or similar contracts entered into, increased about five-fold between 1970 and 1979 in Malaysia. In Mexico, payments for technology rose from \$173.5million in 1975 to \$285.3million in 1979. Less than 30 per cent of more than 8000 technology agreements registered during the period 1973-1979 related to Mexican enterprises with foreign equity participation. In the Philippines during the 1970s,

there was an increase in the number of licenses granted to joint ventures in which foreign enterprises held minority interest and in the number of licenses granted to enterprises without foreign equity participation. A survey conducted in 1978-79 indicated that about a third of some 150 licensing agreements were with enterprises having no foreign participation in ownership. Of the remainder, about two-thirds were conducted with joint ventures with minority foreign participation, and remaining with enterprises with majority foreign participation. A survey in the electronics industry in Singapore revealed that 14 of the 16 wholly-owned foreign firms had licensing agreements (one with a firm other than its parent company) while six out of seven joint ventures, and three of seven domestically controlled firms had entered into such agreements.

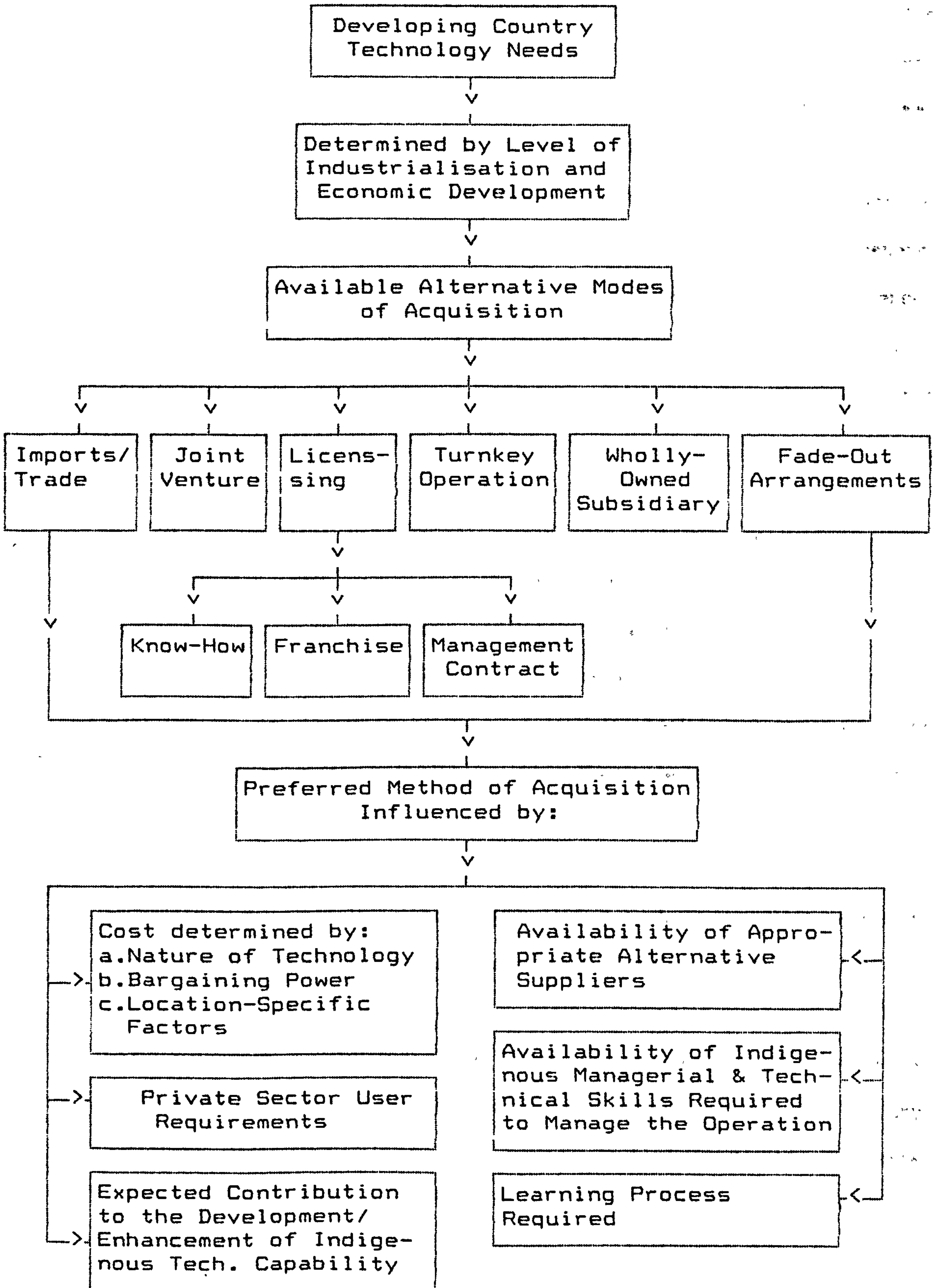
(b) LDCs' Preference for Licensing

The process of technology acquisition by a developing country involves a careful and systematic evaluation of the alternatives available as depicted in the model below (figure 3.2). Figure 3.2 shows that for a developing country, the preferred method of acquisition is influenced/determined by the following factors -

1. Cost - The cost factor is a very complex issue that is of major importance to both the user company and the host government. For the user company, it may mean the difference between profitability and going out of business. For the host country, the concern is the net impact of any technology transfer arrangement on the balance of payment. Consequently, developing host governments intervene in the transfer process by regulating transfer arrangements to ensure that :

FIGURE 3.1

A MODEL OF TECHNOLOGY ACQUISITION
DECISION BY A DEVELOPING COUNTRY



(a) appropriate technologies are imported, and (b) "reasonable" prices are paid for them. In addition, the cost is further determined by (i) the nature of technology in question. It is expected that a more complex and sophisticated technology will attract higher costs; (ii) bargaining power of both the user company which stems from size, negotiating experience and skills, and host government policy towards technology acquisition; and (iii) location-specific factors such as the market lucrativeness, expanding demand among the lower class, the potential for the licensed product(s) or end product of the licensed process. Of all the available alternatives for technology acquisition, licensing is potentially the cheapest way of acquiring needed know-how.

2. The existence of appropriate alternative suppliers is determined by the degree of standardisation of the know-how. Theoretically, it is expected that where there are sufficient alternative suppliers, an LDC can pick and choose technology which suits the local conditions. In addition it is likely that a standardised technology will be more appropriate for local conditions and these technologies are easily licensed with minimum fuss.

3. Availability of indigenous managerial and technical skills required to manage an operation is another factor that determines the method that is likely to be used a developing country for technology acquisition. Where there are sufficient skilled manpower, investments by MNEs backed up with managerial control become unattractive for the host country. Therefore with appropriate and adequate technological and managerial infrastructures, licensing will be a preferred method of technology acquisition.

4. The expected contribution of a given technology to the development and/or enhancement of indigenous technological capability determines the method which a host country will prefer for the acquisition of such technologies. The choice will be between encouraging foreign direct investment or the purchase of the know-how (this choice will depend on factor no.3 above) or even a combination of both. However, wherever possible, a developing country will prefer licensing because of the cost factor.

5. The private sector user requirements ultimately determines the nature of technology to be imported and the method to be used for the acquisition. However, the decision is constrained by the host government's role as the determinant of appropriate compensation for the transferred know-how. Consequently private sector user are encouraged to minimise cost of acquisitions by ensuring rapid assimilation and diffusion.

6. The learning process required for an imported technology determines if such a technology should be bought or acquired through other means such as joint venture operations. Most standardised technologies do not require complex learning process and therefore could easily be acquired through licensing.

On the basis of these factors, licensing is thus seen not only as cost-effective method of acquiring technologies but also as a way of utilising "cheap" technology to develop and enhance the indigenous technological capability. Therefore, while MNEs find licensing in developing countries less problematic in terms of repatriation of funds

(royalties enjoy preferential treatment over dividend in foreign exchange allocations), it becomes a mutually attractive option for both the MNEs and the developing host countries.

3.2.1 Arm's Length Versus Affiliated Licensing

Arm's length licensing refers to licensing arrangement between independent companies. However when a parent company licenses its subsidiary to undertake certain activities abroad, it becomes affiliated licensing. The U.S. Department of Commerce defines direct investment with ownership of at least 10 per cent of a foreign business enterprise as an affiliate. A less than 10 per cent interest is not considered to have significant ownership to influence management.

Research evidence have shown that independent licensing is likely to be found among smaller and medium-sized companies. This was shown in Buckley and Davies study (1979) and Telesio (1980), discussed under firm-level factors below. With smaller and medium-sized companies, lack of sufficient resources make it almost impossible to internalise production in all or several markets. Therefore licensing may be a valuable and continuing source of earnings, especially where auxilliary business is created or where the licensee becomes dependent on the licensor. In which case, a high proportion of the licensor's business may be generated by the licensed product(s) or process(es). This partly explains the licensing strategy of companies such as Whirlpool Corporation and Perkins Engines Inc. Their licensing strategies are well discussed in chapter nine under, case studies.

Licensing of affiliated companies has a different strategic role for the larger multinationals. It is arguable whether licensing play more than incidental role in their international strategy. In some companies, licensing is an integral part of their international expansion. For example, in the automobile industry, selective licensing-cum-assembly agreements contribute significant additional income to the global total. However, the question is whether the process of licensing of affiliated companies is different from that of independent companies. With reference to our earlier definition of an affiliate, Contractor (1985) pointed out that :

"with the 10 per cent cut-off, it is clear that the definition of foreign affiliation is thus very broad and includes minority joint ventures where firms have between 10 and 50 per cent of equity. A great deal many joint ventures which may approximate an arm's length relationship are lumped into the "affiliate" category. This is only an approximate correlation between the percentage of shares held and the degree of control or influence wielded by a minority partner".

Contractor therefore argued that licensing agreements with foreign minority joint ventures tend toward, or even approximate an arm's length relationship between licensor and licensee over terms and conditions. He contend that a licensor will thus negotiate for the maximum royalty, as with an arm's length party.

3.3 Factors Influencing Licensor's Licensing Decisions

The objective of the licensor is to maximise rent for its technology innovations. The licensing decision process involves the evaluation of costs and benefits as well as long term strategic implications and considerations as compared with other alternatives. Therefore the factors that influence licensing decisions are considered from :

- i. Firm-level factors,
- ii. Industry-level factors
- iii. Market/Country-level factors.

The advantage of licensing is found on all three levels. However, there must be firm level advantages (patent, know-how) and the technology must be possible to separate from the owner and utilise by indigenous firm. If this cannot be done, the advantage must be utilised by exports and direct investment. Additionally, a direct investment may be supplemented by a license to the subsidiary. It then becomes an intermediary form between separable and inseparable technology. A great deal of international trade in licensing have come to be known to exist between affiliated firms. For example in Sweden, about 40 per cent of the license exports and 60 per cent of license imports are between affiliated concerns. (see Thunman,1982(b),).

On the other hand, the objective of the licensee is to acquire proven technology, patent or trademark as quickly as possible at a fairly reasonable "price". In addition, the licensees want to keep

abreast of technology innovations without having to go through the rigours of research and development, and the associated costs. The reasons for entering into licensing arrangements are therefore quite diverse from the licensor and licensee's standpoints, and some of the factors are shown in Tables 3.7 and 3.8 below.

Table 3.7

Possible factors which may make licensing a preferred strategy to Multinational Enterprises.

<u>Conditioning variable</u>	<u>Strategic concept.</u>
1. Firm-Level	-Licensor firm size -Research intensity -Reciprocal exchange of technology. -"Choosing" competition -Creation of auxiliary business -Diversification and product line organisat. -Perpetuation of licensee dependency.
2. Industry-Level	-Product cycle standardisation. -High rate of tech. turnover -Product versus process tech.
3. Country/Market-Level	-Constraints on FDI. -Constraints on imports.

Source : Contractor, F.J., 1985.
Licensing in International Strategy;
Quorum Books, pp.70-71.

Table 3.8

Possible Reasons for Licensee's need for Licensing.

1. Avoid R & D costs.
 2. Upgrade Technology.
 3. Receiving valuable brand name.
 4. Selling internationally through licensor.
 5. To pre-empt licensor competition.
 6. Reproduce proven manufacturing techniques.
 7. Future links/other businesses with licensor.
 8. To receive future technology from licensor.
 9. Prestige effect of associating with international company.
-

Source : Contractor, F.J., 1985,
Licensing in International strategy,
Quorum Books, p.178.

The factors that influence the use of licensing as identified in the literature have important role in our understanding of the global significance of licensing, particularly its importance in the "new forms of investment" in developing countries. These factors are discussed in detail under the three level classification as shown in table 3.7).

3.3.1. Firm-Level Factors.

a. The Licensor Firm size.

The size of the licensor firm is an important factor influencing the decision to use licensing for international involvement. The size effect can be explained from two perspectives (i) Too small or (ii) Too big.

(1) In a situation where the licensor company is too small, the most plausible explanation would be that the relatively smaller firms have lower financial, managerial, and foreign market capabilities. Indeed, in their study, Buckley and Davies (1979) showed that these factors may prevent any consideration for foreign investment. They argued that limits to information processing mechanisms place foreign markets beyond the horizon of smaller firms. In the same line of argument, Telesio (1980) noted that relatively, higher licensing propensity occurs in companies with less experience in foreign operations as measured by the proportion of total sales manufactured abroad by controlled subsidiaries. Moreover, given the large capital requirements, it is often difficult to internalise all productions in several countries.

Telesio argued that because of limited resources, the first step for relatively smaller multinational enterprise entering a foreign market is often to license a non-controlled local firm. This move requires very little in the way of resources from the multinational enterprise other than the technology itself. He cited reasons given by a representative of small multinational enterprise in his study for licensing abroad - (1) licensing does not require capital investments, (2) licensing does

not tie up qualified personnel on long term basis, (3) licensing generates revenue immediately, (4) licensing creates the basis for an investment opportunity, and (5) licensing provides an opportunity to get to know the people you are dealing with.

(ii) The second strand to the firm size argument is where the firm is too large to effectively co-ordinate activities of various sections, licensing becomes the obvious way of conducting international investment. Most multinational enterprises do not have the policy of across-the-board internalisation which IBM (International Business Machines) has. Therefore some multinationals operating in certain industries (e.g. Electronics, Chemical, Motor vehicle, etc.) use licensing in their approach to servicing world markets. Significantly, some companies firmly believe in licensing as a global strategy. This perhaps explains the policy of licensing in General Electric Corporation (GEC) with hundreds of global licensees. The RCA Corporation has a policy of licensing with the "buy-back" clause.

b. Reciprocal Exchange of Technology.

Reciprocal licensing has an important long term strategic role, apart from generation of revenue. Licensing in this case is utilised not as a means of entering foreign markets but in order to gain access to the technology of other innovating firms, by reciprocal licensing of technology. It is argued that in the pharmaceutical industry, not even the "giants" can do research to all biological fronts or hope to go

through testing and certification in all countries. Thus exchange of knowledge and territorial rights becomes important for fuller representation in both product range and territorial coverage. The Telesio study confirmed that licensing for reciprocity may increase with relative size because it is the highly innovative firms that are most likely to license for reciprocity. He argued that some past studies have found a positive correlation between innovation and size.

In the textile industry, licensing has been particularly important with the man-made fibre and luxury clothing sector. In their study of clothing industry, Hood and Young (1984) argued that the importance of licensing derives from the nature of man-made fibres themselves. When the fibre manufacturer produces a generic fibre like Nylon and Polyester, the fibre is given trademark permitting exclusive use. More importantly, the technology is such that the possibility for modifying a basic generic structure over time and improving its performance are nearly endless. Licensing and cross-licensing then becomes important given that the market size may be too small to justify investment in optimally-sized plants without creating excess capacity.

Roman and Puett, Jr. (1983) also argue that where a foreign licensee has no reciprocal rights or know-how to offer the licensor at the time a licensing agreement is concluded, a grant-back or feedback commitment with respect to the rights and know-how supplied is often included in the licensing agreement. This arrangement is known as cross-licensing. It is argued that cross-licensing is more common than the one way license. Roman and Puett, Jr. contend that even the one way license is likely to have a reciprocal twist by way of grant-backs.

c. Research Intensity of
Licensor Company.

The Telesio study showed that companies that spend relatively more on research and development as a percentage of sales, tend to use licensing over direct investment. The finding does disprove the general contention that high technology or R & D - intensive firms will uniformly opt for greater internalisation or keeping the technology "in-house". However, there are evidence that cast doubts on this generalisation. For example the Contractor study (1981) showed that licensing receipts increased with greater R & D in licensor firm. It is suggested that a firm may be so comfortable in its technological lead and consequently fearless of imminent or eventual licensee competition, that it agrees to license in all areas where investment is difficult or risky.

d. "Choosing" Competition.

One of the reasons for favouring a particular firm by licensing of technology is that they may be some present or future equity stake, a materials supply arrangement that will last beyond the patent expiry or even plans for joint venture with that firm in third nations. Consequently, the licensing arrangement will give the licensor a head-start over other local firms. On the other hand, it is argued that marketing technology even to competitors in certain cases can actually enhance its commercial use. Certain industries demand at least two

sources for a product before it will be adopted for widespread use, e.g. pharmaceutical industry.

e. Creation of Auxiliary Business.

In several cases, auxiliary business may be derived by the licensor from an agreement, whether mandated in the agreement or not, to the extent of provision of such services as materials and components sales, quality control, training of personnel, ad-hoc technical assistance etc. In situations where the auxiliary business is predominant, the licensing agreement has been seen as a cover for the licensor to operate in the market. A good example is the licensing of automobile assemblers who, at least in early years prior to the development of local suppliers, will buy much of the value of the automobile in parts from the licensor. This is a form of disguised imports, aided often by lower tariffs on components when the government wants local assembly.

f. Diversification and Product-Line Organisation

In very large diversified firms, especially where considerable diversification puts a constraint on the financial and managerial resources available for equity ventures overseas the firms seek additional resources from foreign licensees (Telesio, 1977). It is argued that when a diversified firm wants to increase its product line diversification abroad, a licensee can offer rapid access to markets. For

instance, each product line might require a distinct marketing formula, different for each country, which the firm could execute internally only at a considerable cost. A licensee can offer its own marketing expertise, having already sunk costs into acquiring knowledge of its own market, training personnel and developing sales channels. In addition loss of control over technology is probably of less concern to diversified companies because each product line accounts for only a small share of earnings and sales. Consequently, highly diversified firm will not need to exercise full control over performance of each product line in every market where the company is operating.

Highly diversified firms generally do not erect marketing and production barriers to entry in order to preserve their maturing products from competition, as might be the case for a firm with only one basic product line. Thus, these highly diversified firms are likely to have a number of older, mature products facing price competition, and these products are the candidates for licensing.

g. Perpetuation of Licensee
 Dependency.

Another important role of licensing in international strategy, especially to R & D - intensive firms, is to keep licensees on perpetual dependency. The disadvantages of licensing, arising from licensee independence, are removed if the licensee is kept dependent for trademarks, required components, foreign market access, technical improvements, etc. This would be true even where the licensee government

prohibits such explicit restraints as tied inputs. It is thought that this will most certainly happen because in a protected environment, licensee's interests are likely to be closer to the licensor's rather than their own government.

In Davies (1977), and Hood and Young (1983) it was shown that the licensee often views the permission to use foreign trademarks, for instance, as critical to market success and profit. Hood and Young observed that licensing of trademarks functions as a means of recognition and have a promotional role (e.g. in the textile and clothing industry).

3.3. Industry/Product - Level Factors.

a. Product Cycle Standardisation.

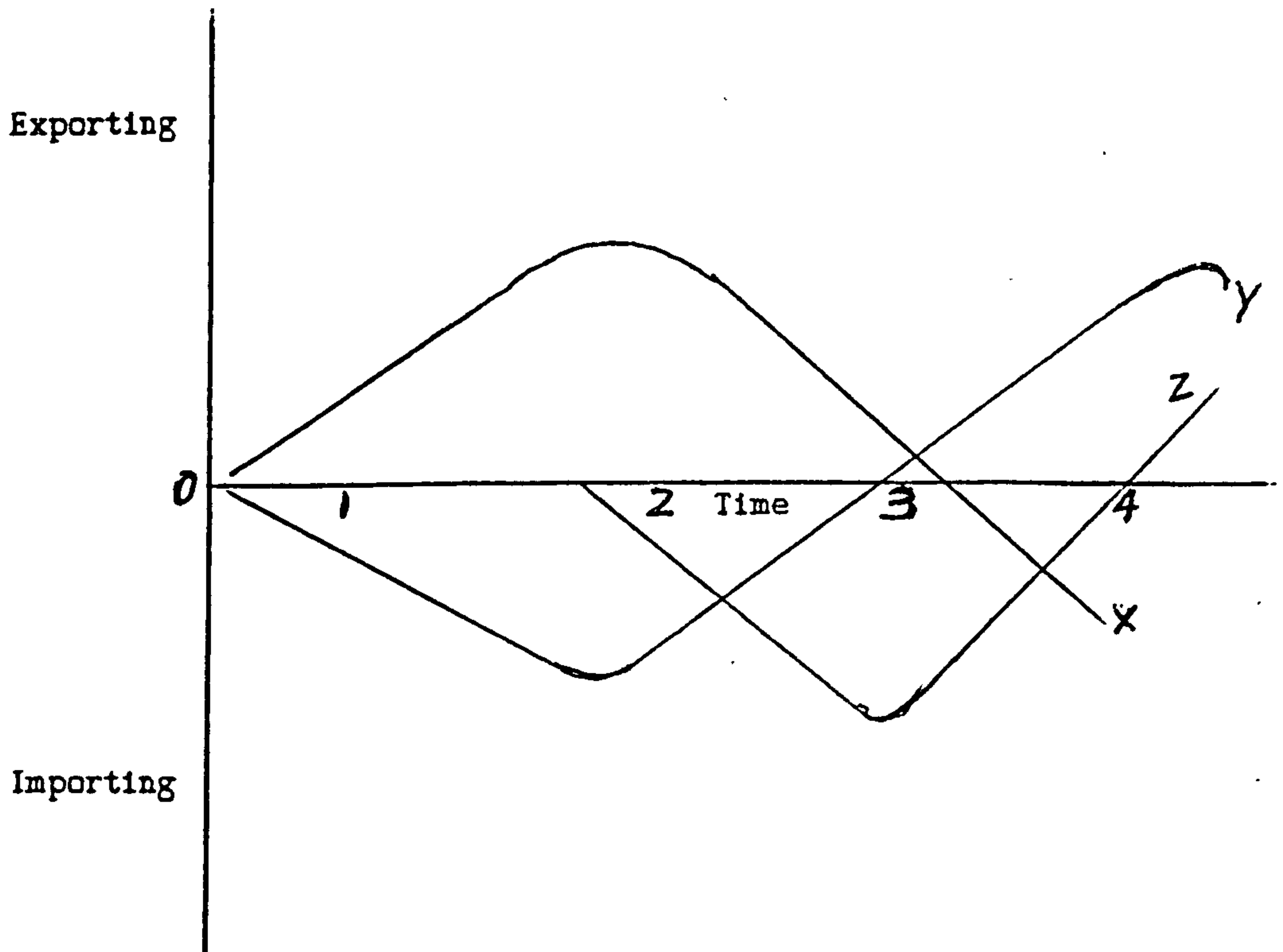
There is the inherent assumption in this concept of product cycle standardisation that generally speaking, obsolescing products are given more consideration for licensing. This is based on the fact that licensing can be placed in the context of the international product life cycle (IPLC). As a product passes through its life cycle, (from introduction to maturity) it exhibits changes in the pattern of consumption and production. The stages of the life cycle are accompanied by changes in the product itself - toward more standardisation, and relative importance of various factors of production such as skilled labour, unskilled labour and capital.

As product passes through the stages of its life cycle, production techniques become more standardised, and the skill level of labour falls. As consumption increases, competitors enter the market. This causes the prices to fall, thereby causing consumption to increase further. The idea of the IPLC is that more mature, standardised products or process facing increasing competition and declining margins, are produced in the least cost global locations. In the least cost global location, the firm has to decide whether it will set up production facilities or license out its technology to unaffiliated firms.

Four stages are identifiable in the product cycle. These distinctive stages are (i) Innovation, (ii) Maturity, (iii) Worldwide imitation, (iv) Reversal, as shown in Figure 3.2 below.

Figure 3.3

Stages of Product Life Cycle



Note : X = Initiating Country
Y = Other Advanced Countries
Z = Less Developed Countries

Source : Oakvisit and Shaw _ "An examination of the IPLC and its application within marketing".Columbia Journal of World Business, Fall 1983.

Figure 3.1 shows three life cycle curves for the same innovation; one for the initiating country, one for other advanced nations, and another for less developed countries. For each curve, net export results when it is above the horizontal line, if under the horizontal line, net import occurs.

As the innovation moves through time, the direction of all the three curves change. Furthermore, time here is relative - the time needed for a cycle to be completed varies from one kind of product to another and the time interval varies from one stage to another.

Stage 0 represents product cycle in operation. It is a stage through which a new product goes through within the original market i.e. introduction to decline. It has been argued that while innovations could take place anywhere in the world, there are most likely to occur in highly developed countries. The reason being that firms in advanced countries may have both the technology and necessary capital to develop new products. At that early stage, lack of substantial overseas competition coupled with the technological break-through, permits the firm to behave as a monopolist, offering the innovation at a premium.

The maturity stage, which is the second stage, is characterised by stability. Sales and exports begin to level off but remain relatively stable. As the product moves further into this stage (as in Figure 3.3 above) the decline in imports by advanced nations tend to accelerate, but this is matched by an increase in imports by less developed countries.

The third stage is the stage of worldwide imitation. Despite stable import demand from the LDCs, the innovating country's worldwide export share falls because - (a) advanced nations are now self sufficient, (b) these countries increasingly replace the innovating country's exports to the LDCs, (c) consumer demand in LDCs no longer grow to absorb all the supplies offered by all advanced countries.

It would be anticipated that later in the life of the product, LDCs with lower production costs would become the major sources of supply and export back to the innovating country and other developed countries. A firm that knows it is due for a model change or technology change will find itself willing to license the older version, secure in the knowledge of continuing technical gap between it and the licensees.

The fourth stage - the reversal, is the stage where the innovating country no longer exports, and may be forced to import instead. The major functional characteristics of this stage are product standardisation and comparative disadvantage. The product is no longer a novelty and with a lack of further modification, it becomes sufficiently standardised for most LDCs to produce a simple version of the product. Comparative disadvantage arises because the product is no longer capital or technology-intensive, but instead becomes labour-intensive.

b. High Rate of Technological
Turnover.

The rate of technical change is another factor which will induce significant use of licensing. This is a common practice in the electronics and computer industry. Hypothetically, Motorola Inc. may well license a micro-chip design to Hitachi company, despite the fear that the licensee is technologically equal and already constitutes an international threat. Motorola will do this because the rate of technological change is so rapid, in other words, the design is so perishable that some licensing income may well be generated on the design.

Also, certain technologies, though new, may be of marginal importance to a company and hence license more readily. For example, if a firm innovates in an area where it does not hold a significant technological lead, the advantage offered by the innovation might not be fully exploitable. In this case, a licensing arrangement might offer the more profitable alternative.

c. Product versus Process
Technology.

It is possible to realise extra revenue by licensing peripheral process know-how, even when the basic product technologies are not licensed. For instance, this can be done in galvanising in the steel industry or anodising aluminium. There can be substantial incremental

income possibilities in licensing these associated processes because it involves little incremental costs, compared with the licensing royalty.

3.3.3. Country/Market-Level Factors-

a. Environmental constraints on FDI or FDI Income.

Various constraints on the operation of MNEs in developing countries have meant that the MNEs are faced with the decision to operate in a developing economy through licensing and other non-equity contractual arrangements. Some of these constraints range from prohibition of foreign investment in certain industrial sectors, local participation requirements, to repatriation of funds. The LDCs have done this with growing number of legislations.

Davidow (1980) observed that these new legislations are by no means identical in provision or conception to those found in developed countries like the U.S.A. Unlike the American anti-trust law which makes no distinction in the treatment of national and alien firms, most developing countries' legislation appears more regulatory in purpose and effect than are the broad prohibitions of western anti-trust laws.

In addition, high political risk could alter the decision on market entry strategy in favour of licensing. In some developing countries, dividends are very volatile compared to more stable and agreement-bound income sources such as royalties or fixed fees.

b. Constraints on Imports into
Licensee Nation.

As legislations or political risk may rule out the direct investment option, tariff and non-tariff barriers often preclude the exporting option. In most cases, these restrictions are designed to protect specific industries that could not survive open competition from imports. In developing countries, Fayerweather (1970) explained that protection serves some economic objectives, in that they are trying to accelerate industrial development, hence import restrictions are widely used to permit local factories to get started, even though their costs are higher than those of the foreign plants. These countries, he argued, are determined to build up local manufacturing, partly because they believe that industrialisation is the key to future prosperity (and rightly so), and partly because it symbolises economic independence.

Where there are balance-of-payment problems, manufactured products in a foreign country are subjected to certain "terms of access" to domestic market (see Keegan, 1980). These terms of access cover different categories of effect on imports such as import duties, import restrictions, foreign exchange regulations and preferential arrangements.

The patterns of the international trade depend, thus, to a large extent on internal considerations of the MNE, ranging from internal accounting principles to the availability of means of transferring funds between countries. The question that arises in the issue of which of these levels, are the most important factors in the choice of licensing, to be found. This will, of course, differ in every company, but for

analytical purposes, some empirical findings of reasons to license are discussed in the light of this three-level classification.

Telesio (1980), examining the licensing behaviour of 66 U.S and non-U.S based multinationals, found the order of relative importance of seven reasons to license to unaffiliated or minority-owned companies to be -

1. Government pressure for licensing
2. Market too small for profitable investment
3. Entry into market too difficult because
of strong competitors
4. Shortage of funds for investment
5. Politically risky situation for investment
6. Lacked knowledge of market
7. Did not have management for investment.

The observations show a tendency for the market-level factors to dominate the company's decision to license instead of making direct investment (reasons 1, 2, 3, 5, & 6). Firm-level factors occur in reasons 4 & 7. Reason 3 may eventually also be regarded as a factor in the industry level. One must of course, bear in mind that this may very well vary substantially between companies depending on size, nationality and international strategy, etc..

In another study, Buckley and Davies (1979) examined 30 executives' explanation on the totality of their overseas operations and their general policy on alternative strategies. What emerged to explain the licensing decision process were as follows-

1. Licensing as an outcome of constraints
(firm & market level)
2. Licensing as a global strategy
3. Licensing as second-best strategy
4. Licensing in response to monopsony pressure
(e.g. pressure from outside the company - Govt. demands,
customers etc.)
5. Licensing as a means of servicing small protected markets

In so far as these two studies do not suggest applicability to all licensing situations, they nonetheless, give a general indication of the difference in licensing considerations compared to other means of servicing a market.

3.4. Some General Problems of Licensing.

Like any other form of technology transfer and acquisition, licensing as an international strategy has its own problem. The sale of know-how is clouded with problems due to its "intangible" state. Because of lack of information technology transfer and acquisition can be problematic. Caves, Crockell and Killing (1983) argue that this is the result of market imperfection. One of the most serious conflicts between MNEs and host countries in the sphere of technology involves pricing. For instance, developing countries maintain that MNEs systematically overcharge them for the technology they supply. Hood and Young (1984) argue that host countries are inevitably at a disadvantage because it

cannot know all there is to know about what is being bought until the technology has been purchased. Technology receiving countries also feel that transferred technology may be ill-suited to the factor endowment of developing countries. (see Contractor and Sagafi-Nejad, 1981).

From the licensor's point of view, McGee (1966), Teece (1976), and Lovell (1979) as well as Caves, Crockell and Killing argued that transaction costs involved in transferring technology are quite significant, pointing that resource cost of transferring technology constitutes between 2 and 59 per cent of the recipients' project total costs, averaging about 19 per cent. This cost factor was emphasised by Root and Contractor (1984) as minimum acceptable limit in price negotiation.

With multiple licensees, uniform royalties will not yield the desired results, but at the same time, discriminatory royalties alone may not work unless different markets are spatially separated with imperfect knowledge, on the part of the buyer, of the market structure. However the monopolistic licensor with perfect information and perhaps no transaction costs on its part, could write licensing agreements to extract all rents from competing licensees.

The issue of risk cannot be understated as far as technology transfer is concerned. The licensor risks the escape of his technology from proprietary control as well as risk of unauthorised disclosure, the opportunity loss of profits foregone from foreign investment when the alternative strategy of licensing works out badly and the emergence of a new competitor when it works too well. On the other hand, the licensee

may make a substantial investment in physical facilities and marketing outlays on the "uncertain" prospect that a licensed technology will in fact, perform as promised.

In addition, a technology's economic performance is uncertain. The technology may not work properly in the new location, the demand for the product that embodies it may change, newer technologies may displace it. All these factors reinforce the fact that potential returns to the technology licensed abroad are simply uncertain.

3.5. Summary.

This chapter has demonstrated the use of licensing as an alternative strategic approach to FDI and exporting, under changing world conditions which have been brought about by both protectionism on the one hand, and the need to change production locations in response to different rates of economic growth, on the other hand. It has also shown the various factors that influence a firm's decision to license as opposed to FDI and exporting. It concludes with the the discussion of the problems of licensing.

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CHAPTER FOUR.

NEGOTIATION AND BARGAINING POWER.

CONTENT.

- 4.1. Introduction.
- 4.2. The Negotiation of Technology Transfer Agreements.
 - 4.2.1. The Determinants of MNEs' Bargaining Power.
 - 4.2.2. The Determinants of Developing Host Countries' Bargaining Power.
- 4.3. Negotiation of Licensing Agreements
- 4.4. The LDC Firm's Bargaining Power and Negotiation of Licensing Agreements.
- 4.5. A Typical Bargaining Model.
- 4.6. Influence of Equity Interest During Negotiations.
- 4.7. Conclusion.

The concept of bargaining power is very crucial to the discussion of international business negotiations between potential or actual foreign investors and host governments regarding the terms and conditions applying to foreign direct investments and technology transfer. The investor is almost always a multinational enterprise (MNE) with its origin, headquarters, and central activities located in its home country. To the host government, it is a foreign company - an alien - and its investment activities may therefore be subject to special requirements and restrictions. The government normally seeks the greatest amount of benefits at the least possible cost. On the other hand, the MNE naturally desires the fewest restrictions and the greatest amount of freedom possible, and it seeks the highest profits at the lowest risk to itself.

International business negotiations are thus concerned with the balancing of freedom and restrictions, benefits and costs, and profits and risks between a host government and a multinational investor. The relative bargaining power of the parties determine the outcome of the negotiations.

Many writers in international business such as De La Torre (1981); Fagre and Wells (1982); Rugman, Lecraw & Booth, 1985; Poynter (1985); Contractor (1985); Moran (1985) and others have argued that the concept of negotiating strength is an aggregate which incorporates a wide range of variables affecting relationship between a multinational investor and a host developing country firm.

Stoever (1981) contend that such an aggregate will include variables such as:

1. the power to command resources, i.e. the ability to supply what other party needs or wants;
2. the ability to offer opportunities, such as markets, jobs, or training;
3. the availability of alternatives : alternative suppliers to the host country or alternative investment opportunities to the company;
4. experience in negotiating;
5. knowledge of one's own and other party's strength and weaknesses;
6. ability to accomodate the other party's needs and dispel their fears;
7. precedents;
8. use of external/third parties and/or international bodies;
9. ability to persuade or convince the other party of one's good intentions and desirability as a party;
10. ability to act unilaterally : for the host government, to expropriate or to change laws and policies; for the company, to circumvent government regulations.

Therefore, the balance of bargaining power is expected to shift towards the party that possesses more significant factor needs. It has to be said that in the negotiation process, there are likely to be multiple parties. It is particularly relevant when reviewing issues affecting the negotiation of technology transfer arrangements to the developing countries. Even when the negotiations are primarily between an MNE and a local company or a private partner,

host governments are usually involved in the negotiation. For instance, government agencies are likely to be consulted on such matters as foreign exchange regulations, ownership requirements, personnel or expatriate policies, sourcing requirements, etc. It is the intervention in the negotiation process between a foreign licensor and a developing country licensee, by a host government which increases the complexity of the bargaining power issue. Although host governments get involved in these processes as a response to the perceived nature of MNEs.

Host country governments intervene in the negotiation of technology transfer arrangements in order to increase the benefits flowing from operations of MNEs in the country as a whole or to specific groups within the country. Davidow (1980) explained that the developing countries view bargaining with multinational enterprises as being inherently or frequently unequal and therefore requires international or national intervention to balance the terms and conditions. Moreover, Derakhshani (1986) argued that because different countries present different environmental conditions for the same technology, and since the characteristics of the actors differ among circumstances, no single type of transfer arrangement is likely to succeed in all situations, even for a single technology. Therefore these factors underline the fact that bargaining power is a dynamic concept which changes with different set of factors.

4.2 The Negotiation of Technology Transfer Agreements.

As indicated above, bargaining power is determined by power to command resources and supply what each other needs. Moran (1985) explained that in terms of theory, the predominant model that economists have used when looking at relations between foreign investors and host countries has been one of bilateral monopoly : the foreign investor has control over capital, technology, management and marketing skills needed to launch a product successfully; the host country has control over access before investment is made and over conditions for operating afterwards.

Rugman, Lecraw and Booth (1985) contend that in a bargaining framework, the outcome of negotiations between MNEs and host country governments is determined by four groups of factors. They argue that the goals of the MNEs and the goals of the host government determine their bargaining position, and that the characteristics of the MNE and the characteristics of the host government determine their relative bargaining position. The relationship between goals and characteristics is difficult to explain because the characteristics of both the MNEs and the host government strongly influence their respective goals in the negotiations. The analysis is further complicated by the knowledge that neither the goals nor the relative bargaining strengths of the MNEs and host country governments are static. They change over time.

Nonetheless, Fagre and Wells Jr. (1982) argued that the deal that is struck between foreign investor and host country reflects the need for and the scarcity of the resources owned by the two parties as well as perhaps, their bargaining skills. Thus, a multinational enterprise that can offer access to capital, technology or marketing skills can be in a relatively strong bargaining position, especially if few other firms have similar resources or willing to externalise their know-how and resources.

On the other hand, the differences in the possession of factor endowments between countries partly explain the willingness of multinational enterprises to become international and exploit these advantages (see Dunning, 1980). It is also argued that market imperfection (i.e. the possession of certain firm-specific advantages by the MNEs) creates bargaining leverage. Moran (1985) pointed out that without some kind of market imperfections, the disadvantages of operating in foreign environment would favour local entrepreneurs over international competitors.

Given that the bargaining power of a developing country is likely to be weak when it is faced with high technology firm (Fagre and Wells, 1982), the past two decades have seen developing countries coordinating their international policies to force new kinds of inter-governmental agreements that would improve the overall economic and social conditions of developing and underdeveloped countries (see Wallender 111, 1980). One of the principal objectives of this approach was to increase the bargaining power of the third world nations vis-a-vis the developed world and to gain greater control

over multinational enterprises and how they transfer capital and technologies to their countries.

Through various international code activities, specific objectives of Third world countries have been identified as including the following -

1. reducing the social and economic costs of technology acquisitions in the Third world;
2. increasing the power of the Third world governments and their productive sectors in terms of choosing and acquiring appropriate technology;
3. establishing new institutions that would help governments take a more active role in controlling and directing technology and capital flows;
4. establishing means through which technology and capital could be more efficiently diffused within the host country after its initial transfer;
5. creating pressures to establish more research and development facilities in developing countries.

In addition to these inter-governmental activities, individual countries have sought to control import and investments through legislations, formulating guidelines for approval of new foreign investments, restrictions on profit remittances, approval of all contracts concerned with technology transfer as well as the registration and approval of foreign capital/loan (Okono, 1987). In some countries like India, attempt is being made to increase their bargaining power by both supporting local research and development

efforts and influencing the market condition for technology, in a manner favourable to them (see Carlsen, 1975). The idea for this support for local R & D in the public sector as well as in private sector is to (a) decrease the need for imported technology; (b) increase the ability to evaluate the benefits provided by alternative suppliers; and (c) increase the knowledge of the existence of alternative sources of technology.

Equally significant is the stance of international bodies such as the United Nations Industrial Development Organisation (UNIDO) as emphasized in Wallender study. The objective of these bodies is to help establish model laws and offices for more efficient control of international business operations in particular countries.

This has meant considerable changes in terms of relationship between a developing country firm and the multinational enterprise. Consequently, the environment for negotiating technology transfer arrangements has changed as well. Whereas in the past, negotiations were carried out between interested parties, without a third party intervention, nowadays, local governments and international institutions have begun to play active role in influencing the process of negotiation. The issue of negotiation has become so complex that a foreign firm must deal not only with the private sector user, but must also gain the support of the local government and possibly international institutions which may be assisting the local government on advisory capacity.

However, third party involvement in the negotiation process could mean that a company's objectives and strategy could conflict with the objectives of the government agencies, and this will probably affect the bargaining posture of the potential technology user in that private sector users will assist the licensors wherever possible in circumventing government regulations, thereby weakening the efforts of the government to help obtain "favourable terms" for the licensees. De La Torre (1981) claimed that because of different priorities of government and private indigenous firms, it has resulted to adverse effects in Mexico's bargaining strength, which is rather surprising, inspite of Mexico's high power of attraction for foreign investors.

4.2.1. The Determinants of MNEs Bargaining Power.

It is been argued that the multinational enterprise's bargaining power does not reside exclusively within the firm itself, but rather in the relationship it has with its external environment. Therefore the bargaining power position of the enterprise will be a joint function of its own characteristics and the characteristics of the situation in which it finds itself (see Gladwin and Walter, 1980). However, a multinational has several potential bases of power available for its mobilisation in various bargaining situations. It is recognised that the effectiveness of MNEs bargaining power stems from the following key elements, namely (1) the control or possession of resources to generate power, (2) the awareness of the resources one possesses or controls, (3) the motivation to employ these resources to influence others, (4) skill in converting the resources

into usable power, and (5) good judgement in employing this power so that its use is appropriate in type and magnitude to the situations in which it is used.

It has to be said that the bargaining power of the MNE is high when its firm-specific advantages are valuable to the host country. These firm-specific advantages can be in product or process technology, management skills, access to export markets, access to capital and other scarce resources. The MNE's bargaining power is also greater when its firm-specific advantages are tightly held; that is, few firms exist that can supply such advantages. Now let us consider specific factors that the MNEs possess or control that enable them to wield such bargaining power vis-a-vis host countries and host country firms.

(a) Technology.

The possession of a firm-specific advantage in product or process technology is potentially the most important source of bargaining power for the MNEs. Hood and Young (1983) argued that technology is not only their major source of advantage, but it is also probably their most desirable attribute from the viewpoint of host countries. This is due to the fact that technology is inherently complex, resulting from the complications in the development processes. The process of invention and innovation is often long and drawn-out, and its path tortuous.

Gladwin and Walter (1980) argued that things get invented as the product of time, effort and money invested by individuals,

businesses, and governments. While technology can be developed anywhere in the world, it is more likely to be developed in the industrialised countries. Consequently, the nature of technology, which bears monopoly power, gives the multinationals great bargaining leverage over developing countries' firms. (see e.g. Carlsen, 1975; Teece, 1981; Caves, 1982; Fagre and Wells, 1982). It is argued that the MNEs see virtue in innovation partly because such activities tend to go hand-in-hand with rapid increases in sales and profit (Root and Contractor, 1984). It is therefore not surprising that MNEs possess monopoly power over technology.

The transfer of core or 'frontier' technology' puts the multinationals on such a position that creates unequalness in negotiation with an LDC firm. There are two sides to the nature of power possessed by the MNEs over technology sales or transfer. (i) A distinction has to be made between standardised technology available from multiple sources and advanced 'frontier technology' where the proprietary value is very high, (ii) The second aspect of the argument is the distinction between the transfer of technology itself and transfer of knowledge of how to push ahead the frontier of technology. On the two counts, the multinationals excel due to their extensive activities.

Caves, Crockell & Killing (1983), and Poynter (1985) contend that certain core or frontier technologies are possessed by only few firms. Therefore the MNEs gain strength from market dominance which can reduce the ability of governments to reach out for alternative sources of technology or capital. The entry of new rivals into an

industry serves to dilute the power of the established leaders. With a proliferation of local and foreign rivals, developing country firms can shop around. But when there is not much else being offered in the market place, the multinationals are clearly very powerful during negotiations with developing countries.

The number of willing sellers is further limited by the alternative of foreign direct investment, and this tends to be the choice of larger and more successful firms in the market.

Most developing countries are economically and institutionally under-developed. Consequently the ability of the MNEs to perform or carry out complex manufacturing or managerial tasks in these economies further enhances the bargaining power of MNEs vis-a-vis a prospective transferee. Rugman et al (1985) argue that if the host nation values access to this technology, it must either allow the MNE to operate in its country through its desired mode or forego the benefits of increased efficiency through technology and increased consumer satisfaction. It is argued that the bargaining power of the MNE is particularly strong if it is a technological leader in its industry. In which case, few if any, other firms possess comparable technology.

Another significant aspect of MNE negotiation is that apart from actual bargaining power, it is known that the role of "percieved" bargaining power, as against the actual power, favours the MNE. Poynter (1985) contends that the existence of technology gap, to the extent that it is difficult to determine the size of this gap,

provides opportunity for inexact perception by outside groups. Under this kind of situation, the MNEs have the ability to influence these perceptions to their favour.

(b) Capital.

The resources available to the multinational enterprises, their usage and subsequent effect on the overall savings, investment, and capital-allocation in a developing country, provides significant bargaining power leverage for the MNEs. Gladwin and Walter (1980) explained that by investing abroad, the MNEs thus help economic growth in host countries. In some technology transfer arrangement, the transferors often undertake to provide support capital to enable the venture to take off. The provision of support capital helps in strengthening the bargaining power of the MNEs dealing with host countries. Even in instances where the government would normally kick against certain restrictive provisions such as tie-in clauses, the provision of support capital could be used as a trade-off against such provisions.

Even where the MNEs do not have sufficient capital internally to transfer to their various operating locations, their financial strength as well as established credit rating may permit the MNEs to obtain favourable terms when raising capital locally. Moreover, certain capital markets in developed countries e.g. Euro-Currency markets, may not be open to local competitors.

However, it has been suggested that foreign ownership of capital itself is somehow bad for the host country. The point here is that

foreign-based MNEs can buy up a host nation's resources with their own money when they finance the investment locally. So the nation can benefit far less from foreign owned capital than locally owned capital; and foreign investment thus takes on essentially 'exploitative' characteristics. This is mainly due to timing of costs and benefits. For the LDCs, FDI means benefits first and costs later. For the MNE, FDI means costs first and benefits later. Therefore the MNEs enjoy the benefits of their investments when LDCs pay the price. It is therefore arguable whether foreign investment will be perceived to be exploitative if timing of benefits was the other way round. However Rugman et al (1985) argue that several studies of the impact of MNEs on local capital and the balance of payment have found that the long-run effect of investment by MNEs on the host country's balance of payment is often negative. They explained that there is a short-run inflow of capital, followed by a large outflow. Despite the above problem, hard-pressed developing countries are always eager to accept the prospect of injecting foreign capital into the domestic economy. In effect, multinational transferors in most cases provide not just one but two essential elements necessary for the achievement of economic growth and development, namely technology and capital. The third element (labour) is usually in abundant supply in most developing countries. Therefore it is to be expected that an MNE providing both technology and capital commands significant bargaining power vis-a-vis developing host countries.

(c) Export Market Access.

It is generally known that "waging conflict on one's territory is a potential source of strength that can increase both assertiveness

and winning outcomes for the home team". The multinationals have the advantage of using their home territory as a bargaining power determinant. They are more familiar with their home market and in most cases, control the market. Following the Japanese success, more and more low and middle-income countries have turned towards export-led growth in their development strategy. Rugman et al argue that unlike Japan, countries such as Taiwan, Korea, Singapore, Hong Kong, Mexico, and Brazil did not have large enterprises that were experienced in international market.

It is also argued that some MNEs set-up "export platforms" in low wage countries. These offshore assembly platforms produce inputs to the production processes of the MNE at home, and also provide final goods for sale through the MNEs' existing channels of distribution and sales networks. Although export platform investments are characteristic of the electronics and garment industries, recent trends have seen investment expansion into parts and finished goods for a wide range of consumer products and industrial equipment.

Investments by MNEs in export platform can have a dramatic effect on a country's exports. Thailand's exports of electronics rose from a few million dollars to several hundred million dollars in just three years, all through the efforts of MNEs. In Singapore, 91 per cent of its exports are by foreign-owned enterprises. (see Rugman et al, 1985).

In addition, export markets are particularly important in the case of natural resource-based industries whose outputs are mainly

for exports. Consequently access to foreign markets becomes a vital factor enhancing the bargaining power of the MNEs. This happens because the major multinationals control these markets in what Casson (1984) calls international monopoly. Even in manufacturing concerns which produce intermediate goods probably needed as inputs by these multinationals, it is essential to co-operate with them in order to have access to foreign markets. Since a host country firm would have great difficulties in marketing such products on its own, any negotiation with the MNEs will mean having them at a superior bargaining position (Poynter, 1982).

Also in situations where a large portion of subsidiary's output is sold or transferred to another affiliate of the same parent company, the parent controls market access to a significant degree. Intra-system transfers in manufacturing industries often consist of intermediate goods which may have value only when combined with other intermediate goods made by the same enterprise group (Fagre and Wells, 1982). IBM's worldwide geographical distribution of parts and components manufacturing facilities is a good illustration of this point.

(d) Industrial Organisation and Marketing Skills.

It has also been argued that MNEs are in a strong bargaining position when they are in an industry for which marketing skills are important. In the geobusiness model of international production (Robock & Simmonds, 1983) and eclectic theory (Dunning, 1980), they argue that marketing skills and the ability to differentiate products

are some of the important advantages possessed by the MNEs that are significant where technology becomes standardised. It is thought that the function of marketing research, selling, advertising and promotions are all necessary to the attainment of customer loyalty, for which the success of American firms such as Kellogg, Coca-cola and Heinz, are based.

Firms that rely on product differentiation through advertising tend to seek a high degree of control over their foreign associates. The most potent instrument here is the brand name. The point is justified by the examples mentioned above. Therefore in negotiating with prospective licensees in foreign markets, the licensors are usually in stronger bargaining position because it is expected that these well-known brands will become instant success in the licensed markets because of established trademarks and image (see Fagre and Wells, 1982; and Poynter, 1985).

Another source of bargaining advantage to the MNEs is the oligopolistic market structure and behaviour. It is argued that size is an important attribute for successful innovation given the high cost of R & D and moreover, the profitable exploitation of technology requires some degree of monopoly if secrets are not to be lost to competitors. Generally speaking, product differentiation is frequently associated with oligopolistic market structures.

(e) Negotiating Skills.

This is the mechanics of the actual bargaining. International negotiation, like any other applied skill, demand attention to details and the execution of details separates a good negotiator from others (F. Posses, 1978). In most cases, the MNE do possess negotiating skill more than the prospective transferees due to their wealth of experience in dealing with such transactions. And of course, the amount of information which is available to the MNE may not be readily disclosed to the transferee especially at the early stages of negotiation, in case they are of commercial significance, if the parties agree to proceed no further. It is, however, quite difficult to have any meaningful negotiation without information on the parties concerned. Graham (1983) argues that information is the key variable in the negotiation process. Not only does it affect the ability of the transferee to evaluate the net benefit obtainable from the transferor under different assumptions, but it is also critical for the transferor to adjust its offer in order to enhance those contributions which are most important to the transferee.

Negotiation requires a framework (i.e. working within the range of possibility) with guided objectives, in order to be meaningful. De La Torre believes that there is need for a good understanding, by corporate officials, of company objectives and national priorities. On the other hand, it is important that government officials and other interested parties know the foreign firm, its history, its pattern of investment and international activities.

Negotiating skill is seen as one of the most important elements in the bargaining process. Graham attributes the mechanics of negotiation to two models of communication - (a) representational, and (b) instrumental. The representational communication involves the transmission of information, whereas the instrumental communication involves influencing another party. Influence on the other party could be established by the attractiveness of offer, power and credibility. On all counts, the MNE comes off stronger because they utilise the "percieved" bargaining power to their advantage, and secondly they have trained and qualified personnel who perform the negotiations.

The structural context in which negotiations take place (such as number of negotiators and their relative experience) and the sub-processes of negotiations (e.g. making trade-offs and compromises through negotiation) further places the MNE in a superior bargaining position. Strauss (1978) explained that the trade-offs are less complex to make when acceptable bargaining zone has been established, as in Root and Contractor's bargaining range. Posses (1978) argue that the negotiator must always limit himself to his terms and those proposed to him. The problem here is that negotiators often make exegerated demand in the hope of getting better scores. The expectations distort the picture of the bargaining zone.

(f) Limited Number of Willing Suppliers.

As one would expect, potential technology buyers in developing countries are numerous in relation to MNEs that are willing to transact business with the LDC firms. Consequently, the few willing MNE suppliers are placed on a strong bargaining position with the LDC firms in accordance with the laws of demand and supply. Even where the technology involved is standardised, one finds that most technology supplying firms operate in oligopolistic market, and consequently, they exhibit the same pattern of behaviour, and that makes it difficult for the developing country firms to pick and choose prospective transferors.

Moreover, the political situation in most developing countries is so volatile that MNEs are generally put off. Therefore the technology user will have to contend not only with the knowledge that MNEs operate in oligopolistic market structure, but also with the fact that within the structure, only few firms are willing to sell their know-how to such volatile developing countries' market.

(g) Ability to Offer Opportunities for Job Creation.

Much of the effectiveness of know-how will depend upon the transfer to host countries of appropriate technologies. In most cases the MNEs are capable of transferring appropriate technologies in relation to factor endowment of a country (Hood and Young, 1983). And because most developing countries experience high level of unemployment. Therefore any technology transfer which is thought to

have potential for job creation, is given preferential treatment by the host government (Contractor, 1981). This often results in the making of trade-offs on certain terms and conditions of the transfer. This obviously put the MNE on a strong bargaining position. Hood and Young (1983) argue that the provision of foreign management and managerial skills may produce important benefits for the host country. In the first place, these may be scarce factors and the inflow of entrepreneurial ability and skilled management thereby improves the balance of the local economy. The spin-off effect may be even more important e.g. local personnel who are trained to occupy management and technical posts in the MNE affiliates. Consequently during negotiation of technology transfer arrangements, host governments always ensure that training components of the transfer package are given prominence.

However, it is argued that the value to the MNE of firm-specific management skills as a bargaining chip is constrained in three ways : (1) management is intangible - its value is difficult to quantify and perceive; (2) foreign management can be equated with loss of control over the national economy; (3) foreign management of local enterprises may have the effect (or be perceived by host governments to have the effect) of consigning local workers to menial, uninteresting, and unproductive tasks as a means for MNEs to continue their dominance.

In order to avoid the effect of obsolescing bargaining leverage, it has been argued that MNEs can reinforce their bargaining power by upgrading technology that is becoming standardised in a host country.

Poynter (1985) contend that at a point when host nation government or interest groups begin to believe that they can replace the MNE involvement with domestic technology/mangement/sourcing etc. with too great a loss, MNE threats to withdraw services or skills hoping to prevent intervention are less of a deterrent to domestic entrepreneurs and others intent on obtaining part of the economic benefit created by the subsidiary. To forestall this kind of situation from arising, MNE can upgrade its bargaining power by providing any item which would improve a firm's bargaining position. For example, an additional product line, a more sophisticated process technology, a new sourcing method etc.. In order words, any activity which cannot easily be replicated by domestic skill. Poynter argue that the following MNE actions are likely to increase bargaining power :

1. Introducing a new and more complex/efficient process technology (material, machines, etc.)
2. Introducing new products or services, or better versions of existing product using existing technologies and management skills.
3. Significantly improving exports, especially in cases where export markets are not easily developed or maintained.
4. Increasing amount of intra-MNE sourcing either at input or output side.

4.2.2. The Determinants of Host LDCs Bargaining Power.

The bargaining power of MNE vis-a-vis the LDCs has been shown to emerge from their superior organisation, their control over desired technology and skills, and perhaps the competition from foreign investment among developing countries for relatively scarce technology. On the other hand, the host countries do have some bargaining leverage over foreign investors. Their bargaining power stems from the possession of certain factor endowments which provide location-specific advantages. Host country's bargaining power increases when the value of its country-specific advantages to the MNE increase. These country-specific advantages may be comprised of some of the factor endowments, such as human and natural resources and capital factors of production. The bargaining power of the host country also increases as its control over these factors increases, especially if they are not available in the same degree to the MNE from other sources.

In addition, the host countries have the advantage of operating in one's 'home territory'. Multinationals conduct most of their negotiations 'away', and consequently their opponents have the advantage of contending on home territory. Gladwin and Walter (1980) argued that indigenous opponents are more familiar with the local environment and also enjoy legitimate right to control and manipulate it. The foreign enterprise as a guest, may be constrained in its assertiveness by a need for caution in an unfamiliar

environment. And since it lacks legitimate rights of manipulation, it is often viewed externally as occupying subordinate status and may therefore be compelled to behave less assertively towards its host.

Generally speaking, in the bargaining process, the developing country will be in a better position if (1) it has a large and growing economy, (2) it knows the terms of agreements made by the MNEs in other countries, (3) it understands the benefits and costs to the MNEs of the sale of this technology, and (4) it investigates other alternatives that it may have open. Nonetheless, the principal determinants of host developing countries' bargaining power are discussed below.

(a) Resources.

Developing countries possess resources which include not only raw materials but also cheap labour supply. It is the nature of these resources that forms the attraction for the foreign investor. In Vernon's product cycle hypothesis (1979), he argued that as products go through the later stages of their cycle, the technology becomes diffused and standardised, resulting to increased competition due to imitative innovations. At this stage, it becomes necessary to transfer production to the least cost global locations. On the basis of this kind of situation, Vernon argued on the concept of "obsolescing bargaining". Central to this concept is the role of risk and uncertainty. Before the investment is made, the production costs determined, and the market established, risk and uncertainty would be high for the foreign company. To induce the latter to

invest, the agreement would have to be structured to reward the company handsomely if the project proved successful. At the same time, the host government is faced with the choice of signing a generous investment contract and getting some benefits in return or refusing to allow a generous investment contract and receiving no benefits at all. Within the incentive structure, the rational solution would be to grant an investment agreement that was steeply tilted in favour of the foreign investor from the onset.

Gladwin and Walter (1980) argued that over time, changing circumstances bearing on bargaining power and perceived interests make existing contractual provisions grossly unrealistic. The position of the multinational enterprise vis-a-vis a national government may weaken over time, for a number of reasons, for example -

- (1) Relative easing of entry barriers within the industry which increases the options available to a resource-rich host nation.
- (2) Diffusion over time of the firm's original managerial or technological know-how to local competitors.
- (3) Improvements in the governments' relative negotiating and administrative skills as a function of growing experience and education of its civil servants.
- (4) Pressure on government policy makers by out-of-power political adversaries calling for a tightening of terms.
- (5) Precedent-setting agreements established with other firms in the industry that are more favourable to the government, either within the country or in another country where similar circumstances prevail.

(6) Reversals in perceptions of risk and return on the part of either the government or the enterprise or both.

The dynamism in the obsolescing bargaining that accounts for a shift in power from the foreign investor to the host country springs from the dissipation of risk and uncertainty if the project proved successful. It may also come from a kind of hostage effect, where the company cannot easily threaten to withdraw credibly, once its investment has been sunk. In his study, Ndackson (1987) showed that MNEs in Nigeria had to comply with government policies introduced after investments had been made in order to protect or reap the proceeds of their investments in capital, technology, and human resources. Whatever the combination of specific causes, Hood and Young (1983) and Moran (1985) contend that the obsolescing bargaining model predicts that the initial favourable investment agreement for the foreigner is likely to be subsequently re-negotiated in favour of the host country.

(b) Market Attractiveness.

Market attractiveness as a factor only features when the size of the market is sufficient to be desirable by the MNEs. In certain nations, the size and wealth of the market can be sufficient to provide a large amount of bargaining power (Fagre and Wells, 1982; and Poynter, 1985). An "endowment" which demonstrably helps to attract foreign investors is population. Generally speaking, the larger, wealthier and more easily accessible a developing country's market, the more attractive that country will be to MNEs seeking

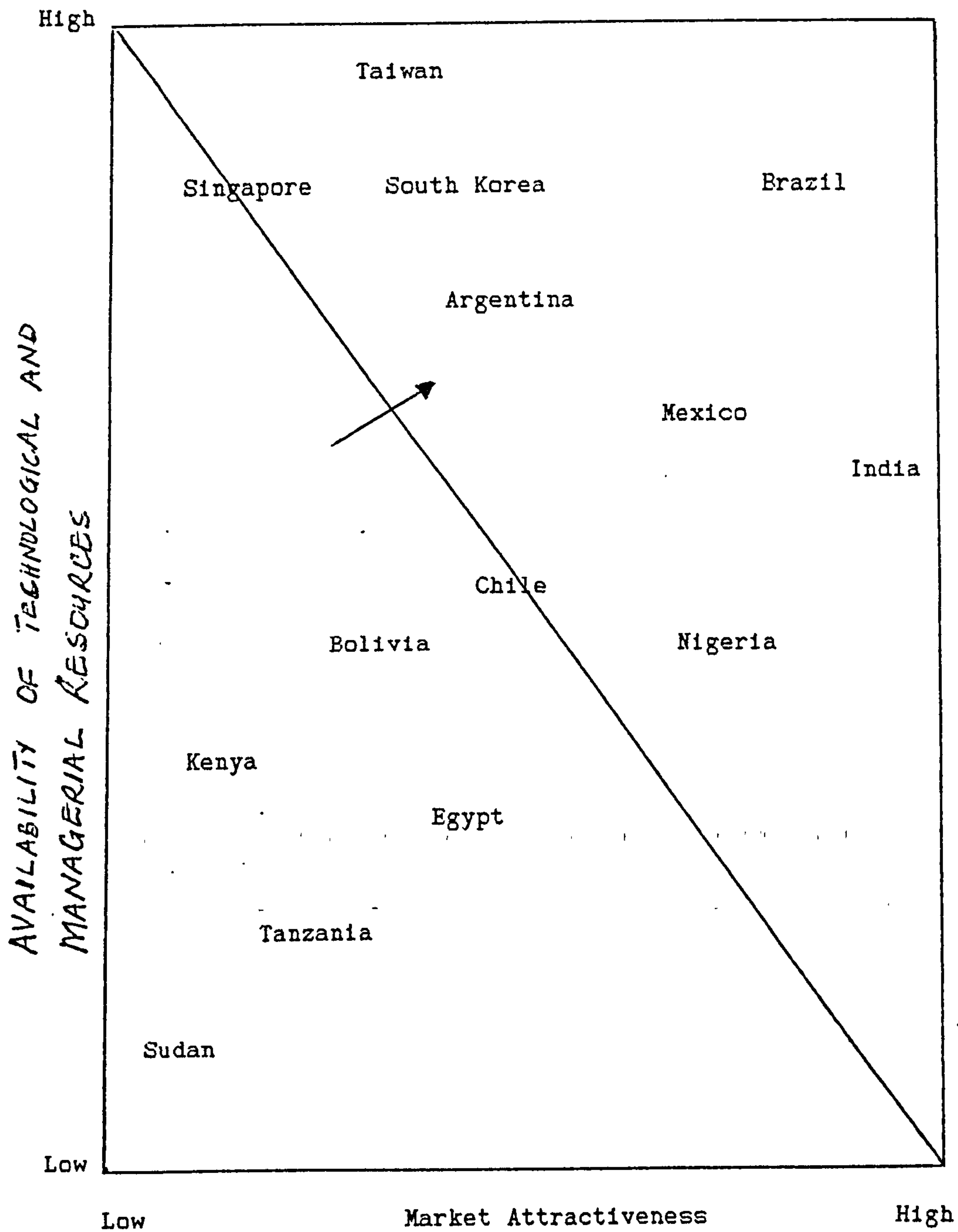
sites to establish manufacturing facilities. Stoeber (1982) argued that an LDC may also be attractive to MNE because of its "potentially" large market, even if its present purchasing power is still low. Thus countries with large population, expanding purchasing power among the lower classes, a growing industrial sector, or untapped mineral wealth, may draw foreign manufacturing companies wishing to establish a market position even though present sales would not justify the investment.

In addition, the high attractiveness of a local market for particular products will attract the continuing attention of more than one multinational enterprise, so the host government will utilise such competition to enhance its bargaining power.

However, Poynter contends that there is a continuum of market attractiveness on which combination of nations and markets can be shown. He argued that motor-cycles have greater market attractiveness in Nigeria than electronic components and invariably placing the government on a strong bargaining position. This is illustrated in figure 4.1 below. Figure 4.1 shows the overall bargaining power of several host nations based on the availability of technical and managerial resources, and the attractiveness of the domestic market. It is argued that nations move up the bargaining ladder at different rates. For example, the speed at which Brazil is acquiring technological and managerial skills, coupled with its educated elites and very large market give her a much better bargaining position (and the MNE less) than, say, Bolivia or Egypt.

Figure 4.1

Bargaining Power at Different National Levels.



Source : Poynter, T.A. (1985) pp.102

(c) Third Party Assistance.

The concept of third party assistance has been well discussed in the earlier part of this chapter under section 4.2. However, it is important to reiterate the significance of this dimension in the technology transfer negotiations. Generally speaking, the developing countries avail themselves of the services of international bodies such as UNIDO and United Nations Conference on Trade and Development (UNCTAD).

Host governments may be able to increase their bargaining power if they can form regional associations with neighbouring countries. It is argued that these associations can take several forms, from common markets to agreements on a common set of investment incentives and regulation for MNEs. If successful, the ability of MNEs to play one country against another is reduced, thereby increasing the joint bargaining power of individual countries within the group.

4.3 Negotiation of Licensing Agreements.

Licensing agreement is the outcome of negotiation and represents a negotiated formula by means of which the licensor shares in the benefits accruing from a transfer. It has been argued that for licensing negotiation to succeed, the licensing operation must be seen to be mutually beneficial and must allow both parties to profit from the agreement. Accordingly, the drawing up of licensing

agreement is a particularly complex procedure since the whole range of contingencies must be considered and accounted for. It has also been shown that in as much as parties to an agreement will guard against exposing themselves, by the provisions of the agreement, they will equally want to ensure that in case of some disputes arising, the terms which have been agreed are legally enforceable (Contractor, 1985).

However, there are so many variables involved in a licensing negotiation that it is difficult to talk in terms of some standard format or approach. A typical content of an agreement (dependent variables) as shown in Table 4.1 below, is discussed to highlight the significance of these variables during negotiation.

Table 4.1

Typical Content of an Agreement.
(Dependent Variables)

-
1. Incentive Remuneration and Royalty Payment - Payment for the transferred technology.
 2. Duration - The length of time that an agreement remains valid.
 3. Improvement Clause - Future improvements on transferred technology.
 4. Territorial Rights - Rights and Limitation on Market coverage.
 5. Liabilities - Responsibilities on defective products/process.
 6. Termination - Withdrawal from an agreement.
 7. Arbitration - Dispute settlement.
 8. Confidentiality - Limitations on disclosure of information.
 9. Restrictive Clauses - Limitations on licensee activities
-

(a) Incentive Remuneration and Royalty Payments.

Royalty payments and incentive remuneration represents "the price" which a licensee pays to the licensor for the surrender of access to possible large rewards which would result from the exploitation of the advantages gained as a result of transfer of technology. (McCall and Warrington, 1984). The extent of the payments and remuneration that an MNE receives from an LDC firm, would depend on the outcome of negotiation by the two parties concerned.

Determining the price of technology is usually the most problematic issue during negotiations due to the nature of technology itself. Gladwin and Walter (1980) as well as Hood and Young (1983) argue that although the marginal cost of using or selling an already developed technology is zero for the owner of the technology, it is nonetheless important to highlight the fact that from the LDCs point of view, the managerial cost of developing an alternative technology might be enormous (or infinite if the capability did not exist at all). Within the two limits, there is no price which could be considered more or less appropriate. But it does seem that charges for technology are often not particularly well related to the value of the technology. Often rules of "what the buyer can bear" are used with no specific relation to the technology in question. Consequently, argument about "appropriate" size of the cost-price margin is a permanent feature of corporate external conflict with developing host countries.

However, the price paid to the foreign licensor would vary anywhere between Root and Contractor's floor and ceiling levels. The ceiling is determined by "the price at which the country would rather do without those technologies or services". Ideally, the licensor would want to extract maximum rent from the agreement while the licensee would naturally, want to minimise the cost of acquiring advantages embodied in the technology so transferred. The eventual price would be determined by the relative bargaining power of the two actors as shown in the Fagre and Wells, Jr. study (1982).

There are a variety of forms which payments could take namely (i) lump-sum fee, paid at signing, start-up or later; (ii) running royalty, normally a percentage of net profit; (iii) technical assistance fee; (iv) shares in licensee company stock and dividends thereon; (v) management consultancy fee; (vi) charges for personnel loaned; (vii) patent and trademark royalty, if treated separately. The forms of payment are not mutually exclusive, therefore payment could be in any form or a combination of forms, depending on the agreement reached.

(b)

Duration.

The duration clause is an important component of the agreement. It shows when an agreement can be terminated. Ideally, the MNE would prefer an agreement to last for as long as possible e.g. 20 years. The longer it run, the higher the incremental revenue the firm generates in rent on the technology, in the form of inflow of royalties. On the other hand, the licensee would prefer the shortest possible time period on the agreement in order to minimise the cost of acquiring the technology. The difference between the "ideal" duration from both perspectives, forms the bargaining range.

The licensor is likely to achieve its objectives where the technology is a 'frontier technology' and unique to the company or where there are very few alternative technology owners willing to externalise their know-how. In which case, the technology buyer will be willing to pay premium price for the privilege of acquiring this know-how. On the same token, the host country licensee is likely to achieve its objective of securing minimum duration if the technology

was standardised, with lots of other willing alternative suppliers. In addition, where the host country is very lucrative and attractive to the licensor, it will be an advantage to the licensee.

(c) Improvement Clause.

This relates to future improvement on a transferred technology. Usually, the licensor may negotiate a clause, requiring complete particulars relating to any improvement by the licensee to be communicated to him. The licensor may do this for defensive reasons. Where a licensor has a multiple licensees, improvements made by licensees would be made available to the licensor, thereby keeping him up to date in the latest refinement of processing technique in order to maintain its advantages over competitors, at no extra costs on R & D.

On the other hand, the licensee would demand that any improvement by the licensor be passed on to him. The extent to which such arrangements or clauses can be agreed may depend on the level of co-operation between the licensor and the licensee. However, the licensee may reject this clause, as it would make him perpetually linked with the licensor. From both licensor and licensee points of view, achieving their aims depends on the factors discussed under duration clause above.

(d) Territorial Rights.

This refers to the geographical coverage within which a licensee is expect to operate. The extent and nature of the territorial rights is likely to be a major bargaining issue in many licensing

agreements. Often the licensors place certain territorial limitations on the licensee in a country or region where they have multiple licensees or export interest.

Licensees are known to reject this kind of clause since it restricts their performance and opportunities for exploiting markets other than their local markets. In most developing countries where exporters are encouraged by government incentives, such clauses are likely to be rejected. Therefore the negotiation of this clause may be subjected to trade-offs on price and other conditions of the transfer. However, in large countries with huge domestic markets, one finds that territorial limitations (especially internationally) are seldom contested with determination because licensees lack the expertise and resources to pursue exporting. Consequently, the main area of emphasis is the domestic market.

(e) Liability Clause.

This clause relates to rights and responsibilities which may arise as a result of defective product or process under license. It makes explicit, the responsibilities for the licensor and licensee for defective product or process. Caves, Crockell and Killing argued that this is a tricky clause because technology may not work properly in a new location. While the licensor would not want to undertake any responsibility for poor performance of a given technology in a new location, the licensee would want a kind of guarantee, in order to minimise losses that might arise due to defective product/process. Therefore the bargaining range will

depend on the extent of acceptability of responsibilities on defective product/process by the two parties.

Between these two extremes of licensor and licensee desires, there is usually the mid-point which extends liabilities in accordance with breach of responsibilities. In other words, liability is accepted by any party whose negligence had caused some damage. The licensor is indemnified of any liability resulting from wrongful application of licensed technology by the licensee. On the other hand, licensee is indemnified of any liability resulting from faulty know-how which does not produce the required result even when applied as directed by the licensor. The method of apportioning liability is known as shared liability and forms the basis of most technology transfer arrangements.

(f) Termination Clause.

This concerns the withdrawal of the two parties from an agreement, and who has the right to determine when an agreement should be terminated. There is always the possibility that a relationship could breakdown. So it is better to ensure that appropriate termination conditions have been negotiated into the agreement.

Usually the licensor would prefer to have the right to determine when an agreement should be terminated because that would ensure that the licensee lives up to its side of the agreement, for fear of not having the agreement terminated. On the other hand, the licensee would want other means of determining when an agreement should be

terminated to ensure that it does not live at the mercy of the licensor.

(g) Arbitration Clause.

This relates to dispute settlement and gives details of how disputes would be settled should need arises. Arbitration procedures are not uniform anywhere. Arbitration may be held under agreement or by operation of law as provided in statute. Arbitration varies from country to country. F. Posses (1978) contend that certain elements of arbitration are of conventional necessities which should be raised, considered and answered with respect to foreign negotiations before reaching final agreement on the arbitration clause. Some of the elements are -

1. Contract provisions for arbitration
2. What is an arbitrable dispute?
3. How is dispute submitted for arbitration?
4. How are arbitrators designated?
5. How is a decision and award rendered?
6. What are the legal effect?
7. What are the rights of appeal?
8. What rights exist to enforce the award and the judgement entered on it?
9. Where may the judgement be enforced?
10. Are arbitration judgement supported by additional remedies?

One of the most contentious issues is the determination of whose jurisdiction disputes should be settled. The licensor would want

disputes to be settled in a neutral place or possibly within its jurisdiction. The licensee will prefer its own location where it feels that its interest will be better protected. The eventual outcome will therefore be subject of negotiation.

(h) Confidentiality Clause.

Negotiations present a special problem because the information sought and tendered during the negotiation period may, if the transaction falls through, be used improperly by one party against the other. And in foreign business, this can cause serious and irreparable damage. Therefore to protect the negotiating parties, there are two kinds of agreements that can be reached on confidentiality : (i) Pre-negotiation agreement on confidentiality and (ii) Post-negotiation agreement on confidentiality (F. Posses, 1978).

On the one hand, the pre-negotiation agreement on confidentiality requires both parties to make explicit agreement to hold private any and all information they derive from the negotiation. This places the parties under double duty. First either party will be held to the agreement as a contractual undertaking. Second, if either party violates the agreement and deceit can be established, the offended party can have recourse for deceit and fraud in a tort action. Alternatively, at the outset of the negotiation, agreement should be made that if the transaction fails to mature, a party may use the information gained in the exchange, provided it pays to the other a certain sum of money as consideration (or liquidated damages) for such an option. If it

decides not to exercise the option, then it will be bound to the highest degree of secrecy, forbidden to make any disclosure of any kind to any person without the prior consent of the other party. This is particularly important in some arrangements where highly technical information or details are necessary for meaningful negotiation to take place.

On the other hand, the post-negotiation agreement on confidentiality requires the licensee not to disclose any technical information to unauthorised persons in the course of operating the agreement. This is one of the difficulties in licensing. Rugman (1980) argued that there is an ever present danger of the firm's information monopoly being compromised by the licensee. And once the firm's knowledge advantage is lost, it becomes impossible for the firm to receive a fair return for its previous investment in research and development. The licensor, under these circumstances seeks an agreement on confidentiality on any transactions with the licensee. The licensee will attempt to limit the extent of this restriction for the fear that might infringe on their right to deal with other potential licensors.

(1) Tie-in Provisions.

This is one of the most controversial issues in licensing negotiation between the MNEs and the LDC firms. Most licensing agreements contain series of tie-in provisions and these may frequently incorporate provisions that would require the licensee to buy expensive machinery, technical services, intermediate parts and other inputs from the parent corporation or from its other foreign

subsidiaries. In addition, restrictions may be imposed on the freedom of the licensee or affiliated company to buy and sell products related to the technology transferred.

Licensees usually object to having tie-in provisions in their agreements as this will restrict their source of supplies. Agreement on this clause will depend on, among other things, bargaining power, product/market circumstances, and perhaps more importantly, government opposition to inclusion of restrictive provisions in agreements.

The LDC Firm's Bargaining Power.

In the preceding section, we have discussed the determinants of both Multinational enterprises and host country's bargaining power i.e. at macro level. However, the purpose of this section is to review some of the factors that could help a developing country firm (micro level) in the negotiations with a multinational enterprise for licensing arrangements. Below are some of the factors which are mainly firm-specific rather than country-specific.

(a) Market Share.

The market share which a prospective licensee commands, makes it attractive to the licensor, and therefore enhances its bargaining power. Telesio (1979) explained that since the MNEs investments abroad seem to exhibit a follow-the-leader pattern, the smaller multinationals find it difficult to expand fast enough to keep up with foreign investments of large competitors. Therefore the smaller MNEs, he argued, often have to deal with this problem by securing local licensee who have sufficient and attractive sales outlets and market knowledge. Developing countries' firms that are well established and control reasonable market shares, usually have strong bargaining power vis-a-vis the MNEs.

(b) Organisational Strength of the Firm.

Most licensors would prefer to deal with developing country firms with strong administrative capabilities and expertise to exploit an invention commercially. In McCall and Warrington as well as Telesio, it

is argued that a licensing arrangement is likely to involve a fairly long term relationship, and therefore the choice of licensee will be crucial to the success of the agreement.

Local firms which are capable of offering additional resources to ensure the success of the agreement usually maintain strong bargaining position with the licensor. This is because the licensor will have to bring in little or no additional resources. Moreover the small multinationals gain resources offered by the licensee, such as good management, sales outlet and market knowledge.

(c) Negotiating Skills.

The skill and knowledge of a negotiator is very fundamental to the bargaining power of the licensee. Most licensees, Millman (1983) argues, employ the services of consultants and technology transfer agencies who can provide expertise, by assisting the firms with market surveys, feasibility studies, etc. This boosts the bargaining position of the developing country licensees. Apart from the services of consultants and technology transfer agencies, some developing countries' governments provide guidelines for private individuals and firms seeking technology transfer deals with foreign investors.

4.5 Influence of Equity Interest During Negotiations.

Generally speaking, licensing arrangements could be made between unaffiliated parties as well as affiliated parties. Within the affiliated category, the relationship could be based on minority equity interest of the licensor or majority equity interest. Available evidence suggest that the incidence of licensing arrangements between licensors and developing country unaffiliated licensees is quite small - about 20 - 25 per cent of worldwide licensing arrangements (see e.g. Root and Contractor, UNCTC Third survey, 1985; and Business Monitor MA4 - Overseas Transactions).

It is not immediately clear, the extent of influence which equity relationship has over licensing negotiation. Theoretically speaking, in a relationship where the licensor has a minority equity interest in the licensee company, the transaction is done on arm's length basis, claimed Contractor (1985). He also suggested that where the relationship is on the basis of majority equity interest in the licensee company, no formal negotiation takes place. Simply the licensor provides the licensee with a set of conditions which must be complied with.

However, contrary to this theoretical assumptions, licensing arrangements in most developing countries are not quite like that. Perhaps it is worthy of mention here that licensing negotiations between affiliates are regulated by government agencies in countries like Nigeria, India, Brazil, Mexico and Egypt. In Nigeria for instance,

there is mandatory registration of such agreements. These agreements will not be registered should they fall short of the conditions set out by the Federal government. Perhaps more significantly, the parties to the agreement are expected to execute the agreement according to the terms and conditions under which it had been approved or they will be guilty of an offence and liable to be prosecuted and punished for the offence in the manner established by the laws of the country.

It will therefore be misleading with this knowledge, to suggest that where there is an arrangement between affiliated parties, negotiation is merely a formality. Perhaps the assumption could be true of developed countries' practices, but it is certainly far from practicable in the LDCs where there are technology regulatory agencies.

4.6 The Bargaining Model.

4.6.1 Introduction.

The concept of negotiation requires that negotiators must always limit themselves to their terms and conditions, and those proposed to them in what can be established as offers and counter-offers. These offers must be weighed against existing market conditions, and factors external to the object of the negotiation, such as external influences which also have to be evaluated. The objective of the evaluation is to determine if these factors can be measured within acceptable limits. Although some of the factors can never be definite, e.g. illegal acquisition of know-how, it is nonetheless important to incorporate them in the negotiation framework by providing contractual alternatives

within the range of possibility. A certain amount of flexibility is also needed in the process of compromises so that positions can be shifted without being wrong, losing face, or appearing inconsistent. Offers and counter offers will continue to be made until the parties reach a mutually acceptable settlement concerning the division or exchange of one or more specific resources.

There are different theoretical models depicting the bargaining framework within the context of international business, such as Gladwin and Walter's Two-Dimensional model of conflict behaviour and resolution (1980). However, for the purpose of this study, the most appropriate model is the Root and Contractor's Normative model of licensing negotiation (1984), as emphasised by Cho (1988), because of its immediate relevance to the problems of the present research. Consequently the following section reviews the Root and Contractor's model.

4.6.2 The Root and Contractor's Normative Model of Negotiation.

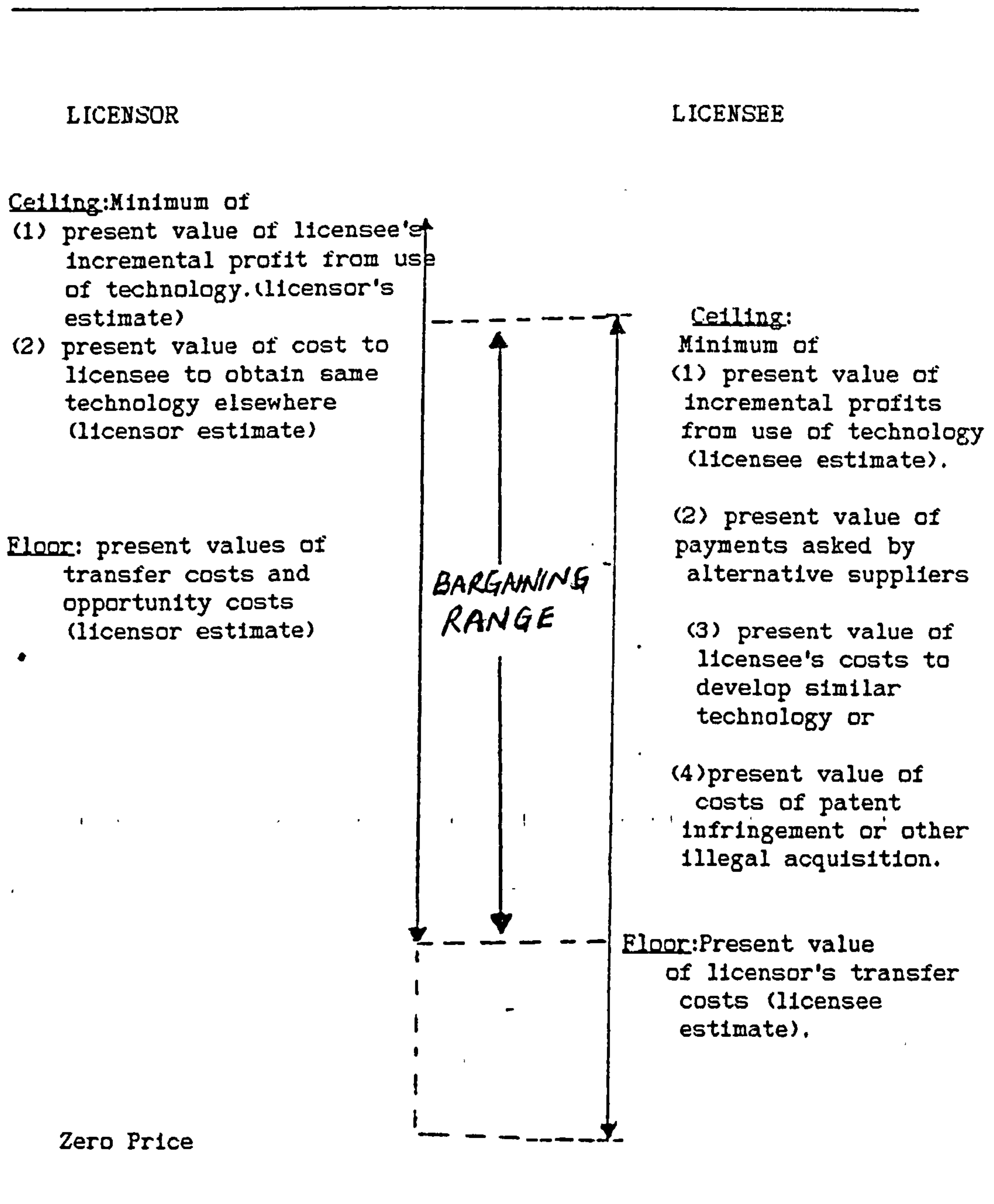
The bargaining model shows the range within which the negotiation is based. The dependent variables are negotiated individually and the outcome is a function of bargaining power, ceteris paribus. Given that there is always a minimum "price" which is acceptable to the MNE for technology transfer, and at the same time, there is a maximum to what the technology recipient would be willing to pay for the technology. The difference between the minimum acceptable price and the maximum payable by the licensee forms the bargaining range.

The term "price" embodies all the dependent variables which are integral part of the licensing negotiation. However in their study, Root and Contractor confined the term price to the economic rent derivable from transfer of technology to a third party. On this premise, they developed a normative model of licensing negotiation, as shown in figure 4.2 below. This model assumes perfect operation of the market forces, and clearly shows that the outcome of negotiation will depend on the bargaining power exercised within the conceptual boundary of the range, as determined by minimum and maximum acceptable limits to the licensor and licensee respectively.

Root and Contractor adduced from the model that the licensor enters negotiation with a range of possible offer prices that he is prepared to accept as compensation. The licensor's offer floor price is the sum of the present values of the transfer costs and opportunity costs. The licensor's ceiling offer price is the lower of two present values : (1) the value of technology package to the licensee as perceived by the licensor, and (2) the costs to the licensee to obtain the same technology package from another source as perceived by the licensor. They argued that the licensor will refuse to enter an agreement if the compensation does not cover the transfer and opportunity costs and will not expect to get more compensation than the ceiling price. The licensor's floor price does not account for R & D costs, but by securing a compensation higher than floor, a contribution will be made toward this cost category.

Figure 4.2

Normative Model of Licensing Negotiations.



Source - Root and Contractor, 1984, p.211.

On the other hand, it is argued that the licensor's offer price range is confronted by the licensee's bid range. The licensee's bid floor price is the licensee's estimate of the licensor's transfer costs, but it omits any allowance for the licensor's opportunity costs, which does not concern the licensee. The licensee's bid ceiling price is the lowest of the four present values : (1) the licensee's incremental profits from the use of the technology package, (2) the costs of the same technology package from the best alternative supplier, (3) the full cost to develop the technology package independently, and (4) the cost of obtaining the technology through illicit means, such as theft, illegal copying or deliberate patent infringement.

The overlap of the licensor's offer price and Licensee's bid range (the distance between the licensor's floor price and the licensee's ceiling price - see figure 4.2 above) determines the bargaining range. According to Root and Contractor, negotiations are possible only when the licensee's ceiling price is higher than the licensor's floor price. They argued that this condition is easily met in territories such as Eastern Europe. With exporting and direct investment precluded, opportunity costs are likely to be zero, and the licensor's floor price is equal to the transfer costs.

In developing countries outwith Eastern Europe, it is a different ball game altogether. Direct investment and export possibilities exist in these markets but market forces are subject to government interference. Having said that, this model presents us with basis for further evaluation of the independent variables as they affect negotiations for technology transfer agreements.

Research Hypotheses

On the basis of the preceding discussion on bargaining power, the following hypotheses have been formulated, forming the basis for the primary data collection. These hypotheses have been drawn up from two levels -

- a. Ownership-specific factors, and
- b. Location-specific factors.

(Note that this is only an outline of the hypotheses. Detailed definitions and discussion on these hypotheses are presented in chapter eight) :

a. Ownership-Specific Factors.

H1. The perceived importance of technology by the licensee is positively related to licensor bargaining power.

This hypothesis seeks to explore the extent to which the nature of technology determines the outcome of licensing negotiations, and it was taken from Caves, Crockell & Killing (1983) as well as Poynter (1985).

H2. The provision of support capital is positively related to licensor bargaining power.

This hypothesis attempts to assess the significance of support capital on the outcome of negotiations for licensing agreements. This was taken from Gladwin and Walters (1980), and Contractor (1985).

H3. Control of export market access by licensor is positively related to its bargaining power.

This hypothesis was taken from Rugman, Lecraw and Booth (1985), and it seeks to test the assumption that where the control of export market access resides with the licensor, it is likely to influence the outcome of licensing negotiations in favour of the licensor.

H4. Licensor's negotiating skill is positively related to its bargaining power.

This hypothesis attempts to determine the importance of bargaining skills in licensing negotiations, and was taken from Posner (1978) and Graham (1983).

b. Location-Specific Factors.

H5. Availability of alternative suppliers is negatively related to licensor bargaining power.

It seeks to test the assumption is that competition from alternative suppliers of technology weakens the licensors' bargaining power. This hypothesis was taken from Telesio (1979).

H6. Restrictive government policy is negatively related to licensor bargaining power.

This hypothesis which was taken from Wallender (1980) and Okono (1987), attempts to assess the impact the government policy on the negotiation processes of licensing arrangements.

H7. Third party assistance to a licensee is negatively related to licensor bargaining power.

This hypothesis seeks to assess the degree of importance of third party assistance in the negotiation of licensing agreements. It was taken from Fagre and Wells (1982).

H8. Locational attractiveness of a host country is negatively related to licensor bargaining power.

This hypothesis attempts to determine the extent to which host country's locational characteristics influence the negotiation of licensing arrangements. It was taken from Stoever (1982) and Poynter (1985).

H9. Licensee size and sophistication is negatively related to licensor bargaining power.

This hypothesis seeks to explore the influence of licensee size and sophistication in a licensing negotiation, and was taken from McCall and Warrington (1984).

H10. Existing licensor operation in a host country is negatively related to its bargaining power.

This hypothesis was taken from Vernon (1979) and Moran (1985) and it attempts to determine the effect of obsolescing bargaining power on a licensor who has an existing ownership link with the potential licensee in the licensing negotiation processes.

This chapter has demonstrated the significance of bargaining power in the technology transfer arrangements from both the MNEs and host LDCs' points of view. It also shows that for licensing agreement to be successful, the LDC firm must possess certain qualities which will form the basis of initial attraction for the MNE, and subsequent bargaining leverage which it requires to deal successfully with an MNE.

The chapter concludes with a summary of research hypotheses drawn from both the bargaining power and general literature on international technology transfer.

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CHAPTER FIVE.

NIGERIA - THE ECONOMY.

CONTENT.

- 5.1. Introduction.
- 5.2. The Economy - Sectoral Analysis.
 - 5.2.1. Manufacturing Sector.
 - 5.2.2. Mining/Extractive Sector.
 - 5.2.3. Agriculture.
- 5.3. Investment Climate in Nigeria.
 - 5.3.1. Industrialisation Policy since 1970.
 - 5.3.2. Foreign Investment in Nigeria.
- 5.4. Nigeria's Technology Policy and the Role of Government in Technology Acquisition.
- 5.5. Licensing in Nigeria.
- 5.6. Conclusion.

This chapter discusses the economic, social and political background of Nigeria. Within the last two decades, a whole range of policy measures have been introduced, aimed at maximising the country's economic objectives, particularly in the areas of technology acquisition and industrialisation. Moreover, the chapter demonstrates licensing's seductive appeal for the government vis-a-vis acquisition of technology.

The size and wealth of the country have had considerable influence over various economic development plans over the years. The population of Nigeria is racially homogeneous but made up of many peoples, distinguished by language, culture and their sense of collective identity - an ethnic diversity which has strongly influenced the country's politics and constitution.

The size of the population is uncertain. The official estimate for mid-1980 was 84.7 million. The figure was the result of increasing at an annual rate of 2.5 per cent on the 1963 census result of 55.67 million. No one disputes that the population is increasing, though the demographic basis for estimating the rate of increase is slender. It is generally agreed that advances in hygiene and preventive medicine since the 1940s have considerably reduced the death rate, especially among children under the age of five, while birth rate remains relatively high.

The labour force, defined as persons between the ages of 15 and 55 who were economically active or wished to be, was estimated at 29.22 million in 1975. The age limits appear unduly restrictive. The basis of estimation was a rural demographic survey carried in 1965-66 (Ministry of Internal Affairs). Of nearly 28 million thought to be in gainful employment, 64 per cent were involved in agriculture, nearly 17 per cent in manufacturing (including processing and crafts), over 12 per cent in distributive trade and 5 per cent to other services, the remaining 2 per cent were found in building, transport, mining and public utilities. Undoubtedly, the vast majority of these people would be self-employed or engaged in household enterprises.

The number of wage and salary earners was only 2.18 million according to the estimate for 1975. They include 1.5 million involved in the "modern" sector of enumerated employment - roughly one million in various forms of public employment and half million in private business. While the 28 million in gainful employment were heavily concentrated in agriculture, the 2.8 million wage and salary earners were to be found mainly in services (including public administration and teaching), manufacturing, building and distributive trade.

The geographical distribution of the population is uncertain for the same reason as its total is doubtful, but some features are well established. They include the low densities of the middle belt and also of the North East. Generally, the south is more thickly populated than the North.

The composition of the gross domestic products (GDP) features farming as the principal economic activity of most Nigerians. This feature accounts for the predominance of agricultural output in the country's GDP estimates. But the growth of earnings from agriculture provided the demand for a continuing diversification of the economic activities into services, building and manufacturing.

While the volume and values of agricultural output have grown, its contribution to the GDP has declined over time and rapidly since 1970. From the 1960s, an even stronger influence was exerted on the composition of the GDP. Mineral oil emerged as Nigeria's major export, its volume increased greatly after the "Biafran" secession attempt was overcome in 1970, and its unit value rose swiftly from 1973. Consequently, the share of mining in the GDP rose from less than one per cent in the late 1950s to nearly 33 per cent twenty years later. Other sectors of the economy expanded with this exploitation of a new resource, but the stimulus appears to have been felt least in agriculture.

5.2

Sectoral Analysis.

The fundamental problem that one faces in making statistical analysis on Nigerian economy is that of acute shortage of reliable up-to-date data. This is, of course, one of the indices of under-development. Having said that, the following analysis is made in the light of available government data.

Nigeria's manufacturing sector is characterised by (a) limited range of diversification, and concentrates on low technology, labour intensive industries. This is clearly shown by large presence of industries like textiles, food, soft drinks, tobacco products, simple metal products and some assembling; (b) a fairly high dependency on protection by government tariff system; (c) substantial geographical concentration, mainly in Lagos and a few other cities; and (d) a relatively high degree of private ownership, largely foreign.

Manufacturing has been a rapidly expanding sector of the economy. The share of the manufacturing sector to gross domestic products (GDP) rose from 2 per cent in 1960 to 10 per cent in 1982 (African Concord, 1986). Its growth rate which was 18 per cent in 1975 slowed down to an average of 12 per cent between 1976 and 1980. The contribution generally of the industry to GNP (Gross National Products) rose from 3.6 per cent in 1960 to a peak of 9.5 per cent in 1970. It fell to 4.7 per cent in 1975. One plausible explanation why the manufacturing sector did not do better than what it had contributed to the GDP is the fact that companies in this sector depend largely on foreign inputs, and with the sharp decline in their foreign exchange allocation, factories have had to operate at less than 50 per cent capacity.

In 1980, there were 2,315 industrial establishments in Nigeria. In 1976, the gross output was N3,814,810. It rose to N21,681,374 in 1981. After a decline of 12 per cent in 1984, the index of manufacturing production rose by 19.2 per cent in 1985. On the whole, the index of

industrial production rose by 14.7 per cent in 1985 as against a decline of 4.9 per cent in 1984. This improved showing arose from the streamlining of the import licence system which ensured a greater flow of imported raw materials and spare parts, according to Central Bank of Nigeria. Table 5.1 below shows the growth trend from 1960 to 1985.

Table 5.1

Index of Manufacturing Production
Annual Growth 1960-1985.

<u>YEAR</u>	<u>GROWTH RATE (%)</u>
1960	12
1970	11.5
1980	12
1985	19.2

Source : Surveys of African Economies,
Volume 6, 1975, pp.299 and Central Bank of Nigeria,
Economic and Financial Review, Volume 24, No. 3,
September, 1986.

The steel industry which was planned to provide a spring base for the nation's industrial take-off is still bogged down with problems. Only the Aladja steel complex in Warri, Bendel State is operating but at less than full capacity. It has been hit by foreign exchange shortages since over 90 per cent of inputs are imported. The industry was planned to produce essential iron rods and flat steel sheets which are needed for the construction industry which is expanding fast, and car bodies respectively. Flat sheets also facilitate the production of

tanks, oil pipelines and casing of military hardware. All these are presently imported contributing to the unfavourable trade imbalance for the nation.

5.2.2. Mining/Extractive Sector.

Mining as an industry, and petroleum in particular, has been the largest source of foreign exchange for the country since the 1970s. In 1974, Nigeria was fifth largest exporter of petroleum in the world and the largest in Africa (IMF, 1976). Crude petroleum production, which started in the 1950s and amounted to 28 million barrels in 1963, expanded rapidly through 1966, when it totalled 152 million barrels. In the initial period of civil war all onshore productions stopped, and total output dropped to 52 million barrels in 1968. However, as petroleum producing areas came increasingly under the control of the Federal government, production resumed, and a petroleum export boom ensued. In 1969, production reached 197 million barrels, surpassing the pre-war high, and in 1970 it more than doubled. But beginning in 1971 the rate of growth of output moderated. In that year, production rose by 44 per cent to 569 million barrels, while in 1972 and 1973 it increased by 17 per cent and by an estimated 13 per cent respectively, to about 750 million barrels. Output of crude petroleum was forecast to increase by 10 per cent to some 825 million barrels in 1974, about 2.3 million barrels a day.

Apart from growth in output, Nigeria has benefited from increases in the posted prices of crude and from a rise in the domestic rate of taxation of the foreign producing companies. The contribution of the petroleum industry to the Nigerian economy is largely in the form of payments in foreign exchange of taxes and royalties to the Federal government, calculated on the basis of the posted prices. From 1970 to 1973 taxes and royalties accounted for 86 per cent of Nigeria's net foreign exchange earnings from this industry. As a result of the increase in production and posted prices, such earnings rose from the equivalent of N253 million in 1970 to N811 million in 1972 and further to an estimated N1,288 million in 1973.

At the time of the formulation of the second National Development Plan, the Federal government announced its intention of acquiring participations in the oil producing firms. Initially, it negotiated equity participation of 33 per cent in the smaller companies operating in Nigeria, mainly Safrap and Agip-phillips. During 1973 it acquired a 35 per cent production participation in Shell-BP, which accounted for about two-thirds of the output of crude at the time (IMF, 1976). In May 1974, the Federal government increased its participation in the petroleum industry to 55 per cent for all companies operating in the country.

Government participations were held by the Nigerian National Oil Corporation (NNOC), which was established in April 1971, and was authorised to engage in all phases of the petroleum industry, from exploration to refining and marketing.

By 1980, the value of oil exports was N13.3 billion, accounting for 98 per cent of government export earnings and over 80 per cent of its revenue. With this the government was able to afford huge sums to the country's development plan : N43 billion (1975-80) and N82 billion (1981-85) as against N2.2 billion (1962-68) and N3.2 billion (1970-74) in less prosperous years. Between 1958 and 1983, the country earned N85 billion in oil revenue and N43 billion between 1979 and 1983. However when oil prices collapsed, it was inevitable that the country suffered. Foreign reserves disappeared and the external debts increased. It is now that the problem of over-dependence of the nation on petroleum earnings has been faced with the view to finding alternative foreign exchange earners.

Other than petroleum, major minerals mined in Nigeria are tin, columbite, limestone, coal, gold, and cassiterite (see Table 5.2). Since 1971, with the exception of limestone and coal, output of these minerals declined. Tin production fell from 7,400 tons in 1971 to 6,000 tons in 1973. Tin has been mined in Nigeria for over 70 years and the best alluvial reserves have been exhausted. In addition to the physical difficulties involved in mining the remaining reserves, production costs of the tin industry have risen.

Production of columbite and cassiterite showed a downward trend after the civil war. In 1973, output of these minerals amounted to 1200 tons and 7,800 tons respectively from 1,600 tons and 10,800 tons in 1970. Production of marble reached 4,800 tons in 1971, declined in 1972 and was apparently negligible in 1973. Despite record world gold prices, gold production also declined in 1971. In 1970, Nigeria produced

3,500 grams of gold but by 1973, production had fallen to 600 grams. Like a number of other minerals other than petroleum, gold reserves in Nigeria have been virtually exhausted, with most output now coming from alluvial sources in the Western and North-Western states.

Coal production, mainly in the Eastern states, has recovered markedly from war damages. Output of coal increased from 60,900 tons in 1970 to 341,200 tons in 1972, but declined to 327,100 tons in 1973. In 1974, it dropped again mainly because of declining domestic demand, as the main consumers such as the Nigerian Railway Corporation, the Ports Authority, and the electricity generating services have been switching to petroleum products. The energy crisis, however, has given Nigeria's coal reserves increased importance, and the Federal government is looking for possible export markets.

Limestone production has risen rapidly, reflecting the increased demand for building materials. In 1973, limestone output reached 1,790,000 tons compared with 688,400 tons in 1970.

In 1974, the Federal government set up the Nigerian Mining Corporation, to oversee all mineral production except for petroleum and coal. In addition to establishing mineral policies, the corporation was expected to embark on various projects to stimulate mineral output.

Table 5.2.

Mineral Production, 1970 - 1974.
(In thousands of long tons, unless otherwise stated).

	1970	1971	1972	1973	1974
Crude Petroleum (M Barrels)	395.8	568.9	665.2	749.7	825
Refined Tin	8.1	7.4	6.7	6.0	6.5
Columbite	1.6	1.4	1.4	1.2	1.2
Cassiterite	10.8	9.9	9.1	7.8	8.2
Marble	1.8	4.8	3.6	-	-
Gold (Thousand grams)	3.5	1.0	0.4	0.6	0.5
Coal	60.9	193	341.2	327.2	280
Limestone	688.4	813.4	1406	1790	2240

Source : IMF - Surveys of African Economies,
Volume 6, 1975, p.305.

5.2.3

Agriculture.

Nigeria's four major climate and vegetational regions entail a fairly high degree of specialisation in agricultural production. The northern area is characterised by low rainfall, a short wet season, and low relative humidity. Most of the country's millet, sorghum, cowpeas, groundnuts and cotton are grown in this region. The large savannah which extends across the middle of Nigeria from west to east can be divided into two regions, differentiated by the amount of rainfall received - the first borders the northern region and has ecological conditions akin to it, while the southern savannah receives more

rainfall and is more closely related to the southern tree-crop region. The savannahs are known jointly as the food belt. The important crops of these regions are yams, rice, cocoyams and soyabeans.

The tree-crop or rain forest belt, mainly a high forest region, stretches from the savannahs almost to the sea. It receives heavy rainfall and is formed by part of the western and mid-western states and by the south-eastern and the east central states. The bulk of Nigeria's cocoa is produced at the western end of this region, while palm products are predominantly grown at the eastern end. Important quantities of yam, cassava and cocoyam are also produced in this region.

The Nigerian system of agriculture is based on numerous small farms. The 1970/71 rural survey indicates that in that year about 55 per cent of all producing farms were smaller than 2.5 acres and that 82 per cent of all farms had less than 5 acres. Even for tree crops, which are often grown on large scale plantations in other parts of the world, small holdings are the rule in Nigeria. Despite the predominance of such holdings, only a small proportion of the country's land resources is being utilised. The low rate of utilisation reflects mainly the concentration of population in certain parts of the country. Despite the abundance of land of land, population pressures have become serious in the rain-forest belt as well as in groundnut and cotton areas of the north. The middle savannah regions represent the largest under-populated and under-farmed area in Nigeria, one which offers the greatest potential for agricultural development.

In the 1950s and early 1960s, agriculture was not only the mainstay of the Nigerian economy but also a leading sector. Between 1958/59 and 1962/63, agriculture and related activities expanded at an annual rate of 4.5 per cent in real terms, the rate of growth of agriculture alone being even higher. This expansion, which significantly exceeded the population growth rate, provided an ample supply of domestic foodstuff and a rising level of agricultural exports. However, during the next four years, the real growth rate fell to 2 per cent a year, and while reliable statistics are not available for the war period, little, if any growth probably took place.

Available figures on export crops are limited to marketing board purchases, exports, and producer and export prices. Owing to increased domestic consumption and to the existence of smuggling, it is therefore difficult to assess the exports and recent production trends. Agricultural exports, consisting largely of cocoa, groundnuts and palm products, but also including cotton, rubber, hides and skins have not done well in the post war period.

By 1975, Nigeria was the second largest producer of cocoa in the world. Cocoa purchases by the marketing boards averaged some 217,000 tons in the first half of the 1960s, with the highest marketed output of 294,000 tons, having been attained in 1964/65 (IMF,1976). While purchases in the post-war years averaged 265,000 tons, they declined to 240,000 tons in 1972/73 and a further drop was recorded for 1973/74. Also Nigeria in 1975, was the world's largest exporter of groundnuts. Purchases by the marketing boards declined sharply in the post-war years and amounted to 559,000 tons in 1972/73, compared with 978,000

tons in 1965/66. This was also the trend with the other export products.

It is important to mention that the discovery of oil in commercial quantities in the late 1950s and its subsequent increase in importance to the country's economy meant gross neglect for agriculture. This situation has been aggravated by drought and desert encroachment into the agriculturally fertile region. Agriculture contributed about 64 per cent to the GDP in the 1960s. It declined to 44.6 per cent in the 1970s, staying at 23 per cent in the first half of the 1980s. The agriculture's share of total exports was 85.6 per cent in 1960. After 10 years, it reduced to 30 per cent. It shrunk further to a mere 2.4 per cent in 1980.

These statistics mean that the country has become dependent on food and raw materials import. Signifying an eight-fold rise in six years, food import bills jumped from N126.3 million in 1972 to N1,027.1 million in 1978. Since then it has averaged annually at N1.5 billion, about 15 per cent of the GDP.

Agriculture presently employs 70 per cent of the labour force. This indicates low productivity. Farming is essentially subsistence. The small holders who dominate the sector have to contend with out-moded technology, ineffective distribution and marketing services, and problems with obtaining loans.

Lately, some wealthy businessmen and ex-politicians have been involved in farming with some successes. The index of agricultural production therefore showed an increase of 4.2 per cent in 1984, sustained at 2.5 per cent in 1985. Also, in order to diversify the economy from a single commodity base - oil, and make the country self-sufficient in food production and agricultural raw materials, the government has provided special incentives for the agricultural sub-sectors such as supply of fertilizers, improved seedling, agricultural implements at subsidised prices, credit facilities at reduced interest rates, no restrictions on annual claim for capital allowances by agro-allied companies whereas such claims are restricted to 75 per cent and 66% for manufacturing and other companies respectively.

5.3 Investment Climate in Nigeria.

Nigeria as an investment location offers a considerable amount of potential for investors. Having attained independence status in 1960, the government did recognise that industrialisation process could be fully realised only if overseas capital, experience and skills were utilised, and consequently, it devised an incentive policy to attract foreign investors. Incentives to invest in Nigeria were headed by a valuable inducement, namely the granting of "pioneer" status which confers tax exemptions on profits for up to five years (Ministry of Industries, Lagos, 1986).

The incentive system in Nigeria is designed in such a way as to provide an environment whose investment climate was conducive enough

for the attraction of foreign investment, and at the same time, protective enough to shield existing domestic trade investments against unfair competition due to dumping of foreign goods, and also encourage indigenous private entrepreneurs to venture into new areas of investment.

Apart from using taxation system as policy instrument for investment promotion, the government also uses monetary and credit policies to create suitable investment climate for the attraction of foreign investment. Such policies take the form of credit allocations and controls required to provide the right incentives for investment promotion usually in specified sectors.

The orientation of the development policy at the early stage of independence was geared towards the production of simple import substitution consumer goods which required low level of technology and which could easily be undertaken in Nigeria. Consequently, industrial projects for the production of beer, textiles, cement, beverages, soaps, and detergents, etc. were the first batch of projects in which foreign investments began.

The issue of development and development planning is one that has loomed large in most African countries. Since 1962, Nigeria has launched three national development plans. The first was the 6 year development plan which covered the period 1962-1968, the second plan covered 1970-1974, and the 1975-1980 development plan was the third plan. The vast economic growth of the country, is perhaps best illustrated by the size of the planned expenditure in the these various

plans and the considerable changes which have taken place in the composition of production within the economy. While in the 1962-1968 plan, expenditure was N2,366 million, the 1970-1974 planned expenditure rose to N3,190 million, and in the 1975-1980 plan, the figure skyrocketed to N30 billion (Filani and Onyemelukwe, 1981).

The major objectives of these plans have been the further modernisation and diversification of the Nigeria economy. They were also meant to develop various institutions which would facilitate rapid economic development and at the same time provide means for an increasing control of that development by Nigerians.

5.3.1. Industrialisation Policy

Since 1970.

Over the years, Nigerians have argued for increased participation in the operations of economic activities in the country. As a response to this, the Nigerian government evolved a national policy on indigenisation which was spelt out in the second national development plan. As Emeka Ezeife (1981) pointed out, indigenisation within the Nigerian context is the process of increasing local involvement in the ownership, control and management of economic activities in the country. It is a gradual process of promoting indigenous participation in all aspects of the economy, especially in those areas that have previously been dominated by foreign business.

Indigenisation in the above context was seen as complementing political independence, which is in line with the strong belief that political independence would be meaningless without a good measure of economic independence. The policy was designed along lines similar to those of other nations which prevent foreign capital from sabotaging their social, economic and political independence.

It is nonetheless, important to stress that the policy was not designed to bring about any outright nationalisation or complete takeover of foreign businesses. Rather, it was designed to change the existing structure of foreign domination and to ensure adequate opportunities for indigenous participation. The approach to indigenisation has therefore been designed not to discourage foreign investment in Nigeria. It can even be said that the various legislations on the programme have been formulated to assure a place for continued foreign investment in the country. The indigenisation programme was also designed to ensure that Nigerian entrepreneurs were assisted in developing their own expertise and management skills, and to ensure active participation of Nigerians in these areas of economic activity that are still under foreign control.

The policy was therefore seen as a preventive action against the danger that could result from any sudden withdrawal of foreign investment owing to factors other than economic considerations. It is also intended to guard against the difficulty of controlling foreign businesses which are answerable, first and foremost, to their foreign owners whose interests may not, at all times tally with the aspirations of the nation.

In pursuance of these objectives, the second national plan in 1970 declared that all large and medium scale industries would be run as mixed ventures, meaning that at least 35 per cent of their equity would be held by public and other indigenous interests. The other aspect of the programme is that a permanent public stake, given at least a majority of the equity, was enjoined in petroleum refining and such new and "strategic" manufacturing industries such as gas liquifaction, iron and steel making, petrochemicals and fertilizers. While the first of these intentions has been overtaken by the indigenisation programme which was started in 1972, the second has been maintained.

The purpose of the Nigerian Enterprises Promotion Decree (NEPD) of 1972 was to oblige foreign business in a large number of specified activities to transfer their ownership wholly or in part to private Nigerian investors, but it later became apparent that public share acquisitions (by the Federal government, statutory corporations, or state governments) were interpreted as part of the programme of indigenisation. The scope of the legislation included trade, construction and many services as well as a number of manufacturing activities.

Twenty two activities were scheduled to become reserved for Nigerians nationals. In another 33, foreign enterprises were to be excluded unless above stipulated size (paid up capital exceeding N400,000 or annual turnover exceeding N1 million) and having at least 40 per cent of their equity in Nigerian ownership (see Appendix 111).

The second phase of the indigenisation programme was formalised by a decree in 1977. By then there was alarm in official circles at the narrow concentration of business ownership said to be resulting from the execution of the 1972 decree, and rules were laid down with the intention of securing a wider disposal of shareholding in the future. But somehow, they included preferential treatment of share applications by state governments. Forty activities were now listed in the first schedule as exclusive to Nigerians, including 10 transferred from the original second schedule. The second schedule was itself enlarged, partly by its inclusion of activities such as mining, banking, insurance, iron and steel making, petrochemicals and fertilisers in which Federal government had already acquired (or announced its intentions of acquiring) substantial interests.

Minimum Nigerian participation for activities listed in this second schedule was raised from 40 per cent to 60 per cent. In all activities not listed in either schedule, minimum Nigerian shareholding of 40 per cent was required. Indigenisation had thus become a comprehensive programme.

Another feature of the industrialisation policy deserving notice is the importance attached to increasing ratio of value-added to gross output in manufacturing. Thus the second national development plan proposed a "value-added maximisation principle" as the criterion for selecting those specific industrial activities that were to be given fiscal encouragement. For any manufacturing enterprise, the difference between gross output and value-added is the cost of goods and services

(materials, tools, semi-finished products, power, professional advice) purchased from outside.

5.3.2. Foreign Investment in Nigeria.

One of the fears generated by the indigenisation decree was that it would scare away foreign investment. The behaviour of direct investment at the early stage of the introduction of the indigenisation programme confirmed this fear. Table 5.3 shows the pattern of foreign investment in Nigeria between 1971 and 1975. Direct investment reached a peak of N327.8 million in 1972 but fell to N243.5 million in 1973, and stood at N281.7 million in 1974. However, the 1975 figure showed an increase in foreign direct investment to N359.6 million.

Table 5.3

Foreign Direct Investment(FDI) in Nigeria,
(Million Naira) 1971 - 1975.

<u>YEAR</u>	<u>TOTAL FDI (in million N)</u>
1971	162.8
1972	327.8
1973	243.5
1974	281.7
1975	359.6

Source : "Nigeria" - Emeka Ezeife, in Indigenisation of African Economies, Adebayo Adedeji (Ed.) Hutchinson Press, 1981, p.178.

The trend has been upward since 1975 and has been seen as a distinctive nature of the buoyancy of the economy. This was emphasised by the boost that the economy enjoyed from oil production. Between 1980 and 1984, cumulative foreign private investment in Nigeria increased consistently, and reached N6,484.3 million in 1984, indicating an increase of 9 per cent above its 1983 level of N5,949.5 million (as shown in Table 5.4). The increase in the level of cumulative foreign investment was slightly lower than the increase of 10.5 per cent recorded for 1983.

Table 5.4

Cumulative Foreign Direct Investment (FDI)
in Nigeria (million Naira) 1980-1984.

<u>YEAR</u>	<u>CUMULATIVE FDI</u>
1980	3,620.1
1981	3,757.9
1982	5,382.8
1983	5,949.5
<u>1984</u>	<u>6,484.3</u>

Source : Central Bank of Nigeria - Economic and
Financial Review, Volume 24, No.3,
September 1986, p.30.

On regional basis, the United Kingdom (U.K) companies have the bulk of FDI in Nigeria. U.K's share of FDI in Nigeria has effectively increased on the 1970 position of 44 per cent (N440 million) to 1984 figure of 47.9 per cent (N3,109 million) (see Table 5.5). FDI from the U.S.A has increased over the years in absolute terms, but in real terms, it shrunk considerably from 23 per cent of total FDI in Nigeria in

1970 to just under 15 per cent in 1984. The trend for other Western Europe (excluding U.K) and others (unspecified countries) exhibited the same pattern of growth between 1970 and 1980 and decline between 1981 and 1984.

Table 5.5

Cumulative FDI in Nigeria by Region,
(1970-1984)

COUNTRY	1970		1980		1984	
	Billion N	%	Billion N	%	Billion N	%
U.K	0.44	44	1.422	39.3	3.109	47.9
U.S.A	0.23	23	0.566	15.6	0.965	14.9
Western Europe	0.23	23	1.107	30.6	1.659	25.6
Others	0.10	10	0.525	14.5	0.751	11.6
	1.00bn	100	3.62bn	100	6.848bn	100

Source : Central Bank of Nigeria - Economic and Financial Review, 1986, p.30.

However, the above trend could be explained by two distinctive factors - the effect of indigenisation scheme, and the buoyancy of the economy. Because of the fears nurtured by some foreign businessmen as to what the ultimate goal of the Nigerian indigenisation policy is, this has produced the effect of reducing the value of foreign investment in the country. On the other hand, foreign investment in oil production, building and construction, trading and business services remained high. The U.K was recorded as net suppliers of investment resources in 1984 (Central Bank of Nigeria, 1986). It has to be emphasised that the U.K

has for many years, accounted for the bulk of the net inflow of the foreign investment resources in Nigeria.

Overall, Table 5.3 shows growth of over 600 per cent during the fifteen year period (1970-1984). According to the Central Bank analysis, the bulk of the cumulative foreign direct investment was in manufacturing and processing, and trading and business services - accounting for about 32.5 per cent (N2,109.3 million) and 40.5 per cent (N2,622.5 million) respectively.

5.4 Nigeria's Technology Policy and the Role of Government in Technology Acquisition.

Since Nigeria acquires substantial part of her technology from abroad, the government is increasingly interested in various aspects of technology transfer in general, and in licensing arrangements in particular (Okono, 1987). This is with a view to strengthening the hand of the enterprise which will actually use the imported technology and to ensure that the project as a whole, is consistent with the national development objectives.

In line with the above objectives, Nigeria has adopted technology transfer policies designed to strengthen, upgrade its design engineering capability and commercialise its basic research findings to underscore the desire of technological self-reliance. The ultimate goal here is to develop indigenous technology and efficient system for the

absorption and adaptation of imported technologies appropriate to national priorities and resources.

Nigeria's industrial sectors involving high priority and sophisticated technology inputs have always depended on import of technology for accelerated industrial growth. Nigeria's technology policy is seen as flexible, especially regarding investment incentives, licensing and technology acquisition. Nonetheless, the country's open door policy has not been without some sort of control. The major instrument providing legal and institutional framework for controlling technology transfer in Nigeria is the National Office of Industrial Property Decree No. 70 of 1979 (Appendix iv).

It imposes obligatory registration of all technology and license agreements concluded with foreign partners by Nigerian companies. The National Office of Industrial Property (NOIP) as a regulatory agency is aimed at supervising the selection and acquisition of foreign technology as well as the form in which the acquisition is materialised, while at the same time, encouraging the most efficient use of technology so obtained for the benefit of the national economy.

NOIP provides training opportunities and facilities in the forms of workshops and conferences in order to encourage a more efficient process for the identification and selection of foreign technology, the development of the negotiating skills of Nigerians with a view to ensuring the acquisition of the best contractual terms and conditions by Nigerian partners entering into any contract or agreement for the transfer of foreign technology. These training programmes also ensures

the provision of a more efficient process for the adaptation of imported technology.

NOIP is also involved in continuous monitoring of the execution of any contract or agreement registered. Agreements are registered after a careful review of application form/questionnaire completed by the transferee firm. The purpose of the evaluation of a technology agreement is to carry out a social-cost-benefit analysis, to be able to assess if the commercial transaction involved in the agreement do comply with the goals of Nigerian technological policy. The National Office ensures that restrictive provisions have to be eliminated from the text of an agreement prior to registration.

It has to be stressed that NOIP has made significant progress over the past five years and consequently, NOIP reported a tremendous shift from absolute dependence on "packaged project" purchase towards licensing arrangements, purchase of patents and know-how, foreign technical assistance and lately to management service sectors covering hotel franchising, insurance, banking and financial institutions. In all technology contracts, increasing attention is now being given to the terms and conditions particularly those concerning costs, means of payments, restrictive clauses, use of domestic resources, duration of contracts, exports, patents, training, etc.

It is important to note that the National Office encountered serious problems in the course of performing its duties from

- (1) the transferees and
- (2) the transferors.

1. The Transferees.

Immediately the office became operational, it was faced with the problems of public acceptance and appreciation of its role, particularly amongst the business community. The office was seen as another bureaucratic bottleneck to their operations. However, this impression was gradually corrected through public enlightenment campaigns organised by the office. Over time, business enterprises are now appreciating the role of NOIP and the need for them to avail themselves of the services and advice of the office on technology transfer agreements. It is also interesting to note that many companies have been seeking on formal basis, assistance from NOIP in the process of their negotiations, and this has helped to improve the quality of agreements submitted for registration.

2. The Transferors.

It has been reported by NOIP that generally the technical partners or technology transferors to Nigerian companies were very resentive, putting up strong resistance and always refusing to co-operate in offering better terms and conditions with equitable payment terms as provided by the law. It is even more difficult when it implies modifying the already signed agreements. It is however, noteworthy that this posture is gradually changing particularly as they know that the conditions demanded by NOIP are in most cases internationally recognised and that they have complied with similar conditions in other countries.

This section reviews the practice and experience of Nigerian entrepreneurs as it relates to technology transfer and licensing arrangements in Nigeria. Since licensing has been extensively discussed in general terms, in the previous chapters, it is not necessary to repeat the discussions here. However, the emphasis is on the role of NOIP in ensuring beneficial licensing arrangements in Nigeria.

In the course of the evaluation of technology transfer agreements and licensing arrangements in Nigeria, the National Office has attempted to distinguish between transferors with foreign equity and non-equity participation, and other terms and conditions. This has however, posed some problems with the transferors with foreign equity interest which usually insist on separating their equity contributions from technology being transferred.

The annual report of the National Office showed that a predominant number of existing technologies come from the U.K and Western Europe generally. The dominant mechanism of acquiring technology in the country remains purchase of machinery and equipments, and transfer by the use of trademarks and patent licensing (NOIP Annual Report, 1987). Although the global recession created a negative climate for investment activities in Nigeria, licensing of technology has become quite popular among investors as well as local enterprises. This is clearly reflected on the activities of NOIP. Table 5.6 below shows the number of technology and licensing agreements submitted and registered between 1983 and december 1986.

Table 5.6

Agreements Submitted to NOIP
1983 - December 1986.

YEAR	No of Agreement submitted	No of Agreement approved	No of Agreement pending
1983	231	62	169
1984	116	52	64
1985	277	91	186
1986	132	127	15
Total	756	332	424

Source : Annual Report, National Office of
Industrial Property, 1986.

Since the National Office became operational in 1983, a total of 756 agreements were submitted to the office and 322 were registered representing 43.9 per cent of the total number of agreements submitted. In the process of the evaluation of transfer agreements, a savings of \$40.3 million was made by the office in 1983 on 127 agreements registered in foreign payments through the process of improved terms and conditions, compared with 91 registered agreements for 1985 which resulted in a savings of \$75 million (see Table 5.7)

In 1986, a total of approximately \$137.6 million had been allowed on the 127 registered agreements which were based on license, technical assistance, management and consultancy services.

Table 5.7

Savings from Registered Agreements.

<u>YEAR</u>	<u>Savings on Approved Agmts</u>
1983	\$33 million
1984	\$40.4 million
1985	\$75.6 million
1986	\$40.3 million
<u>Total</u>	<u>\$156.3 million</u>

Source : Annual Report, NOIP 1986.

Taking into account the agreements already approved within the last three years, the payment for trademarks and licensing alone is estimated at about \$68.53 million of the total sum allowed on technology transfer arrangements during the period (see Table 5.8) while outgoing payments for the acquisition of foreign technology stood at \$278.66 million.

Table 5.8

Payments for Acquisition of Foreign Technology.

<u>Year</u>	<u>Trademark & Know-how licensing</u>	<u>Other Forms of Technology Acquisition</u>
1984	\$1.9 million	\$8.6 million
1985	\$32.22 million	\$98.34 million
1986	\$34.41 million	\$103.21 million
<u>Total</u>	<u>\$68.53 million</u>	<u>\$210.13 million</u>

Source : Okono, F.J. "The Experience and Practice of Licensing and Other Technology Transfer Arrangements in Nigeria, 1986.

Table 5.8 above shows that payment for licensing arrangements between 1984 and 1986 constituted just under a quarter (24.59%) of total payments made for technology acquired during the said period, reflecting the importance attached to licensing by Nigerian enterprises and the government. In his paper, Okono, Director of NOIP, pointed out that "in the long-run technology acquisition through licensing arrangements could contribute to the expansion of manufactured exports from Nigeria".

5.6

Conclusion.

Available data on the Nigerian economy in general and on licensing in particular have shown the growing appreciation of licensing as a suitable mode of technology acquisition. It is equally significant that with the establishment of NOIP, data is now available for research purposes, providing basis for evaluation of the existing technologies and the effectiveness of various modes of transfer. It is particularly interesting that Nigeria's technology policy encourages acquisition and absorption of technology from abroad as well as providing assistance for the development of indigenous know-how.

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CHAPTER SIX.

RESEARCH METHODOLOGY.

CONTENT.

- 6.1. Introduction.
- 6.2. Objectives of the Study.
- 6.3. Research Design.
- 6.4. Questionnaire Administration.
- 6.5. Analysis of Results.

In the earlier part of this study, it was shown that the multinational enterprises (MNE) generally provide most of the technology (Product or managerial) and a large part of the resources (capital, raw materials, etc.) needed by the developing economies of the world. However access to investment locations and operating conditions are determined by the host government. On the basis of factor needs and ownership, the MNEs and the host countries negotiate with varying degrees of bargaining strength usually determined by the ability to provide each others needs.

It is important to point out that just as in direct investments, most developing host countries control the transfer of technology through other contractual means such as licensing, and the terms of such transfers. Therefore on both counts (i.e. direct investments and sale of know-how) bargaining power influences outcome of negotiation and one of the principal bargaining power determinants for the host developing country is the locational attractiveness. However, it has to be said that the access to the market only features as a bargaining leverage when the size of the market is sufficient and lucrative to be desirable by the MNEs. Poynter (1985) argues that in certain nations, the size and wealth of the market can be sufficient to provide a large amount of bargaining advantage to the host country.

It is also argued that large and lucrative markets for particular products will attract the continuing attention of more than one MNE because of the follow-the-leader behaviour of the MNEs (Kotler, 1980).

This will invariably provide competition among the supplier firms. Fagre and Wells (1982) argued that host governments will either utilise or cultivate such competition because it allows the government to increase its bargaining leverage. Given these advantages, where private enterprises negotiate with foreign technology supplier, they do so on the strength of the market potential and the expected performance of the technology in the host market.

In spite of the fact that the LDCs depend largely on MNEs for much needed technologies, they have had to regulate the activities of multinational enterprises in the host countries (Helleiner, 1977; De La Torre, 1981; Egbe, 1983; Stoeber, 1982 & 1985). While LDCs consider licensing as one of the cheap options of technology acquisition, (Carlsen, 1975), they nonetheless consider it necessary to assess the desirability of certain technologies imported into their countries (see Okono, 1987). It is argued that the realisation of the gains from the acquisition of technology depends upon terms under which the technology is transferred, and upon the suitability of the technology (Hood and Young, 1983).

In Nigeria, a government parastatal was set up by Decree No. 70 of 1979, known as the National Office of Industrial Property (NOIP). The Office places the government in a regulatory position between their productive sectors and the foreign firms. Their actions and regulations focus on (a) lowering royalties paid for foreign technology, (b) increasing the government capability to screen and direct foreign activities within the country, and (c) generally improve the conditions under which licensing arrangements are made.

Before the formal inception of NOIP, these functions were performed by a special office in the Federal Ministry of Finance. The promulgation of the Nigerian Enterprises Promotion Decree 1972 triggered off massive demand on the office and the need was felt for a separate parastatal charged with the responsibility of regulating inflow of foreign technology into Nigeria.

In the negotiation for licensing agreements, two sets of relationship could exist between the two parties - (a) unaffiliated or arm's length relationship (b) i. affiliated licensor with minority interest, and ii. affiliated licensor with majority interest. Contractor (1985) explained that to varying degrees, licensing agreements with foreign joint ventures (majority and minority) tend toward or even approximate an arm's length relationship between licensor and licensee over compensation and other agreement terms. The obvious fact is that while dividends are to be shared between the two equity partners, the licensors get to keep all the royalties and fees. A licensor will therefore negotiate for the maximum royalty, as an arm's length party.

A number of empirical studies in this area have dealt with the issue of negotiation and bargaining power in licensing arrangements. These studies, have covered limited number of variables which play significant part in reaching agreements between licensors and licensees. Some of the variables include the price, duration, liability, confidentiality, arbitration etc. Two types of conditions exist for technology transfer negotiations. The first is the "western" type conditions under which negotiations are conducted according to, and outcome determined by market forces. The negotiations are based on the bargaining strength of the parties and the ability to provide what each other needed. The limits within which negotiations take place was described in Root and Contractor bargaining model (1984), showing ceiling and floor levels. The difference between the high and low points form the bargaining range.

The second type of condition involves interfering with the market forces especially in developing countries, where negotiations are influenced by the criteria set by the government, and these guides which are regulatory in nature, impinge on the licensor bargaining power. Therefore this is a significant departure from the Root and Contractor model, especially in determining what constitute acceptable upper limit.

In previous studies, analysis and discussions have been based on technology as the ownership-specific variable and market attractiveness as the location-specific variable influencing the outcome of

negotiation. While these remain the principal determinants of bargaining power, it is noteworthy that other variables/factors are nonetheless significant in the negotiation process such as the government involvement through the regulatory agencies. The literature review section of this study has shown the extent and significance of the use of licensing as a method of foreign market entry and participation, particularly in developing countries. Despite the growing volume of literature on licensing in developing countries, no empirical research has addressed the issue of negotiation in a "controlled environment" in relation to the bargaining power model. Moreover, no single research on licensing in developing countries has considered the range of variables that are of considerable influence to the bargaining process for licensing arrangements.

The objectives of this study are therefore three-fold -

- i. To determine the variables that influence the negotiation process between a foreign licensor and a host country licensee in a controlled environment;*
- ii. To assess the degree of importance of these variables in the negotiation process; and*
- iii To evaluate the policy implication of the findings on (a) the licensor, (b) the licensee, and (c) the host government.*

In developing the research design, issues and problems identified in the literature were fundamental. The literature review allowed us to identify existing information and previous work on the problem. A review of literature has been presented in chapters two, three, and four.

For the primary data collection, there are three methods that can be used, and these are Telephone survey, Mail survey, and personal interviews. Personal interview was chosen in preference to the other two kinds of survey methods for the following reasons -

Telephone Survey.

This stands out as the best method for gathering information quickly. It permits the interviewer to clarify questions if they are not understood. The main drawback of telephone interviewing is that only short, not too personal interviews can be carried out.

Mail Survey.

This may be the best way to reach persons who would not give personal interviews or might be biased by the interviewers. On the other hand, mail surveys require simple and clearly worded questions, and the return rate is usually low and/or slow.

On the other hand, Personal Interview was considered most appropriate because this is the most versatile of the three methods. Personal interviewer can ask more questions and can

supplement the interview with personal observations. Although the personal interview is the most expensive method and requires much more technical and administrative planning.

Consequently, for this study, the data collection was carried out with the use of flexible and semi-structured questionnaire (see Appendix v) administered on face-to-face basis in order to meet the data gathering requirements, and to ensure consistency.

An interview constitutes a process of interactive stimulus-response behaviour between the interviewer and the respondent. The interviewer provides a stimulus to the respondent in the hope that the response will be a verbal indicant of behavioural events, attitudes, judgements, or environmental characteristics of relevance to his research objectives. The researcher's problem is to construct and carry out an interview process which will evoke the most accurate and complete representation of the things he wishes to assess. (Kerlinger, 1970 and Kotler, 1980).

For personal interview, two broad types of questionnaire are available to the researcher, 'structured and unstructured, or standardised and unstandardised interviews'. In standardised interview, the questions, their sequence, and the wordings are fixed. Standardised interviews use interview schedules that have been carefully prepared to obtain information pertinent to the research problem. Unstandardised interviews are more flexible and open. Although the research purpose governs the questions asked, their content, their sequence, and their wordings are entirely in the hands of the interviewer.

As indicated earlier, personal interviews are time consuming and expensive. This problem was encountered in this research while trying to arrange interviews which fitted economically into a geographical and time pattern. The second type of disadvantage is that personal interviews involve tapping the memories of the respondents which could introduce two forms of error, namely distortion and memory failures. However, for the purpose of this study, there was no reason to suspect that any systematic distortion had been applied.

In this research, the interview was designed with the objective of executing interviews that evoked responses truly indicative of (a) behaviour over a whole range of variables affecting bargaining power and negotiation of licensing agreements, (b) respondents' opinions and beliefs, and (c) the environmental description of interests i.e. at micro and macro levels. Also careful consideration was made on the scope and content of the behavioural variables of significance to ensure that questions adequately sampled their full range and depth. The questionnaire covered five broad areas pertinent to the negotiation of licensing arrangements, namely:

- i. Background information
- ii. Details of licensing agreement
- iii. The bargaining process
- iv. Bargaining power and independent variables
- v. The impact of licensing on the licensee.

In developing the research questionnaire, each variable area of interest was defined, and a variety of questions were conceived as potential stimulants of response indicating behaviour in each area.

Moreover, a number of criteria were used to guide the question formulation process. Kerlinger and Churchill's criteria of question writing were of particular relevance. The questions selected were those which would supply sample information, as well as allow a smooth flowing interview process.

The first criterion was organisational. The early section of the questionnaire consisted of less demanding questions such as those dealing with the company's characteristics and its environment.

The second criterion was - Is the question related to the research problem and research objective? This means that the purpose of each question was to elicit information that can be used to test the hypotheses of the research.

The third criterion was - Is the type of question the right and appropriate one? Some information could be obtained with the open-end question because issues such as reasons for behaviour, intentions, and attitudes are better dealt with, using questions with considerable flexibility. Certain other information, on the other hand, can be more expeditiously obtained with closed-end questions. If all that is required of a respondent is his preferred choice of two or more alternatives, and these alternatives can be clearly specified. It will be wasteful to use an open-end question. Consequently, the questionnaire used for this research contained a combination of open-end and closed-end questions.

The fourth criterion was - Is the question clear and unambiguous? The reason for this was to avoid questions that contain more than one idea or capable of different interpretations.

The fifth criterion was - Is the question a leading question? Leading questions suggest answers. As such, they threaten validity. Therefore to remove any form of bias, leading questions were completely avoided in the questionnaire.

The sixth criterion was - Does the question demand knowledge and information that the respondent does not have? To counter the invalidity of response due to lack of information, specific respondents with specific responsibilities were used for this study.

Within the constraints of the criteria for question-writing, the research design was made in such a way that made it possible for the researcher to probe deeper into promising areas, to re-phrase questions for communicative purposes, to omit questions which earlier responses indicated that are wasteful in terms of managerial time.

6.4 Questionnaire Administration.

The process of implementing the interview plan as described in the preceding section was one of identifying appropriate respondents, securing and conducting the interviews. In this study, the basic criterion for the choice of the respondents was the capability of the respondents to provide the needed information on the basis of his/her

participation in the decision-making process of the company. The choice of the companies in the sample was primarily based on the willingness of the companies operating in Nigeria under license from foreign firms to take part in the study. In order to broaden the data base to include all sorts of relationship between licensors and licensees, conscious effort was made to ensure that these relationships (i.e. Unaffiliated, licensor affiliation with minority equity interest and licensor affiliation with majority equity interest) were represented in the study. It was necessary to do this in order to assess the effect of equity relationship on licensing negotiation in a controlled economy.

Consequently, the target respondent in each company was the company's managing director or any top executive nominated by the managing director and who has been closely involved in the negotiation of licensing agreement(s). In seeking interview appointments, the researcher sent letters to prospective respondents accompanied by introductory letter from his research supervisor (see Appendices I & II). The letters were hand-delivered to ensure that they were received. This was followed up by telephone calls requesting for interview appointments. Of the 51 companies contacted, only 61 per cent participated in the study.

6.5

Analysis of Results.

Of the 31 responses to the survey, all were of sufficient quality to justify inclusion in the sample data. The actual analysis of the data was carried out with the use of University of Strathclyde Computer Centre's Vax Cluster Computer. The process was simplified by the use of

statistical software - The statistical package for social sciences (SPSS). The SPSS is an integrated system of computer programs designed for the analysis of social science data. The system provides a unified and comprehensive package which enabled us to perform different types of data analysis such as frequency distribution, cross-tabulations, correlation coefficient analysis and factor analysis.

In processing the data, each question on the questionnaire was coded. In questions which required a 'yes' or 'no' answer, code number 1 was used for the 'yes' and the code number 2 was used for the 'no' answer. The responses to the open-end questions were assigned numbers depending on the category that they were classified (Appendix VI). All the coded numbers were written in specific columns (punch card columns) which were assigned to each question. Assignment of columns to each question depended on the coded numbers for each question.

After all information on the questionnaire was coded, the punching of the designated codes in the designated columns of the punch card began. This task was performed by the keypunch operators of the University of Strathclyde Computer centre, who read codes from the data file prepared by the researcher. In all, seven punch cards were used for processing the questionnaires.

The following three key statistical techniques namely, (1) frequency analysis, (2) correlation coefficient analysis, and (3) factor analysis were considered appropriate for the analysis of the results in this study for the reasons given below -

1. Frequency Analysis.

Frequency analysis shows count of the number of occurrences that fall into each of several categories, when the categories are based on two or more variables considered simultaneously. In a given sample, it shows the frequency of occurrence of a particular variable in a survey. It is very easy to read and interpret. However its major drawback is that it does not explain relationships between variables.

2. Correlation Coefficient

Analysis.

This is a statistical technique used to measure the nature and degree of association between independent and dependent variables. It considers the joint variation of two measures, neither of which is restricted by the researcher. Its main advantage is that it deals with limitations inherent in the frequency analysis. However correlation coefficient analysis does not emphasise the degree of significance of each variable in determining an outcome.

In this study, there was the problem of the existence of multicollinearity between the independent variables. It has to be said that the multicollinearity was inevitable because of the nature of independent variables. However the significance of these variables were determined with the use of t test. Moreover, because the correlation coefficient analysis does not identify variables in relation to the actual degree of their importance, factor analysis was introduced. (see factor analysis below).

3. Factor Analysis

Factor analysis determines the number of factors at work in a situation, the nature of the factors, their degree of interaction, and the magnitude of their influence. It is essentially a wholistic method in that it constructs statistically from a range of variables, the important wholes which need be taken into account when making interpretations. In other words, it has two main functions - data reduction and substantive interpretation.

Factor analysis does not end with simple answers of 'yes' or 'no' to the question of whether a change in one variable is associated with a change in another. It goes further, both to determine the degree of association and to pick out the essential wholes among the influences at work i.e. it seeks to for a more complete account of influences at work. Factor analysis differs from analysis of variance principally as follows -

- i It provides as to the strength (not mere presence or absence) of association between two variables.
- ii It does not require supposition as to which are dependent or independent variables, and
- iii It reveals whether the independent variables assumed in the analysis of variance are in fact (a) mutually independent, and (b) the really important independent influences in the given circumstance.

However, despite its advantages, factor analysis' main disadvantage is that it does not indicate the extent of the difference in various entities or variables. For the purpose of this study, correlation coefficient analysis was able to offset this limitation.

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CHAPTER SEVEN.

ANALYSIS OF RESULTS I.

CONTENT.

- 7.0 Introduction.
- 7.1 Characteristics of Companies in the Sample.
- 7.2 Details of Licensing Agreements.
- 7.3 The Bargaining Process.
- 7.4 Bargaining Power and Independent Variables.
- 7.5 The Impact of Licensing on the Licensees.

This chapter is purely descriptive of the research findings. It describes and explains the research sample and its characteristics, nature of licensing agreements studied, the bargaining process, the variables that influence negotiation and the impact of licensing on the licensees. Note that in order to preserve the anonymity of the company as agreed with the respondents, the companies are identified with codified identifier numbers ID1 to ID31. ID standing for identification code used in the computer coding scheme. Therefore throughout the analysis, specific companies will be referred to, in relation to their identification code. The descriptive analysis in this section was carried out with the aid of frequency analysis.

7.1 Characteristics of Companies in the Sample.

The study sample contained a total of thirty one companies of different characteristics. Table 7.1 below provides a summary of the individual characteristics of the sample companies. In addition, the follow-up section aggregates the data in order to put the results in perspective for discussion purposes. All the results of the survey were of required standard to justify inclusion in the analysis.

Table 7.1: Summary of Characteristics of Companies in Sample

COMPANY	TYPE OF COMPANY	AGE OF COMPANY	SIZE (NO. OF EMPLOYEES)	AV. SALES (LAST 5 YEARS IN MIL. NIRA)	PROPORTION OF SALES EXPORTED	LICENSOR COUNTRY OF ORIGIN	RELATIONSHIP WITH LICENSEE	PERCENTAGE OWNED BY LICENSOR	RESPONDENT	TYPE OF AGREEMENT
1	P	8	200	4	N/A	Switzerland	Affiliated	40	GM	Trademark & know-how
2	P & C	15	260	15	N/A	West Germany	Affiliated	40	GM	Technical & management
3	P	16	719	60	N/A	U.K.		40	CS	Technical Services
4	HE	17	678	35	N/A	Japan		7	CS	Know-how
5	HE	27	572	22	N/A	U.K.		51	CS	Know-how
6	P	21	1550	38	N/A	U.K.		38	CS	Trademark & Patent
7	HE	55	10000	700	N/A	U.K.		40	CS	Technical Service
8	P	39	4000	350	N/A	U.K.		40	CS	Patent - Trademark & Technical Services
9	HE	16	1000	43	N/A	U.S.A.	Unaffiliated	N/A	CS	Trademark & know-how
10	E	8	650	32	N/A	Holland	Affiliated	40	CS	Trademark & know-how
11	HE	14	575	25	N/A	West Germany	Affiliated	40	MD	Trademark & know-how
12	B & B	37	6065	250	N/A	U.S.A.	Unaffiliated	N/A	CS	Trademark & Buttlers Agreement
13	HE	6	850	17	N/A	France		N/A	CS	Know-how
14	B & B	41	4500	250	Less than 0.1%	U.K.		N/A	CS	Trademark & Patent

/over....

Table 7.1: (continued)

COMPANY	TYPE OF COMPANY	AGE OF COMPANY	SIZE (NO. OF EMPLOYEES)	AV. SALES (LAST 5 YEARS IN MIL.NIRA)	PROPORTION OF SALES EXPORTED	LICENSOR COUNTRY OF ORIGIN	RELATIONSHIP WITH LICENSEE	PERCENTAGE OWNED BY LICENSOR	RESPONDENT	TYPE OF AGREEMENT
15	MV	14	1568	150	N/A	West Germany	Affiliated	40	GM	Assembly & Manufacturing License
16	B & B	5	350	-	N/A	France		25	GM	Know-how
17	B & B	8	300	33	N/A	France		10	CS	Trademark & know-how
18	B & B	4	350	22	N/A	U.K.		10	CS	Know-how
19	P & C	25	280	55	N/A	U.K.		40	GM	Know-how
20	B & B	37	4000	240	N/A	U.K.		40	CS	Trademark & know-how
21	P & C	26	325	33	N/A	U.K.		40	CS	Know-how
22	HE	5	162	15	N/A	India		40	GM	Know-how
23	HE	26	1000	60	N/A	U.K.		37.4	MD	Know-how
24	C & A	28	800	32	N/A	Belgium		60	GM	Technical Assistance
25	A	4	45	2	N/A	Holland	Unaffiliated	N/A	GM	Know-how & Equipment
26	P & C	4	147	11	N/A	U.S.A.	Affiliated	40	MD	Know-how
27	F	20	1000	150	N/A	Switzerland		40	CS	Trademark & Technical Services
28	C & A	28	1500	120	N/A	U.K.		40	CS	Trademark & Technical Services
29	HE	100+	95	5	N/A	U.S.A.	Unaffiliated	N/A	MD	Know-how
31	P	18	409	20	N/A	U.S.A.	Affiliated	40	CS	Trademark & know-how
31	HE	12	150		N/A	U.S.A.	Unaffiliated	N/A	CS/GM	Trademark & know-how

Notes to Table 7.1

<u>Code</u>	<u>Company Type</u>
P & C	Paints and Chemicals
A	Agro-Products
MV	Motor Vehicle
B & B	Beer and Beverages
E	Electronics
F	Food Products
C & A	Cement and Allied Products
P	Pharmaceuticals
HE	Heavy Engineering

Respondents

CS = Company Secretary
GM = General Manager/Director
MD = Managing Director

Of the thirty-one (31) companies that took part in the research interview the greatest number of licensing arrangement from one country came from the U.K. 41.9 per cent of the licensing agreements had U.K. licensors. Closely followed by Europe and Japan (excluding the U.K.) with 38.7 per cent. Although the European licensors were evenly spread across the continent. 16.1 per cent of the licensing agreements had United States (U.S.A) licensors, while one licensor was of Asian origin, specifically India. These details are shown in Table 7.1(a) below.

Table 7.1 (a).

Geographical Distribution of Licensor Countries.

	<u>Frequency</u>	<u>Percent</u>	<u>Cumulative %</u>
United Kingdom	13	41.9	41.9
United States	5	16.1	58.1
Europe & Japan	12	38.7	96.8
Others	<u>1</u>	<u>3.2</u>	<u>100</u>

n=31

Although the research letters were addressed to the Managing Directors of the companies approached, the eventual interview took place with three categories of respondents namely, Managing Directors, General Managers/Executive Directors, and Company Secretaries. These were individuals who are knowledgeable about licensing arrangements in their respective companies.

A breakdown of the respondents showed that 16.1 per cent (5) of the respondents were Managing Directors; another 16.1 per cent (5) were

either General Managers or other Executives of different corporate designations with equivalent responsibilities. The majority (67.7 per cent) of the respondents were Company Secretaries as shown in Table 7.1 (b) below. It is important to point out that these interviews took place largely with the Company Secretaries because the Managing Directors who delegated these interviews felt that they were appropriate for the research requirements since they were deeply involved in the negotiation of the licensing arrangements, playing major roles such as drafting of agreements and regular consultations with the national Office of industrial property. Secondly it was felt that they were more likely to have sufficient managerial time for the duration of the interview.

Table 7.1 (b).

Position of Respondents.

	<u>Frequency</u>	<u>Percent</u>	<u>Cumulative %</u>
Managing Director	5	16.1	16.1
General Manager	5	16.1	32.3
Company Secretary	<u>21</u>	<u>67.7</u>	<u>100</u>

n=31

While all firms in the sample were in manufacturing, (including assembly and processing), the industrial distribution of the sample was as follows - 4 companies in paints and chemicals; 1 company in agro products; 1 company in motor vehicle assembly; 6 companies in brewery and beverages bottling; 1 company in electronics; 1 company in food

products; 2 in cement and allied products; 5 companies in pharmaceuticals; and 10 companies in heavy engineering (see Table 7.1 (c)). Although the industrial spread of the sample companies is wide, the choice of the companies was determined by (a) their willingness to partake in the study and (b) resource constraint, time factor, and geographical location of firms.

The size of the companies in the sample varied widely in terms of staff employed. The smallest company studied had 45 employees while the largest had 10,000 staff. However on the whole, an aggregate breakdown of the sample shows that 2 companies employed between 1 and 100 staff; 4 companies had between 101 and 250 employees; 7 companies had between 251 and 500 employees; 8 companies had between 501 and 1000 workers; while 10 companies of the companies employed more than 1000 staff (see Table 7.1 (d)).

In addition, the average sales over the past five years of the companies in the sample showed two extremes. At one end is the smallest with average turnover of about 2 million naira and at the other end, is the largest with an average turnover of over half a billion naira. The aggregate shows that 5 companies in the sample have had sales of between N200 million and N800 million per year; 5 companies have had sales of between N50 million and N199 million annually; while the remaining 21 companies have had annual sales of between N3 million and N49 million as indicated in Table 7.1 (e) below. It is important to stress that the economic performance of some of the companies have been affected negatively by the recent economic problems of the country.

Table 7.1 (c).

Industrial Distribution of Firms in Sample.

	<u>Frequency</u>	<u>Percent</u>	<u>Cumulative %</u>
Paints & Chemicals	4	12.9	12.9
Agro Products	1	3.2	16.1
Motor Vehicle	1	3.2	19.4
Beer & Beverages	6	19.4	38.7
Electronics	1	3.2	41.9
Food Products	1	3.2	45.2
Cement & Allied Products	2	6.5	51.6
Pharmaceuticals	5	16.1	67.7
Heavy Engineering	<u>10</u>	<u>32.3</u>	<u>100.</u>

n=31

Table 7.1 (d)

Number of Employees.

	<u>Frequency</u>	<u>Percent</u>	<u>Cumulative %</u>
1 - 100	2	6.5	6.5
101 - 250	4	12.9	19.4
251 - 500	7	22.6	41.9
501 - 1000	8	25.8	67.7
1000 and above	<u>10</u>	<u>32.3</u>	<u>100</u>

n=31

Table 7.1 (e).

Average Annual Sales over the last 5 years (1982-1986).

	<u>Frequency</u>	<u>Percent</u>	<u>Cumulative %</u>
3 - 49 m Naira	21	61.2	61.2
50 - 199 m Naira	5	19.4	80.6
200 - 800 m Naira	5	19.4	100

n=31

The relationship between the licensors and the licensees ranges from arm's length relationship to majority equity participation by the licensor in the licensee firm. Of the thirty one companies in the sample, 24 had ownership links with the licensors while the remaining 7 did not have any kind of ownership association. Among those with ownership links, the licensors had minority equity interests ranging from between 7 and 40 per cent, in 21 firms. In the remaining 3 firms, the licensors had majority equity interests ranging between 51 and 60 per cent.

From the 24 firms with equity relationship with the licensors, 10 firms had had changes in the proportion of equity holding between the two parties (i.e. licensors and licensees), and all the changes have meant reduction in the equity holding of the licensor companies. These changes were made mandatory by the Nigerian Enterprises Promotion Decrees 1972 and 1977 (NEPD). The decrees classified all business concerns into three broad industrial schedules namely schedules 1, 2, and 3. Foreigners are excluded from active participation in the businesses listed in schedule 1. In schedule 2 businesses, Nigerians

must have majority equity participation with interest not less than 60 per cent. Under schedule 3, foreigners may have up to 60 per cent equity interest. It is noteworthy that in all the companies in the sample, licensing arrangements were made independent of ownership links. Licensing was borne out of the necessity to increase economic benefits which were reduced by changes in ownership structure of the licensee companies.

The study also showed that 18 companies in the sample of 31 have been in existence before the NEPD of 1972. The ages of the remaining 13 companies ranged between 4 and 15 years. The 10 companies that had licensor interests reduced as a result of the NEPD requirements fell within this category.

7.2 Details of Licensing Agreements.

This section of the research findings discusses details of all agreement in the survey, providing details of nature of licensing agreements as well as terms and conditions of the agreements. These details are summarised in Table 7.2 below.

Three major types of licensing agreements were identified in the study, namely patent, trademarks and technical service agreements. The study showed that of the 31 firms in the sample, 58.1 per cent had agreement relating to patent; 6 companies for trademarks; and 7 companies for technical assistance. Some of the firms in the sample had more than one agreement with the licensor. Respondents were asked to identify the most important agreements and it emerged that 54.8 per cent of the sample considered patent most important because of the inherent transfer of technology. 5 companies of the sample said trademarks were most important because of the sales potential associated with trademarks, while 9 companies thought technical assistance was most important because of both the technology component and sales potential.

The duration of the agreements was not uniform. 83.9 per cent of the sample had agreements with duration ranging from 3 years to 5 years. 3 companies of the sample had duration of between 6 and 10 years while 2 companies had indefinite duration. It is important to note that the 2 companies with indefinite duration in their agreements were some of the agreements where no royalty was payable. Consequently, they did not have to go through government scrutiny for approval.

Table 7.2

Details of Licensing Agreements Studied.

COMPANY	ROYALTY	DURATION (YEARS)	OBLIGATIONS ON					IMPROVEMENT CLAUSE	LIABILITY	POWER TO TERMINATE AGREEMENT	TERRITORIAL LIMITATIONS	COUNTRY OF ARBITRATION	RESTRICTIVE PROVISIONS
			SELLING PRICE	PRODUC- TION VOLUME	USE OF TECHNICAL SERVICES	RESTRIC- TION ON R & D	SECURITY						
1	1%TO	3	NO	NO	YES	NO	YES	REOI	N/A	BOTH	N/A	NIGERIA	N/
2	2%PBT	3	NO	NO	YES	NO	YES	REOI	LI	BOTH	YES	LONDON	N/.
3	1%TO	3	NO	NO	NO	NO	YES	N/A	N/A	BOTH	N/A	NIGERIA	N/
4	.5%TO	5	NO	NO	YES	NO	YES	REOI	SL	BOTH	N/A	"	"
5	2%PBT	6	NO	NO	YES	NO	YES	REOI	SL	"	"	"	"
6	.5%TO	3	NO	NO	YES	NO	YES	REOI	SL	"	"	"	"
7	2%PBT	3	NO	NO	YES	YES	YES	REOI	"	"	"	"	"
8		3	NO	NO	NO	NO	YES	"	"	"	"	"	"
9		3	"	"	"	"	"	"	"	"	"	"	"
10	2%PBT	-	NO	NO	YES	YES	YES	"	LI	"	YES	"	"
11	"	3	"	"	"	NO	NO	REOI	SL	"	N/A	"	"
12	N/A	10	"	YES	NO	YES	YES	N/A	LI	"	YES	"	"
13	2%PBT	5	NO	NO	YES	NO	"	"	N/A	"	N/A	"	"
14	"	3	NO	YES	NO	YES	"	REOI	SL	"	YES	"	"
15	2.5%NS	N/A	NO	NO	YES	YES	YES	"	"	"	"	PARIS	"

COMPANY	ROYALTY	DURATION (YEARS)	OBLIGATIONS ON					IMPROVEMENT CLAUSE	LIABILITY	POWER TO TERMINATE AGREEMENT	TERRITORIAL LIMITATIONS	COUNTRY OF ARBITRATION	RESTRICTIVE
			SELLING PRICE	PRODUCTION VOLUME	USE OF TECHNICAL SERVICES	RESTRICTION ON R & D	SECRECY						
16	2%NS	5	NO	NO	YES	NO	YES	REOI	SL	BOTH	N/A	NGR	N/
17		3	NO	NO	YES	YES	YES	REOI	LI	BOTH	YES	"	"
18		3	"	"	"	"	"	"	"	"	"	"	"
19	2%PB	3	"	"	"	NO	"	"	SL	"	"	"	"
20	2%PB	3	NO	NO	YES	NO	YES	REOI	LI	"	YES	"	"
21		3	NO	NO	NO	NO	YES	"	SL	"	"	"	"
22	2%NS	5	NO	NO	YES	NO	YES	REOI	N/A	"	NO	"	"
23		3	NO	NO	YES	NO	YES	REOI	N/A	"	YES	"	"
24	2%NP	5	NO	NO	YES	NO	YES	N/A	N/A	"	NO	"	"
25	2%TO	5	NO	NO	YES	NO	YES	N/A	N/A	"	"	"	"
26	2%NS	3	"	"	"	"	"	REOI	SL	"	"	"	"
27		5	"	"	"	"	"	"	"	"	YES	"	"
28	2%NP	3	"	"	"	"	"	"	"	"	NO	"	"
29	N/A	5	"	"	"	"	"	"	"	"	YES	LONDON	"
30		3	NO	NO	YES	NO	YES	REOI	SL	LICENSOR	"	NGR	"
31	N/A	N/A	NO	NO	NO	NO	YES	N/A	N/A	BOTH	N/A	INT	N

Notes for Table 7.2

TO	TURNOVER
PBT	PROFIT BEFORE TAX
REOI	RECIPROCAL EXCHANGE OF INFORMATION
SL	SHARED LIABILITY
LI	LICENSOR INDEMNIFIED OF LIABILITY
NS	NET SALE
NP	NET PROFIT

In some companies licensing arrangements were introduced as one of the consequences of the indigenisation decree. In others, especially where there are no equity relationships, the reasons for seeking licensing arrangements with foreign companies differed from one firm to another, but the general needs were classified into three broad areas of technology, market potential of the product/process, and technical assistance. 48.4 per cent of the respondents said that technology acquisition was the principal reason for seeking licensing; 38.7 per cent gave market potential; while 4 companies said they wanted technical assistance from the licensors.

In typical licensing agreement packages, eleven elements were identified, as follows -

- a. Machinery and equipment.
- b. Technical assistance in production.
- c. Patent and trademarks
- d. Design and formula.
- e. Plant design and construction.
- f. Technical assistance in product design.
- g. Quality control.
- h. Assistance in input purchase.
- i. Technical assistance in advertising.
- j. Technical assistance in marketing
- k. Assistance in training.

Only company in the sample thought that machinery and equipment was the most important element in the agreement. 45.2 per cent of the sample said technical assistance in production was the most important

element in their agreements. 38.7 per cent went for patent and trademarks. 2 companies thought quality control was most important. 1 company said input purchase, another 1 for marketing assistance. When respondents were further asked to discuss other elements of the package, their responses ranged from quite important to either not important or not included in the agreement. 58.1 per cent of the sample either did not have marketing assistance as part of the package or was considered the least important aspect of the agreement. 48.4 per cent did not consider assistance in advertising at all important. 8 companies did not consider or have technical assistance in plant design and construction in the agreement. 5 companies did not have technical assistance in product design. Another 5 companies did not have assistance in input purchase as part of the agreement. 4 companies did not have design and formula, another 3 did not have assistance in production as part of the agreement. 3 companies did not have quality control as a clause in their agreements. Also another 3 did not have provision for training.

The above breakdown shows two extremes of what the respondents considered the most important elements of their agreement, on the one hand, and elements that were considered least important or completely missing in their agreements, on the other hand.

All but one company in the research sample said that alternative licensors were available for licensing. However reasons for choosing their particular licensors in preference to other licensors, were by no means uniform. 5 companies in the sample chose their licensors because of sophistication of technology. 67.7 per cent of the sample had to

choose their present licensors because of ownership links, while 2 companies gave other reasons such as licensors willingness to do business in Nigeria, despite stringent government control.

For the royalty payment, there were variations in the structure of payments within the sample. 3 companies had no royalty payment clause, 87.1 per cent had running royalty while 1 company had a combination of fixed sum and running royalty. Within the royalty paying companies in the sample, 64.5 per cent paid between 1 and 2 per cent of profit before tax as royalty, 8 companies paid between 3 and 4 per cent while 3 companies did not pay any royalty. In addition, the duration for royalty payment was the same as the duration of the agreement. 83.9 had durations had durations ranging between 3 and 5 years. 1 company between 6 and 10 years, 1 company had indefinite duration, while 3 did not have time as they did not pay royalty.

The restrictive clauses in the agreement differed from one agreement to another. Table 7.2(a) below summaries the nature of restrictive clauses and the extent to which they were tied into the agreements.

Table 7.2(a)

Restrictive Clauses in the Agreements.

<u>Restrictive Clauses</u>	<u>Yes (%)</u>	<u>No (%)</u>
Restriction on selling price	-	100
Restriction on production vol.	6.5	93.5
Restriction on technical assist.	77.4	22.6
Restriction on R & D	22.6	77.4
Restriction on intro. of other products	32.3	67.7
<u>Obligation on confidentiality</u>	<u>96.8</u>	<u>3.2</u>

It is noteworthy that none of the agreements had restriction on the determination of product selling price by the licensee. Only 2 companies of the sample had restriction on production volume. 77.4 per cent had restriction on the use of foreign technical services. In all those cases, the licensors insisted on the provision of technical assistance at a fee. One of the reasons why the licensors always achieve this objective is because of the argument that only products of equal standard to the licensor products could be given stamp of approval and allowed to use licensor trademarks. Therefore in order to ensure that standards are maintained, licensees are always willing to utilise technical services of the licensor. 7 companies of the sample had restrictions on their R & D activities. The licensees were required to get approval from licensors before embarking on any form of R & D activities because quality standards are determined by licensors even where R & D results obtained locally, produce some positive results,

otherwise licensors' trademarks could not be used to market such products.

Also 10 companies in the sample were restricted from introducing other products to complement the existing product range. The most significant restriction on the licensees in all the agreements was on obligation on confidentiality. 96.8 per cent of the sample had confidentiality clauses in their agreements. The confidentiality clause requires that the licensee should not reveal to any third party, any information, plans, drawings, and other documents as well as know-how received from the licensor. In some agreements, the licensors had the licensees imposing corresponding obligations on its own sub-contractors, or its own employees or servants in order to ensure that licensor know-how and trade secrets are not exposed to competitors.

The study revealed that 77.4 per cent of the companies in sample had one sort of improvement clause or the other. 7 companies did not have provisions for improvements that might be made to a licensed product and/or process in the course of the life span of the agreement. All the companies that had improvement clauses exhibited the same type of clauses and that ensures reciprocal exchange of information. Both the licensees and licensors were obliged to notify each other of any improvement made during the course of the agreement.

Equally significant in the study was the liability clause. It defines the rights and responsibilities of the licensors and the licensees in the working of the agreement. 74.2 per cent of the sample had liability clauses entrenched in their agreements. Within this

category, 7 companies had licensors indemnified of any liability that may be suffered by the licensee. 51.6 per cent had a shared liability clause. Where claims were made against the licensee and faults/errors were traceable to wrong process or faulty equipment supplied by the licensor, such a licensor shall be liable to the claims. However, where faults were traceable to wrong application of know-how by the licensee, the said licensee shall be liable for such claims. In addition, some agreements went further to indemnify licensors over and above direct losses suffered by the licensee. In these circumstances, the licensor is indemnified with respect to indirect damage such as loss of profit and consequential damages.

The termination of agreement clause was uniform in all the companies studied. They showed that either party can terminate the agreement with notice of intention given, as required by the agreement. There is a wide range of grounds for termination of an agreement, and it could be any of the following -

- a. Breach of the agreement by either party.
- b. Expiration.
- c. Changes in government regulation as it affects royalty payments.
- d. Sub-licensing of know-how, without licensor consent.
- e. Independent R & D for a different product based on licensor know-how, patents and secret information provided to the licensee.
- f. Where nature or quality of product was unsatisfactory, and licensee had failed to comply with written warnings.
- g. Failure to comply with formulation.
- h. Incapable of complying with terms of agreements.

- i. In cases where the licensee faces liquidation or a receiver was appointed.
- j. Where the legal structure of the licensee company changes, as it affects licensor's equity interest and participation in licensee company.

Another important restriction which featured in most of the agreements was the limitation on market coverage. 51.6 per cent of the sample had limitations on market coverage. The limitation is split between domestic market and international market coverage. Within this category, 81.3 per cent (i.e. 51.6 per cent of the sample) were limited internationally, with unlimited coverage of domestic market. On the other hand, 4 companies in this category had both local and international market restrictions. The reason for these limitations were mainly to protect licensor interests in markets where they operate or in order to protect other licensees from the licensor, from unnecessary competition.

67.7 per cent of the research sample had support capital from the licensors for the licensed projects. It has to be emphasised that, however, that this high percentage was due to the fact that equity participation was a strong factor in assisting the licensee to see that the project succeeded, and also some the licensees were formally part or wholly owned by the licensor. In which case, the capital would have been in place before the licensing ideas were conceived.

All the companies in the sample had arbitration clauses. This was considered important because a good relationship with genuine

intentions could turn sour. During the research interviews, it was revealed that agreeing on countries of arbitration was always a difficult issue. 87.1 per cent had Nigeria's arbitration laws as applicable for dispute settlement, should any dispute arose. 12.9 per cent had neutral countries as arbitration centres. It is important to note that all the companies with international arbitration clauses did not register such agreements with the National office of Industrial property, since no royalty payments were required.

The survey showed that 74.2 per cent of the sample had tie-in clauses in their agreements. The nature of these tie-in clauses differed from one company to another as shown in table 7.2(b) below. Among those with tie-in clauses, 11 companies were for input supplies, 1 company was for equipment supply, 10 for technical assistance, while another 1 was for other sorts of tie-in requirements.

Table 7.2(b)

Tie-in Clauses in the Agreements.

	<u>Frequency</u>	<u>Percent</u>	<u>Valid %</u>	<u>Cumulative %</u>
Input Supplies	11	35.5	47.8	47.8
Equipment supp.	1	3.2	4.3	52.2
Technical Assist.	10	32.3	43.5	95.7
Others	1	3.2	4.3	100
No tie-in	8	25.8	MISSING	

n=23

The respondents were asked how and who made the initial contacts. 54.8 per cent of the respondents said the initial contacts were made licensees seeking new business opportunities. Some of these resulted in joint venture arrangements. However 38.7 per cent of the sample that have been operating in Nigeria as wholly-owned subsidiaries of foreign companies before NEPD 72 were obliged to dilute their equity holding in these subsidiaries. In this case, licensing arrangements although separate from corporate negotiation, came immediately after given up substantial equity stake on the insistence of the parent companies. 2 companies in the sample were linked together by third parties. This is summarised in table 7.3(a) below.

Table 7.3(a).

Initial Contacts.

	<u>Frequency</u>	<u>Percent</u>	<u>Cumulative %</u>
Licensee	17	54.8	54.8
Licensor	12	38.7	93.5
Third Party Link	2	6.5	100

n=31

None of the companies in the sample had a special licensing department. Consequently, negotiations were conducted by the following, on behalf of the licensees. 87.1 per cent of the sample revealed that negotiations were conducted by management team involving all the relevant parties (e.g. user department, finance, etc.). 2 companies of the sample had the negotiations conducted on their behalf by outside

consultants. Another 2 had the negotiations done by the licensee holding companies. On the other hand, the negotiations for the licensors were conducted by management team with the relevant department.

The length of negotiation period varied from one company to another. 12 companies in the sample said their negotiations lasted between one month and six months. Although these were mainly renewal negotiations and therefore did not require protracted negotiations. For instance, on the one hand, ID7 and ID8 explained that usually their renewal negotiations were conducted expeditiously because they were mainly formality except where major changes were required. On the other hand, ID10 insisted that being a licensee from a wholly-owned subsidiary status meant that there was no need for protracted negotiations. ID12 argued that negotiation with licensor took about three months because agreement drafts presented to them were standard agreements used worldwide. ID11 said on their part that the negotiation for the agreement took little time because they simply communicated to the licensor the government position vis-a-vis certain terms of the agreement. 10 lasted between 7 months and 12 months to reach agreement. 29 per cent of the sample had protracted negotiations that lasted over one year and in some cases, up to three years. (see table 7.3(b) below). Different reasons were given for this longer negotiation period. ID13 and ID30 remarked that it took their agreements so long to become effective because although the actual negotiation of the agreements between the licensees and the licensors was concluded in about one year, it took over one year after the agreements were signed,

to get them approved and registered with the National Office of Industrial Property.

On the other hand, ID19 explained that one of the major reasons why the negotiation took so long was that they had difficulties in reaching agreement over the jurisdiction for arbitration.

Table 7.3(b).

Length of Negotiation Period.

	<u>Frequency</u>	<u>Percent</u>	<u>Cumulative %</u>
1 - 6 months	12	38.7	38.7
7 - 12 Months	10	32.3	71.0
13 Months & over	9	29.0	100

n=31

During the period of negotiation, number of contacts made between licensors and the licensees differed between companies. Again the companies that made fewer contacts were those negotiating for renewals. 50 per cent made between one and five contacts while another 50 per cent made between six and ten contacts during negotiations. It has to be stressed that most of the these contacts were in the form of draft agreements and letters rather than meeting on face-to-face basis.

80.6 per cent of the respondents said they had negotiating experience. Despite the fact that up to 80.6 per cent had negotiating experience, 45.2 per cent needed third party assistance to enable them reach a meaningful agreement, and these assistances were mainly obtained from consultants who had handled similar negotiations in the past. For instance, on the one hand, ID19 said that legal consultants

were used for drafting and re-drafting of agreements. On the other hand, ID24 remarked that negotiations were conducted on their behalf by an investment holding company that had so many foreign agreements. However it is noteworthy that only 1 company in the sample had trade-offs during the negotiations.

It is equally very significant that 93.5 per cent of the sample conceded to the fact that government policy had commanding influence over the negotiations. The reason why government policy was so important in reaching agreements was due to the fact that agreements involving royalty payment needed the NOIP approval before they could become effective and/or enforceable. 2 companies did not accept that government policy had any influence during their negotiations. This category of companies were those that did not need government approval because royalty payments were not needed. The nature of policy influence over negotiations ranged from fixing ceiling level for royalty payments to determining acceptable conditions of the licensing arrangements such as tie-in and restrictive clauses.

The respondents were asked if they were satisfied with the outcome of their negotiations. The results as summarised in table 7.3(c), showed that 90 per cent of the sample were satisfied with the outcome of their negotiations. In as much as 90.3 per cent were satisfied with their agreements, only 67.7 per cent did not want changes made to their agreements as they were at the moment. 2 companies wanted more royalty for the licensors to compensate them adequately for the know-how transferred. Emphasising on this point, ID23 argued that it was wrong and unfair to the licensor to have fees for technical services related

to profit. ID23 insisted that fees should be more attractive e.g. by relating it to production or other appropriate criteria. Also ID27 explained that technology transfer was a major step and that licensing makes it even cheaper. Therefore transferor should be adequately compensated. ID27 argued that the level of royalty payment was too low and did not compensate adequately for transfer of this nature. 3 companies wanted to see less royalty payments made to the licensors. They argued that since licensors were equity participating partners, there was no reason why they should be paid royalty in addition to their share of the dividends. 1 company wanted to see licensors accepting more liabilities than they presently do. ID12 argued that with the present agreement, the licensor will be indemnified even if wrong and contaminated raw materials were supplied. 4 companies of the sample wanted general improvement on the terms of the licensing agreements. This point is illustrated by the response of ID15, arguing that the agreement was too restrictive in all respects. Given the opportunity, ID15 insisted that they will go for a different set of conditions for the use of the license. These would include fixing a time limit after which the licensee will discontinue with the royalty payment, less restrictive clauses such as mandatory use of technical assistance from the licensors, where components and material inputs were supplied by the licensors, the prices must be according to the prevailing market prices, and less dependence on the licensors (see table 7.3(c).)

Table 7.3(c).

Changes in Agreements.

	<u>Frequency</u>	<u>Percent</u>	<u>Cumulative %</u>
No changes wanted	21	67.7	67.7
More royalty wanted	2	6.5	74.2
Less royalty wanted	3	9.7	83.9
More licensor liability	1	3.2	87.1
Better terms wanted	4	12.9	100.0

n=31

7.4 Bargaining Power and Independent Variables.

These independent variables were taken from the research hypotheses and the the research results showed that technology was the principal factor that influenced negotiation. This is reflected by the fact that 80.6 per cent of the respondents in the sample said that technology was a very important determinant of the negotiation outcome. In most cases the transfer package included the supply of basic technical information in the form of engineering drawings, diagrams and instructions, detailed manufacturing process, material as well as training of personnel needed for effective operation. The technology and its importance was viewed from the point that "it enhances the country's manufacturing base and reduces dependency on importation", thereby relieving pressure on the balance of payment difficulties. However, 5 companies did not consider technology as extremely important. Although these were companies that depended on the agreements for trademarks rather than the know-how itself. Indeed, one

of such companies did say technology was not important. The most important feature of the agreement as far as it was concerned, was the trademark.(see Table 7.4(a) below).

Table 7.4(a).

Impact of Technology on Negotiations.

	<u>Frequency</u>	<u>Percent</u>	<u>Cumulative %</u>
Very important	25	80.6	80.6
Fairly important	5	16.1	96.8
Unimportant	<u>1</u>	<u>3.2</u>	<u>100.0</u>
		n=31	

Respondents were asked of the impact of support capital on negotiation. Support capital did not feature as an important factor and one of the explanations for this was the fact that these support capital were given as part of the licensor equity participation in the licensee company. Although this had some positive influence on the outcome of the negotiation because licensor commitment, it did not provide any bargaining leverage. In some of the cases, the provision of support capital was inevitable because these licensees were previously wholly-owned subsidiaries of the licensors. In meeting government's requirements, these licensors had to reduce their equity holding in their subsidiaries, and licensing arrangements were only conceived as a means of generating extra revenue. Therefore the licensor's equity holdings were traded as support capital for the new licensee. On the whole, 3 companies in the sample thought it was very important. Within this category, ID24 insisted that licensor holding 60 per cent share holding meant that substantial capital was provided. In addition, the

licensor acted as surety in the acquisition of overseas loan needed for the initial take-off of the project.

On the other hand, ID26 argued that support capital was quite important because the licensor provided the initial equipment and supplies as part of the support capital requirement of the agreement. 6 companies felt it was fairly important, 5 companies cent said it was neither important nor unimportant, 1 company thought it was fairly unimportant while the majority of the respondents (51.6%) considered it unimportant. These companies explained that support capital did not affect the agreement because it was seen as part of the obligation of the licensor. (see table 7.4(b) below).

Table 7.4(b).

Impact of Support Capital on Negotiations.

	<u>Frequency</u>	<u>Percent</u>	<u>Cumulative %</u>
Very important	3	9.7	9.7
Fairly important	6	19.4	29.0
Neither imp. nor unimp.	5	16.1	45.2
Fairly unimportant	1	3.2	48.4
Unimportant	<u>16</u>	<u>51.6</u>	<u>100.0</u>

n=31

The study also showed that ownership link was an important factor during negotiation. 13 companies considered ownership link very important. It was revealed that because most of the licensors already had equity interests in the licensee companies, they were readily

willing to comply with government policies because royalty payment (whatever amount) represented additional income to the licensor firm. 6 companies in the sample thought that ownership link was fairly important during negotiation. So effectively, 19 companies considered ownership link important for reasons explained above. 2 companies said it was neither important nor unimportant, while 10 companies did not think it was important because negotiation was conducted on formal basis. The different perceptions of the importance of ownership link is summarised in table 7.4(c) below.

Table 7.4(c).

Impact of Ownership Link on Negotiations.

	<u>Frequency</u>	<u>Percent</u>	<u>Cumulative %</u>
Very important	13	41.9	41.9
Fairly important	6	19.4	61.3
Neither imp. nor unimp.	2	6.5	67.7
Unimportant	10	32.3	100.0

n=31

Respondents were asked of the impact of locational attractiveness on the negotiation, and the results showed that 87.1 per cent of the respondents in the sample considered locational attractiveness very important. Because of the size and wealth of the country as a market, it means it is very attractive for licensors to consider accepting terms as dictated by government policies, which they would normally not consider in markets that were not so attractive. As one company Executive puts it: "locational attractiveness has been the cornerstone of the licensor's licensing policy. This is underlined or shown by the

location of other licensees worldwide". 2 companies of the sample felt that it was fairly important while another 1 thought it was neither important nor unimportant. 1 company considered locational attractiveness unimportant as an influence during negotiation.

It is important to point out that both respondents who considered locational attractiveness neither important nor unimportant and the one that thought it was unimportant argued that locational attractiveness could be an important influencing factor for a licensor trying to penetrate a new market, and that since their licensors were already operating in the market, location becomes unimportant factor or perhaps not a determining influence during negotiations for licensing agreements. This result is summarised in table 7.4(d) below.

Table 7.4(d)

Impact of Locational Attractiveness on Negotiation.

	<u>Frequency</u>	<u>Percent</u>	<u>Cumulative %</u>
Very important	27	87.1	87.1
Fairly important	2	6.5	93.5
Neither important nor unimp.	1	3.2	96.8
Unimportant	<u>1</u>	<u>3.2</u>	<u>100.0</u>

n=31

When the respondents were asked to assess the impact of third party assistance during negotiation, the following results were obtained. Only 6 companies of the sample considered third party assistance important. Of these, 4 companies thought it was very

important, and these were respondents who did not have experience and those who had negotiations carried out on their behalf by holding companies. 2 companies felt it was fairly important, while another 5 did consider third party assistance neither important nor unimportant. On the other hand, 2 companies of the sample thought it was fairly unimportant. The majority of the respondents in the sample (58.1%) considered third party assistance unimportant. (see table 7.4(e) below. The reason why majority of the companies in the sample considered third party assistance unimportant was because most of the ceilings on the major clauses had been fixed by the government. Therefore these third parties did not alter the basic negotiation framework.

Table 7.4(e).

Impact of Third Party Assistance on Negotiation.

	<u>Frequency</u>	<u>Percent</u>	<u>Cumulative %</u>
Very important	4	12.9	12.9
Fairly important	2	6.5	19.4
Neither imp. nor unimp.	5	16.1	35.5
Fairly unimportant	2	6.5	41.9
Unimportant	<u>18</u>	<u>58.1</u>	<u>100.0</u>

n=31

All the firms in the research sample agreed that their products were exportable. But none of them relied on licensor marketing network abroad for export planning. Because of the size of the market, and given the fact that it was until recently a sellers market, the companies were more concerned with satisfying the local market. And in

most cases the size of their production facilities were not large enough to cope with export demands. Consequently this did not have any impact on the negotiation for licensing agreements.

The respondents were asked to assess the impact of licensee company size during the negotiations. majority of the sample (51.6%) said that this was important because it provided the licensors with the confidence that the licensees will be capable of protecting the licensor quality, image, and trademark. Consequently, the licensors were more willing to look beyond the immediate financial gains of the transactions and considered future working relationship such as acquiring equity interest in the licensee company. Moreover, in large companies where licensors already had equity interests, such involvements became more paramount than any other secondary relationship such as affiliated licensing.

On this issue of company size, ID11 explained that the licensee had the advantage of size, which meant that all their demands were taken seriously. ID19 pointed out that their size and reputation meant that they were seen as being capable of maintaining the licensor technology and therefore protect their reputation. On the other hand, ID20 argued that the size of their company from the days when it was a subsidiary of the licensor meant that the licensor had a lot of consideration before accepting the general ceiling as fixed by the government.

Also ID29 pointed out that its reputation and known association with other foreign companies was one of the main reasons why the licensor approached them with licensing proposals in the first place,

considering the fact that no equity relationship existed between them. Therefore this was an important influence during negotiation. However, 48.4 per cent did not consider size to be an important influence on the negotiation (see table 7.4(f) below.

Table 7.4(f)

Influence of Licensee Size on Negotiation.

	<u>Frequency</u>	<u>Percent</u>	<u>Cumulative %</u>
Important	16	51.6	51.6
Unimportant	<u>15</u>	<u>48.4</u>	<u>100.</u>

n=31

On the effect of competition from alternative technology suppliers on negotiations, only 3 companies of the sample said that it had influenced negotiation. They were firms large enough to wield considerable bargaining power and who had unaffiliated relationships with the licensors. Consequently, terms of the agreement were negotiated on the basis of prevailing market prices and conditions. But large majority of the sample (90.3%) thought that availability of alternative suppliers did not have any influence during negotiations because they were practically at the mercy of the licensors. Although there were many alternative licensors, only a handful were willing to license their know-how to developing country licensees because of the volatile nature of the market.

One of the companies in this category, ID9, explained that a third company based in the U.K. that is affiliated to them had to persuade

the licensor, providing necessary assurances for the royalty payment before they agreed to license their know-how to a Nigerian company. In other cases, company Executives argue that ownership links made it almost impossible for them to consider alternative suppliers. Because only few active alternative licensors existed, the most important consideration was the willingness of licensors to do business with Nigerian companies. Often, it was difficult to find alternative licensors.

Royalty payment issue was one area where acceptability to the licensor was determined or influenced by the long term strategic corporate objectives of the companies. Moreover, the ceiling to the level of royalty payment as set by the National Office of Industrial Property were fixed on the basis of perceived transfer costs of such transactions, as well as the international "going rate" without consideration whatsoever for the licensor opportunity costs. Respondents were asked to assess the determinants of the royalty payable by the licensees, and the study revealed that 90.3 per cent of the agreements had ceilings to their royalty level fixed by the National Office of Industrial Property (NOIP). All agreements requiring royalty payments were required law to be submitted to NOIP for screening and approval before such funds could be remitted. NOIP fixed the ceiling levels for all royalty payments. Only 3 companies of the sample did not have royalty determined by NOIP. These were companies that did not pay royalty at all, and consequently, did not need to go through NOIP to get their agreements approved. The result is summarised in table 7.4(g) below.

Table 7.4(g).

Determinants of Level of Royalty Payable.

	<u>Frequency</u>	<u>Percent</u>	<u>Cumulative %</u>
NOIP Approval	28	90.3	90.3
No royalty required	<u>3</u>	<u>9.7</u>	<u>100.0</u>
		n=31	

The length of time (in terms of duration) approved by NOIP for all the agreements were considered normal and comparable with what obtained in other parts of the world, by the respondents. Even the companies that did not register with NOIP thought that the duration was normal. Even though duration period differed from company to company, the determinant of the length of time acceptable to NOIP was the complexity of the technology in question, the length of time which Nigerians were expected to have mastered the know-how and the need for continued assistance of the licensor. For instance, ID1 and ID23 had agreements with three yearly duration; ID27 had an initial agreement for five years with the provision that subsequent renewals will be for periods not exceeding three years; ID5 had agreement with six year duration; ID12 had agreement with ten year duration; while on the other hand, ID15 and ID31 had agreements with open duration. (see Table 7.2 above.

The National Office of Industrial Property places the government in a regulatory position between the productive sector and the foreign technology suppliers. The aim is to assist in obtaining favourable conditions of transfer by eliminating restrictive provisions and reducing levels of royalty payment. 90.3 per cent of the firms in the

sample had their agreements screened, approved and registered with the NOIP. The importance of this registration was that all approved and registered agreements were given certificates of registration which then entitles the licensee to remit the approved sum to the licensor. 3 companies in the sample did not register with NOIP. These were companies that had royalty-free agreements, and consequently, had no need for such approvals (Table 7.4(h) below).

Table 7.4(h).

Registration with NOIP

	<u>Frequency</u>	<u>Percent</u>	<u>Cumulative %</u>
Registered with NOIP	28	90.3	90.3
Registration not needed	<u>3</u>	<u>9.7</u>	<u>100.0</u>

n=31

Of the firms whose agreements were registered with NOIP, major restrictive and tie-in provision were rejected in 96.4 per cent of the cases. The nature of restrictive provisions rejected by NOIP included the right of the licensor to remain the sole suppliers of components and materials to the licensee, the provision of technical services by the licensor. It has to be said that even though these provisions were rejected for registration purposes, licensees were nonetheless tied to the licensors by equity relationship. For example, ID1 remarked that because of ownership links, it was not practicable for them to consider other suppliers, except of course, where recommended by the licensor.

Only in 3.6 per cent of the cases was such restrictions approved. The technology and the supplier in this case was regarded as very essential for the country's economic development. In addition, the

government had previously granted operational licenses to similar licensors who failed to utilise their licenses. Consequently, the government had to compromise their stance on certain key issues, in favour of the licensor.

7.5 Impact of Licensing on the Licensee.

This section summarises responses vis-a-vis the worthiness of licensing as a credible alternative for international technology transfer and its resultant impact on the transferee. Different aspects of the impact of the agreement on the licensee were considered including profitability, the creation of employment and the quality of employment created. The results are summarised in Table 7.5 below.

The respondents were asked to assess the impact of the licensing agreements on their companies in all aspects of their operations. The results were as follows :

All the firms in the sample confirmed that the agreement had resulted in increase in their revenue and profitability. In all the companies that were set up with the licensing agreement, the respondents explained that the agreements were responsible for their total financial performance. In those 18 subsidiary companies that had been operating before acquiring the licensing rights from the parent/associate companies, most agreed that the agreements had contributed up to 30 per cent of their revenue and profitability

because of continued technical support from the foreign associates or parent companies as the case may be. They therefore considered licensing very significant for the licensees. It is important to emphasize that the relationship between the technology transferred and improved revenue and/or profitability is that the know-how provided the licensees with competitive advantage over their rivals. These technologies created the need for training and re-training of the workforce, thereby enhancing their productivity.

Table 7.5

Impact of Licensing Agreements on the Licensees.

COMPANY	REVENUE/ PROFITABILITY	TECHNICAL EXPERTISE	MARKETING SKILLS	MARKET SHARE/ REPUTATION	INDIGENOUS TECHNOLOGY	EFFECT ON			INVESTMENT
						EMPLOYMENT LEVEL	QUALITY OF EMPLOYMENT	TRAINING & RE-TRAINING	
1	+	N/A	N/A	+	N/A	+	Skilled	+	+
2	+	+	+	+	+	+	"	+	N/A
3	+	N/A	+	N/A	N/A	+	"	+	"
4	+	+	N/A	+	+	+	++	"	"
5	+	+	+	+	+	+	"	+	+
6	+	+	N/A	+	+	+	"	+	N/A
7	+	+	+	+	+	+	+	+	+
8	+	+	+	+	+	+	+	+	+
9	+	+	+	+	+	+	+	+	+
10	+	+	+	+	+	+	+	+	+
11	+	+	N/A	+	+	+	++	+	+
12	+	N/A	N/A	+	+	+	++	+	+
13	+	+	+	+	+	+	+	+	N/A
14	+	+	N/A	+	+	+	killed	+	+
15	+	+	"	+	+	+	"	+	+
16	+	+	"	+	+	+	++	"	N/A

COMPANY	REVENUE/ PROFITABILITY	TECHNICAL EXPERTISE	MARKETING SKILLS	MARKET SHARE /REPUTATION	INDIGENOUS TECHNOLOGY	EFFECT ON			INVESTMENT
						EMPLOY- MENT LEVEL	QUALITY OF EMPLOY- MENT	TRAIN- ING & RE-TRAIN ING	
17	+	+	+	+	+	+	skilled	+	N/A
18	+	+	+	+	N/A	+	"	+	+
19	+	+	+	+	+	+	"	+	+
20	+	+	+	+	+	+	"	+	+
21	+	+	+	+	+	N/A	"	+	+
22	+	+	+	+	+	+	"	+	N/A
23	+	+	+	+	+	+	"	+	"
24	+	+	+	+	N/A	+	+	+	+
25	+	+	N/A	+	N/A	+	-	+	N/A
26	+	+	+	+	"	+	+	+	N/A
27	+	+	+	+	+	+	++	+	+
28	+	+	N/A	+	N/A	+	+	+	+
29	+	+	"	+	+	N/A	+	+	+
30	+	+	+	+	+	+	+	+	+
31	+	+	+	+	+	+	++	+	+

Note: Key for Table 7.5

- + = Increase /improved
- ++ = Highly Skilled
- N/A = No Change.

To illustrate the point made above, ID3 explained that all their products were manufactured under licence granted by the licensor. ID6 claimed that their agreement was responsible for about 50 per cent of the group revenue. ID7 and ID12 remarked that their performances were entirely due to the license agreement. ID14 claimed that the license agreement contributed about 30 per cent of the revenue and profitability of his company. Moreover, one of the features of these agreements is the provision of technical support services and these support services came in various forms. For instance, marketing support services, the provision of advertising materials, and technical assistance in quality control are all part of the support services provided by the licensors.

On the effect of the agreements on technical expertise, only 2 companies said the agreement had no effect whatsoever on their technical expertise. These were companies that had trademark licensing agreements and did not receive technical support services. However, a large majority (93.5%) confirmed that their technical expertise had benefited immensely from the agreement and were satisfied with the progress they had made. The respondents were more or less unanimous in explaining that this had been achieved because the actual production processes were operated by their staff with only technical supervision from the licensors, in addition to regular training programmes for performance improvement (see table 7.5(a)). For example, ID11 explained that they had achieved a great deal in improving their technical expertise, but these achievements were not sufficient for the licensee to do away with the licensor. On the same token, ID28 conceded that their technical expertise had increased significantly over the years. It

was argued that their progress was monitored regularly by NOIP to ensure that Nigerians acquire the necessary expertise.

Table 7.5(a)

Effect of Licensing on Technical Expertise.

	<u>Frequency</u>	<u>Percent</u>	<u>Cumulative %</u>
No change	2	6.5	6.5
Increased expertise	29	93.5	100.0

n=31

The study revealed that not all the firms in the sample had improved their marketing skills as a result of the licensing agreement. 7 companies did not have any contribution made towards their marketing skills by the agreement. These were firms that had established effective marketing system before the agreements. For example, ID14 argued that licensing agreement did not make any difference to their existing marketing expertise because they have had effective marketing system before the agreement. ID28 also claimed that their marketing performance was entirely due to indigenous efforts and had no foreign input and consequently the agreement had little or no impact on their marketing expertise. Nonetheless, 77.4 per cent improved their marketing skills as a result of the agreements. They explained that this they were able to do because sophisticated marketing systems and networks were inherited or established in line with the licensor systems, with changes made to take into account the differences in marketing environments.

A great majority of the sample agreed that the agreement had made a significant impact on their market share holdings. As shown in table 7.5(b), 93.5 per cent had increased their market shares as a result of the agreements. Of these, some companies that were set up with the licensing agreements explained that the agreements had helped to secure market shares by up to 50 per cent. This is illustrated by the fact that ID18 claimed that within three years of operating the agreement, they have been able to secure about 7 per cent share of the market. ID17 insisted they control 5 per cent share of the market which they consider very significant because of the size of the market. ID13 also claimed that their product had about 15 per cent share of the market. On the other hand, ID15 claimed they have about 40 per cent share of the market. Even ID9 insisted they control about 50 per cent of the market in which they operate.

Those firms with existing operations before the agreements agreed that it had helped to increase their market shares by anything up to 10 per cent. For instance, ID14 explained that even though they had been operating before the agreement, the product under license now control about 7.9 of the market and the size of the market indicated that that market share was substantial. However, a small minority of the sample (2 companies) said the agreement did not change their market shares in any way.

Table 7.5(b).

Effect of Licensing on Market Shares.

	<u>Frequency</u>	<u>Percent</u>	<u>Cumulative %</u>
Increased mkt share	29	93.5	93.5
No change	<u>2</u>	<u>6.5</u>	<u>100.0</u>

n=31

It is important to point out that all the companies in the sample agreed that the licensing agreement had resulted in growth both in terms of efficiency and stature.

When asked about the effect of the agreement on the development of indigenous technology, 93.5 per cent of the sample thought that it had contributed significantly toward the development of indigenous know-how. These firms explained that in-house R & D activities had resulted in the production of allied products, and/or improved on the know-how provided by the licensors to suit local conditions and raw materials. Emphasising on this point, ID6 and ID9 remarked that they can now produce their own products with or without technical support from licensors.

All the companies in the sample agreed that the licensing agreement had resulted in substantial increase in employment. This is evident in ID6 which claimed that 60 per cent of their employees work directly on the products under license. Also ID14 explained that 15 per cent of their staff were taken on due to the licensing agreement and subsequent company expansion. Generally, the level of employment generated as a result of the agreements differed from company to

company. However, the respondents were not unanimous when asked to assess the skill contents of the employment. 11 companies said they had highly skilled personnel, such as engineers and technicians. Majority of the sample (61.3%) said their staff were largely skilled, and 1 company agreed that the agreement had generated unskilled employment. (see table 7.5(c)).

Table 7.5(c)

Skill content of Employment.

	<u>Frequency</u>	<u>Percent</u>	<u>Cumulative %</u>
Highly skilled	11	35.5	35.5
Largely skilled	19	61.3	96.8
Unskilled	<u>1</u>	<u>3.2</u>	<u>100.0</u>

n=31

The study also revealed that all the firms in the sample benefited from increased training activities as a result of the licensing arrangements. They explained that training was a continuous process for technical and managerial staff and had increased since the licensing agreement both in terms of staff number and scope. It was revealed that training was done on-the-job, outside training schools locally, and in some cases, overseas, especially for special skills and management.

The respondents were asked to assess the effect of the licensing on capital investment and the results showed that the majority of the firms (61.3%) had had increased changes in capital investment as a result of the agreements. Some of the firms had had changes to the tune of fifty million naira (N50 million) for the construction of new

production facilities, and in some cases, for the expansion of existing facilities. For instance, ID14 claimed they had just invested about 50 million naira for the expansion of existing capacity and the construction of a new plant. On their part, ID27 also said they had invested about 41 million naira for the construction of new factory facilities.

In concluding the survey, the respondents were asked about their expectations of the agreement, their impression about licensing, and recommendations for potential licensees. The results showed that on expectations, 3 companies of the sample said their achievements exceeded their expectations. Within this category, ID26 argued that the performance of the agreement has been remarkable particularly in the area of social benefits because of the employment opportunities the company has created as a result of the agreement. 90.3 per cent recorded progress as expected. It is significant that none of the companies in the sample was disappointed with the results they had made with the licensing arrangements. The general consensus was that if the agreement had not done as well as expected, there could not have been any need to keep on renewing the agreements.

On their impression about licensing as a means of acquiring technology, the results showed that a great majority of the sample (83.9%) felt that licensing was a highly desirable thing. (see table 7.5(d) below). These respondents consider licensing as a very cheap and easy way of acquiring technology that has been tested and proven, and that once the agreements were properly operated, the benefits were

enormous. 5 companies of the sample thought it was just alright without any special commitment to it.

Table 7.5(d).

Impression About Licensing.

	<u>Frequency</u>	<u>Percent</u>	<u>Cumulative %</u>
Highly desirable	26	83.9	83.9
Just alright	<u>5</u>	<u>16.1</u>	<u>100.0</u>

n=31

On recommendation for prospective licensees, all the firms recommended licensing as a feasible means of acquiring foreign know-how, but the degree of support from the firms varied. 15 companies gave licensing unqualified support based on their companies' experience and benefits derived from them. However, the majority (51.6%) gave licensing qualified support. It was argued that for licensing to be beneficial to both parties, it must be properly conceived, and the licensor must be committed to the venture either by acquiring equity interest in the licensee company, or accept sufficient liability if the project failed.

No conclusions have been made here because the next chapter analyses the implication of the responses presented in this chapter. Therefore conclusions were made on the basis of the statistical analysis of the study.

CHAPTER EIGHT

ANALYSIS OF RESULTS II

- 8.1 Introduction
- 8.2 Hypotheses Definitions
- 8.3 Summary of Results Against the Theoretical Models.
- 8.4 Comparison of Results with Previous Research.
- 8.5 The Relevance of the Bargaining Power Model.

INTRODUCTION.

This section of the study is concerned with the definition and explanation of the hypotheses, and analysis of research findings, and it is discussed under five sub-sections. Finally, a comparison is made of the result of this study and some previous studies, thereby providing basis of assessment of the relevance of the bargaining power model in the Nigerian context.

8.1 Hypotheses Definitions.

The study considers the relationship between the terms and conditions of licensing agreements, on the one hand, and the independent variables that influence the negotiation process, on the other. The independent variables are defined as those factors that determine or influence the outcome of negotiation for licensing agreements (e.g. technology, locational attractiveness, etc.). These independent variables have been drawn up from literature and previous empirical studies (discussed in earlier chapters).

The hypotheses have been taken on two levels namely, (a) ownership-specific factors and (b) location-specific factors.

(a) Ownership-Specific Factors

H1 : The perceived importance of technology by the licensee is positively related to licensor bargaining power.

This hypothesis seeks to explore the extent to which the nature of technology determines the outcome of licensing agreement. The assessment of technology's importance and perceived contribution toward a host economy's development reflects on the bargaining power of the licensor. In other words, a new and unique technology is likely to attract higher price and more restrictive clauses than a standardised technology. This hypothesis was taken from Caves, Crockell & Killing (1983) and Poynter (1985) and they contend that certain core or frontier technologies are possessed by only few firm. Therefore MNEs gain strength from market dominance which can reduce the ability of governments to reach out for alternative sources of technology.

H2 : The provision of Support capital is positively related to the licensor bargaining power.

This hypothesis attempts to assess to significance of support capital on the outcome of negotiations for licensing agreements. The idea here is that the provision of support capital is likely to influence the outcome of negotiations in favour of the licensor. This hypothesis was taken from Gladwin & Walters (1980) and Contractor (1985), they argued that in some technology transfer arrangements, the transferors often

undertake to provide support capital to enable the venture take off. Consequently, such provisions strengthen the bargaining power of the MNEs and invariably undermine the host country's position. They also contend that even in instances where the government would normally kick against certain restrictive provisions such as tie-in clauses, the provision of support capital could be used as a trade-off against such provisions.

H3 : *Control of export market access by licensor is positively related to its bargaining power.*

The assumption is that where the control of export market access resides with the licensor, it is likely to influence the outcome of licensing negotiation in favour of the licensor. In other words, where exporting forms the main source of market for the product/process under license, it is likely to enhance the bargaining power of the licensor. In Rugman et al (1985) it was argued that the MNEs have the advantage of using their home territory as a bargaining chip especially where they are market leaders in the home market. Rugman et al contend that this is particularly significant because more countries are now turning towards export-led growth strategies for their economic development.

H4 : *Licensor negotiating skill is positively related to its bargaining power.*

This hypothesis seeks to determine the importance of negotiating skills as a determining influence on the outcome of negotiations on the dependent variables. In other words, a licensor is more likely to influence a negotiation on the basis of his experience. This hypothesis was taken from Posses (1978) and Graham (1983) and they are that MNEs possess better negotiating skills than the prospective transferors due to wealth of experience acquired in the course conducting similar negotiation elsewhere, as well as the amount of information available at their disposal.

(b) Location-Specific Factors.

H5 : *Availability of alternative suppliers is negatively related to licensor bargaining power.*

The degree of competition from alternative suppliers of technology influences the process of negotiation on the dependent variables. In other words, where there is substantial competition from alternative technology suppliers, the agreement is likely to favour the licensee. This hypothesis was taken from Telesio (1979), and it was argued that an LDC may be attractive to MNEs because of its "potentially" large market and because MNEs exhibit a follow-the-leader behaviour, such a market will not be short of prospective transferors. Consequently MNEs' bargaining power is undermined by competition among suppliers.

H6 : *Restrictive government policy is negatively related to licensor bargaining power.*

This hypothesis is based on the idea that where government excludes other forms of participation, the licensee is likely to have significant influence on the negotiation over the dependent variables. In other words, government policy is likely to enhance the bargaining leverage of the licensee. This hypothesis was taken from Wallender III (1980) and Okono (1987). They argued that because government policies are designed to maximise advantages of the use of imported technologies, these policies tend to strengthen licensee bargaining power.

H7 : *Third party assistance to a licensee is negatively related to licensor bargaining power.*

This hypothesis seeks to assess the degree of importance of third party assistance in the negotiation of licensing agreements. It is assumed that the use of third party assistance is likely to increase the bargaining leverage of the licensee. In Fagre and Wells (1982), they argued that because developing countries' bargaining power is likely to be weakened when faced with high technology firm, they have resorted to the use of third party assistance in order to obtain greater benefit from any technology transfer arrangement. Therefore this affects licensors' bargaining power negatively.

H8 : *Locational attractiveness of a host country is negatively related to licensor bargaining power.*

This hypothesis seeks to measure the extent to which host country characteristics influence the negotiation of licensing agreements. The availability of resources (such as raw materials and labour), the market size and its wealth is likely to influence negotiation for the the licensing agreement in favour of the licensee. In other words, the profitability of a licensing agreement depends on the market potential for the product and/or process, and hence provides incentives for the licensor to concede on certain issues, thereby reinforcing licensee bargaining power. This hypothesis was taken from Stoeber (1982) and Poynter (1985). They contend that bargaining power of an LDC is determined among other things, by the availability of technical and managerial resources, and the attractiveness of the domestic market. In addition, they argued that an attractive domestic market will attract the attention of more than one MNE, and consequently the host government will utilise such competition to enhance its bargaining power.

H9 : *Licensee size and sophistication is negatively related to licensor bargaining power.*

The idea here is that the size and business standing of potential technology recipient will influence the outcome of negotiation of the dependent variables. It is assumed that a well established licensee would mean less transfer cost on the licensor, and hence incentive for

transfer in order to maximise economic rent on the technology, thereby increasing licensee bargaining power. This hypothesis was taken from McCall and Warrington (1984). They contend that local firms capable of offering additional resources to ensure the success of an agreement usually maintain strong bargaining position with the licensor.

H10 : *Licensor's existing ownership link with licensee operation in a host country is negatively related to its bargaining power.*

This hypothesis seeks to assess the extent to which existing licensor operation in a host country affects its bargaining power. It assumes that once a substantial investment has been made by a licensor, subsequent licensing arrangements will be of secondary importance to the licensor, thereby enhancing the licensee bargaining power. This hypothesis was taken from Vernon (1979) and Moran (1985) and "obsolescing bargaining power" was the basis of the contention. They argued that the dynamism of obsolescing bargaining power accounts for shift in power from the foreign investor to the host country over time, and that initial favourable investment agreement for the foreigner is likely to be subsequently re-negotiated in favour of the host country.

8.2 Analysis of Research Findings.

The following analysis has been done using two statistical techniques namely (i) Correlation coefficient analysis and (ii) Factor analysis to complement Frequency analysis used in the previous chapter. These statistical techniques have been explained in detail under methodology (Chapter six).

The analysis of the findings covers ten important independent variables which formed the bases of the hypotheses namely : (a) Technology, (b) Support capital, (c) Export market access, (d) Negotiating skill, (e) Degree of competition from alternative suppliers, (f) Government policy, (g) Third party assistance, (h) Locational attractiveness, (i) Licensee size and sophistication, and (j) Licensor's existing business commitment and/or ownership link in a host country. These hypotheses were tested to determine their effect on the negotiation of technology and know-how licensing to a developing country like Nigeria.

These independent variables are particularly significant because of the limitations on the efficient operation of the market forces by government intervention through control policies. It has to said that even though Nigeria is a developing country, the result of the findings may not have direct implications for all developing countries except for those that have similar control measures as Nigeria. Therefore the interpretation of the results will have to be kept in context. Nonetheless, it covers most of the issues as they affect most

developing countries' bargaining power vis-a-vis licensing of technology and know-how.

The following section reconciles the research hypotheses with the findings, based on the relationship between the dependent variables and the factors influencing the outcome of an agreement (otherwise known as the independent variables.)

H1 : The perceived importance of technology by the licensee is positively related to licensor bargaining power.

This hypothesis implies that the nature of technology determines the licensor's bargaining power.

Five levels (degrees) of importance were applied in assessing the significance of the nature of technology in determining the bargaining power of the licensor namely - very important; fairly important; neither important nor unimportant; fairly unimportant; and unimportant. The respondents were asked to assess the importance of technology during negotiation. Using frequency analysis, the results showed that of the 31 companies in the sample, a significant 80.6 per cent agreed that technology was a very important determinant of negotiation outcome. 16.1 per cent said it was fairly important. Effectively, this means that 96.7 per cent of the sample rated technology as an important factor in the negotiation process. The difficulty in assessing what constituted an important technology was simplified by the government with the

introduction of three industrial schedules as defined by the Nigerian Enterprises Promotion Decree of 1972. These classifications are known as industrial schedules 1, 2 and 3. (see Appendix vii). The recognition and need for foreign technology as perceived by the government determined the placing of an industry within the three schedules, and also that reflected the posture of the government in determining the amount of equity interest foreign investors are allowed to maintain in a company. It is noteworthy that all the companies in the sample were taken from schedules 2 and 3 in which foreign investors are allowed to maintain up to 40 per cent in the case of schedules 2 and up to 60 per cent in the case of schedule three.

To complement the frequency analysis, correlation coefficient analysis was used and the results showed that technology and the host government's control policy had high correlation in determining the level of royalty. The correlation coefficient analysis is summarised in table 8.1 below. The high correlation between Technology and government policy on the one hand, and royalty on the other reflect their significance in the negotiation process and the importance attached to royalty payment.

However, it is noteworthy that the correlation between the agreement terms and the other independent variables is significantly lower. This is attributable to the presence of high multicollinearity amongst the independent variables. A multicollinear condition within a data reduces the efficiency of the estimates for the correlation. This is because the independent variables are judged as if they are not related when in fact they are. For example, there is a high correlation

between technology and ownership link on the one hand, and government policy and locational attractiveness. It has to be said that the associations amongst the independent variables are inevitable because of the nature of the variables both from theoretical and practical points of view. Therefore it becomes necessary to use the t test to determine the significance of the correlation between the independent and dependent variables. The t test showed that individually, the independent variables are significant to varying degrees.

However this leaves us with the problem of determining the order of importance of these independent variables. Factor analysis was applied to solve this problem. (The mechanics of factor analysis have been discussed under methodology - chapter six). The results showed that technology was the single most important factor in determining outcome of negotiation, thereby confirming the results of frequency and correlation coefficient analyses. Table 8.2 shows details of the factor analysis .

Table B.1

Pearson Correlation Coefficients
Between Agreement Terms and Independent variables.

DEPENDENT VARIABLES	INDEPENDENT VARIABLES									
	TECH, CAPITAL	SUPPORT POLICY	GOVT, SIZE	COMPANY FACTORS	LOCATION COMPET- ITION	OWNERSHIP LINK	ASSIS- TANCE	NEGOTIATING SKILL	EXPORT ACCESS	
ROYALTY	-.5041*	-.2284**	-.7699*	.1461	.0828	-.2582**	-.3538*	-.1923**	.2562	.0000
DURATION	-.3015*	-.0292	.1306	-.0453*	-.0589	.1341	.1925	.0669	-.2007	.0000
SECRECY	-.0688	-.3282*	-.0479	-.1768	.0588	.0598	-.0645	.1365	-.0894	.0000
ARBITRATION	-.0202	-.0188	.2906*	.0124	-.1239	.1260	.2522**	.1566	-.1886	.0000
LIABILITY	.0136	.1354	-.1474	.1158	-.0839	.1474	.0123	-.2834**	.3877	.0000
TIE-IN PROVISIONS	-.1266	.1277	-.1549	.1666	.1779	.1930	.2590	.1897	-.1023	.0000

Note : * Significant at 0,05 level of significance

** Significant at 0,10 level of significance

Export market access in the table above is represented as ,0000 because correlation coefficient could not be computed due to zero correlation.

Table 8.2

Variable-Factor Coefficient Analysis.
(Rotated Factor Matrix).

VARIABLES	FACTOR 1	FACTOR 2	FACTOR 3	FACTOR 4
Technology	.86958	.16806	.00559	-.07348
Support capital	.05811	.01408	.90563	-.07913
Ownership link	.33701	.15381	.73121	.19165
Location factors	-.22895	.33184	.13873	.79986
Third Party assis.	-.07817	-.80058	-.11607	.04120
Company size	.04840	.70723	.03916	.16778
Govt. Policy	.84920	-.09293	.22189	.05521
Negotiating skills	-.14910	.56687	.00973	-.56236
Competition	.21694	-.12715	-.44385	.48817

Therefore even though some of the technologies in the sample may be standardised, particularly in the developed countries, they nonetheless play major part in enhancing the country's technology base, thereby reducing excessive dependence on importation of foreign manufactured goods. This of course, lightens the burden on the balance of payment.

When respondents were asked to explain how technology had influenced negotiation, they argued that technology formed the basis for the negotiation because of the need to exploit existing market opportunities on the strength of the technology which the licensors were able to provide. For example, a refrigerator manufacturing firm

in the sample explained that technology was the most important singular factor during the negotiation and consequently formed the basis of their association with the licensor. When the researcher suggested that the country as a lucrative market might have played a significant part, the respondent laughed and explained that the licensor was literally begged and persuaded to accept the licensing proposal, thereby confirming that technology was the main source of bargaining power for the licensor (see detailed discussion on this company under chapter nine : mini-case studies).

However, when respondents were asked about registration with National Office of Industrial Property (NOIP), they revealed that in all but one firm in the sample that went through NOIP, significant restrictions were removed from the agreements before approvals were granted. It is important to explain that the one licensor that was able to get away with significant restrictions on the licensee, did so because the government negotiated the agreement on behalf of the licensee. Consequently the government compromised its stance on some of the issues, in favour of the licensor. Equally important was the fact that conditions on the most of the dependent variables such as duration, had pre-set ceiling levels by NOIP that formed the upper limit of acceptable terms for the licensee. Therefore the difference between the licensee upper limit and the licensor lower limit formed the bargaining range as shown in Figure 8.1 below. The licensor will not enter an agreement where licensee offer falls below the lower limit into the zero price zone.

The research also showed that in all the royalty paying companies in the sample, the levels of royalty payment were determined within the framework provided by NOIP. It therefore showed that because Nigeria had control mechanisms guiding the use of licensing as a means of technology acquisition, the licensor bargaining power was limited. Nonetheless, as indicated above, only one firm in the sample had all the major restrictive provisions in the licensing agreement approved by NOIP. The technology and the supplier in this case were regarded as perhaps indispensable for the country's economic development.

However it has to be stressed that long term strategic considerations as well as other motives such as the sale of materials and components played a key role in determining the acceptability of the upper limits for royalty payment to the licensor. Even where restrictive provisions were eliminated from the agreements, licensors always made sure that some issues of the agreement featured prominently such as quality control. For example, a certain U.S. soft drink bottling company was paid a nominal royalty of US\$1.00 (One U.S. dollar) per annum. As far as this agreement was concerned, what was important to the licensor was the sale of concentrates to the licensee and not the royalty. Certainly the turnover of the licensee justified this strategy.

In a certain heavy engineering company, the licensing agreement was royalty-free with no explicit restrictive provisions. It is even more intriguing because there was no equity relationship between the two companies i.e licensor and the licensee. However the terms of the

agreement were such that parts and components will have to be procured from the licensor. Two of the clauses in the agreement stated that :

- i. "The PROPRIETOR hereby grants USER the non-exclusive right to use the said trademarks upon or in connection with the goods set forth in the attached schedule, but only so long as such goods are manufactured by USER in accordance with standards, specifications, and instructions furnished and approved by PROPRIETOR from time to time".
- ii. "PROPRIETOR or the authorised representative thereof shall have the right, at all reasonable times, to inspect the finished goods upon and in connection with which the said trademarks are to be used, as PROPRIETOR considers necessary to carry out inspection as part of appropriate quality control".

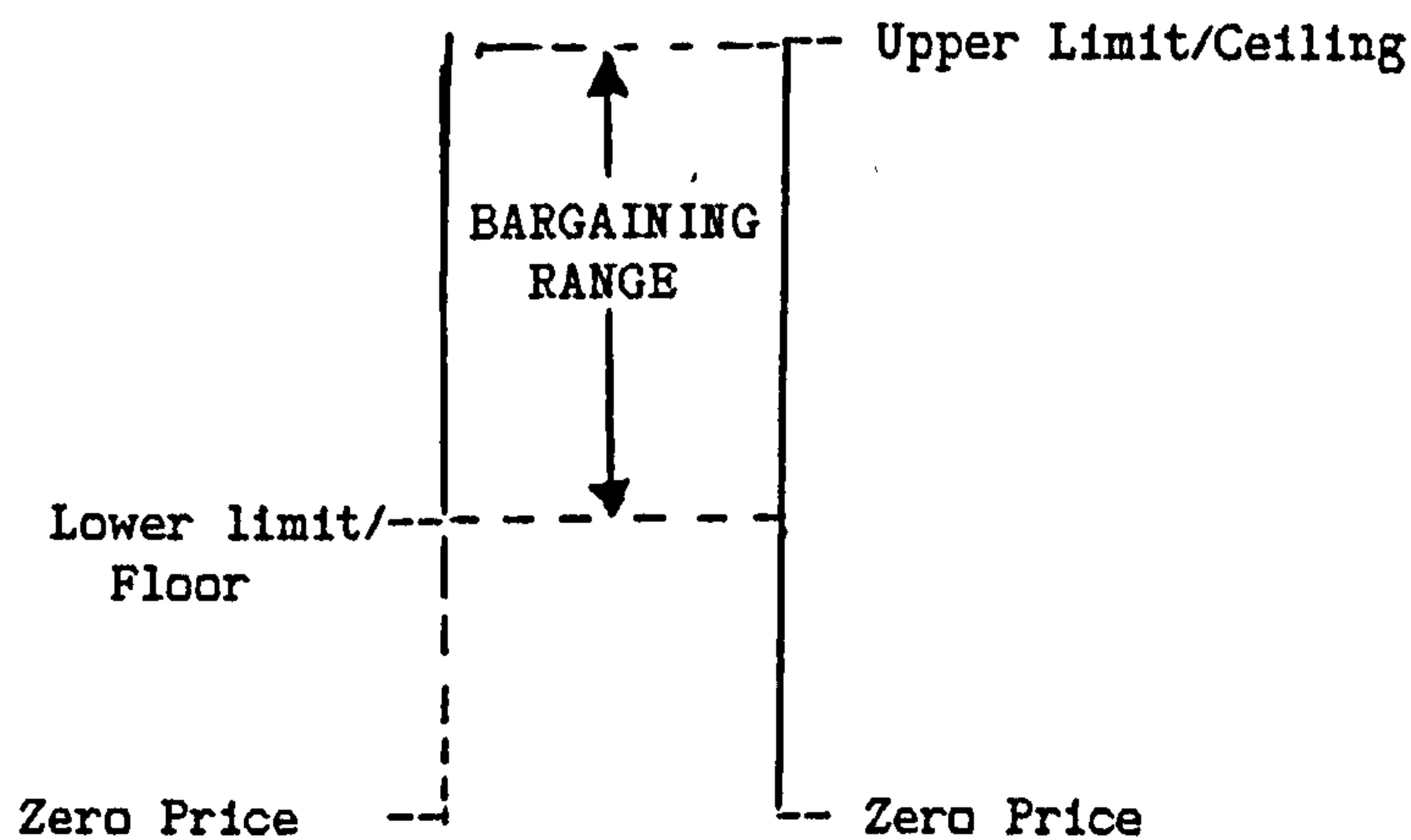
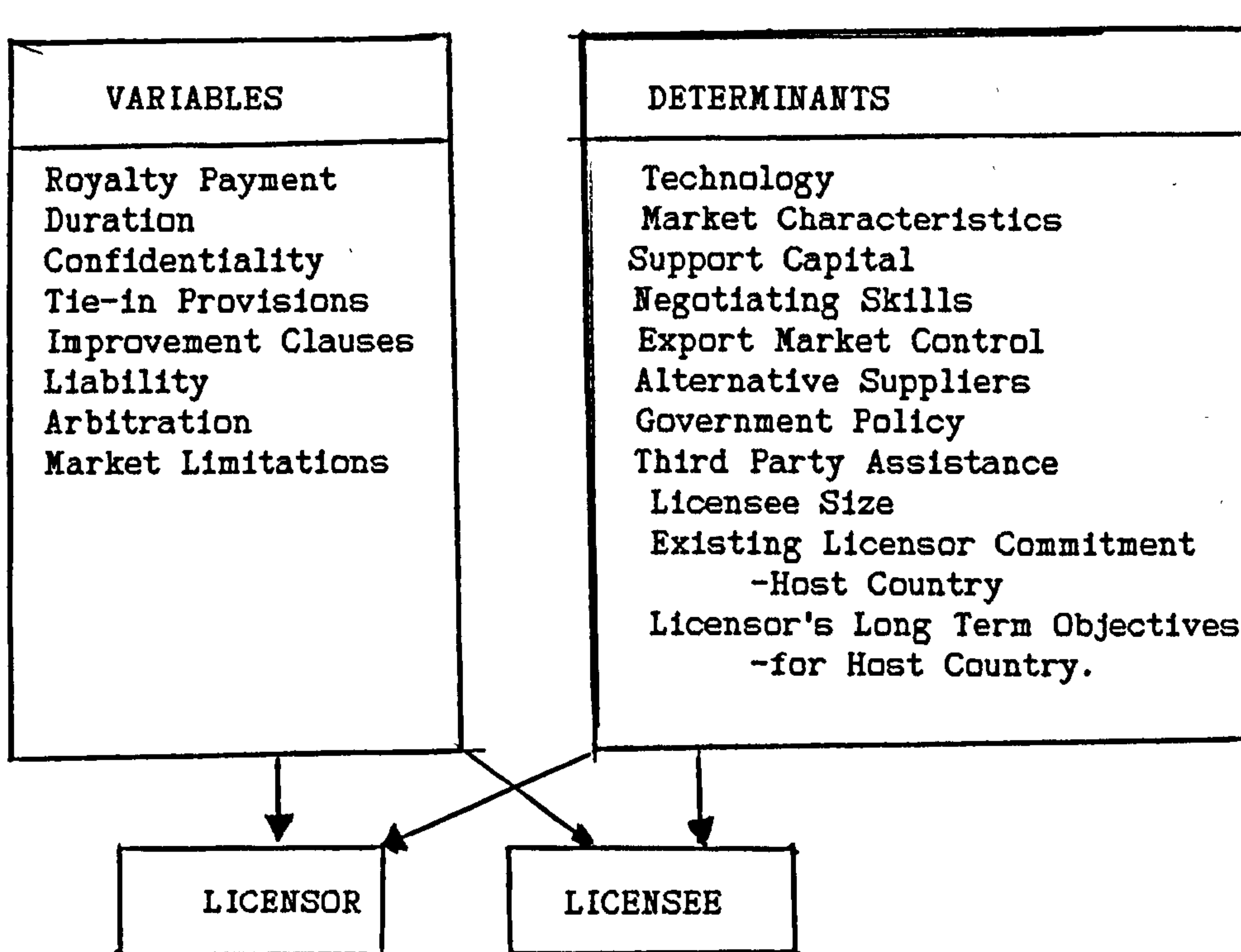
One of the Executives interviewed argued that the implication of this quality control requirements is that literally, only the licensor was able to provide parts and components of "acceptable quality" to fulfil the requirements. Therefore, while the agreement did not have restrictive provisions, the quality control requirements implicitly excluded procurement of parts and components from other sources, unless of course, where other suppliers were recommended by the licensor.

In other cases, the fact that licensors had equity commitment in licensee companies meant that upper limit of royalty payment by the licensees as determined by the government through NOIP, did not alter significantly the attraction of the market to the licensor.

The ability of the licensors to insist and obtain other terms and conditions which made the licensing arrangements attractive and acceptable to them, reflected the importance which the country attaches to the technology and its expected contributions toward the country's economic and social development, thereby supporting the hypothesis (H1) that perceived importance of technology by licensee is positively related to licensor bargaining power.

Figure 8.1

DETERMINANTS OF INTERNATIONAL LICENSING AGREEMENTS.



H2 : The provision of support capital is positively related to licensor bargaining power.

This hypothesis implies that there is a relationship between provision of support capital and licensor bargaining power, and therefore where a licensor provided support capital to the licensee, the licensor bargaining power was enhanced.

The research results, using frequency analysis, showed that of the 31 firms in the sample, 67.7 per cent had received support capital from the licensors. However, only 3 companies of the sample thought that support capital was very important. 6 companies said it was fairly important. Effectively, only 9 companies of the sample regarded support capital as important. The reason why support capital was not regarded as an influencer of the outcome of negotiation stemmed from the fact that most support capital arrangements came in the form of payments for equity interests acquired in the licensee company. In some cases, the licensee companies were originally wholly-owned by the licensor and only lost ownership control due to government decrees. It is therefore not surprising that 54.8 per cent of the sample considered support capital unimportant in determining the outcome of licensing negotiations.

One of the companies in this category, Company ID24 explained that because the licensor controlled 60 per cent equity interest in the licensee company, it meant that substantial capital was provided by the licensor. In addition, the licensor played a very active role in helping the licensee secure foreign loan (by acting as guarantor) which was

needed for the initial take-off of the project. Another company, ID8 remarked that because it was previously a wholly-owned subsidiary company, it meant that the plant was constructed by the licensor and the result was their willingness to accept whatever conditions that were offered, considering the fact that licensor still controlled 40 per cent of the company equity.

This analysis was supported by correlation coefficient and factor analyses. The t test showed significant correlation existed between support capital and the dependent variables at 0.10 level of significance. On its own, the t test did not show the degree of significance of support capital in the determination of the terms of licensing agreements. However, this was determined with the use of factor analysis. This showed that support capital was the sixth most important independent variable of the study. (see table 8.3). While some firms felt support capital was an important influence on negotiation, no significant relationship was found to exist between support capital and bargaining power in the Nigerian context. Therefore the study did not support the hypothesis (H2).

H3 : Control of export market access by licensor is positively related to its bargaining power.

The assumption in this hypothesis is that where export market was controlled by the licensor, it enhances his bargaining power.

Frequency analysis showed that all the firms in the sample agreed that products and/or processes under licences had export potentials. Although 51.6 per cent of the sample had limitations on market coverage, ranging from limitations on domestic market coverage to international markets. However these restrictions were attempts to control direct competition between the licensor and the licensee in a foreign market, rather than licensor exercising control over export markets. When the respondents were asked why they accepted that type of limitation, they were quick to point out that the size of domestic market was so large that exporting was not anticipated for a long time. To illustrate the point that licensees were not too worried about limitations on exporting, Company ID14 explained that because domestic consumers placed a premium on their products, as indicated by retailers selling these products well above the recommended retail prices, it showed that they were still opportunities to expand in the domestic market. It was also revealed that where it became necessary for the licensee to export, appropriate consultations will have to be made by the two parties to remove the limitations.

Consequently, the control of export market access was not considered during the licensing negotiations as an influencer since it was of no immediate importance to the licensees. This point was made

even clearer by correlation coefficient analysis. Control of export market access as an independent variable had zero correlation with all the dependent variables. Moreover there was no multicollinearity between export market access and other independent variables. Thus its efficiency was not reduced by any common association amongst the independent variables. Further attempt to use factor analysis to determine its relevance showed that it could not be computed because it had zero variance with the dependent variables. Consequently export market access is not shown in table 8.2 Therefore, it means that in the Nigerian context, licensor's control of export market access was not positively related to its bargaining power. It has to be emphasised, however, the fact that none of the firms in the sample relied on foreign markets for sale explains the licensees' assessment of control of export market access. It is very possible that, given a different scenerio, the outcome might have been different, but in the present circumstance, the study has not supported the hypothesis (H3).

H4 : Licensor negotiating skills is positive related
to its bargaining power.

This hypothesis (H4) suggests that experience and negotiating skills are a source of bargaining power. Multinational enterprises (MNEs) are known to possess negotiating skills more than prospective licensees in developing countries due to their wealth of experience in dealing with such transactions elsewhere. It is therefore expected that such negotiating skills will enhance the licensor bargaining power.

Using frequency analysis, the results showed that 80.6 per cent of the companies in the sample said they had negotiating experience. Despite the fact that up to 80.6 per cent had negotiating experience, 45.2 per cent needed third party assistance to enable them reach meaningful agreements. Third party assistance is discussed further under hypothesis H7. However, for the larger and older licensees, they considered negotiating experience very important during the negotiation processes. The impact of negotiating skills were considerably reduced by the government's bargaining framework (i.e. ceiling of acceptable conditions) thus leaving no room for manoeuvring. For the independent companies whose agreements were royalty-free, consequently, did not need to go through NOIP, they found negotiating experience very valuable.

The correlation coefficient analysis was used to determine the degree of association between negotiating experience and the outcome of negotiation on the dependent variables. The results showed that there was no significant correlation between negotiating skills and the dependent variables. Moreover, negotiating skill as an independent variable did not come through the t test with acceptable level of significance. Although the frequency analysis showed negotiating experience as important during licensing negotiations, correlation coefficient analysis seems to have contradicted that by showing no significant correlation between it and the dependent variables. Consequently factor analysis was used to determine the actual level of significance of negotiating skills, and the results showed that of the ten independent variables, negotiating skills was the fifth most important variable, thereby confirming the results of the frequency

analysis. The most plausible explanation for the relatively high ranking of negotiation skill is the weighting placed on it by the royalty-free licensors.

The findings have shown that although negotiating skills did not command an influencing position in determining the outcome of negotiations in royalty paying agreements because of NOIP's restrictions, it is quite possible that without strong government influence, its influence on the negotiation process would have been better felt and the ranking may have been higher.

H5 : Availability of alternative suppliers is negatively related to licensor bargaining power.

This hypothesis implies that with available alternative suppliers of a given technology, the licensor bargaining power is weakened.

The study revealed that all the companies in the research sample indicated the existence of alternative potential licensors. However, when respondents were asked about their reasons for choosing their licensors in preference to others, 5 companies of the sample said they chose them because of outstanding reputation. 3 companies felt it was because of technology sophistication and at the same time, its adaptability to the local conditions. The majority of the sample (67.7%) had to choose (or rather were compelled to choose) their licensors on the basis of ownership links. It has to be reiterated that when the Nigerian Enterprises Promotion Decree (NEPD) 1972 was introduced, all

wholly-owned subsidiaries of the foreign companies in Nigeria were compelled by law to dilute their equity interests with local nationals and institutions to about 40 per cent and in some cases, up to 60 per cent, depending on the schedule which the company fell within.

Therefore the parent companies had to seek other ways of optimising economic rent from their technologies already in use in Nigeria. One of the resultant strategies was to license their technologies to subsidiaries operating in Nigeria for additional royalty payments. Under those circumstances, it was not possible for the licensees to consider alternative suppliers for the same technology, in as much as such alternative suppliers existed.

2 companies of the sample had other reasons such as licensor's willingness to do business in Nigeria despite stringent government control. In spite of the fact that alternative licensors existed, the issue that was of paramount importance, was being able to find that licensor who was willing and able to do business in Nigeria. One of the respondents, company ID9, remarked that prior to reaching a working agreement with the present licensor, contacts were made with some potential licensors who did not want to have anything to do with Nigeria. Therefore the criterion for choosing licensors in these situations was willingness to do business with a Nigeria firm, given the circumstances. Even for them to have secured this agreement, a third party based in the U.K., that is closely linked with the licensee, had to act as surety, with an agreement that should the licensee fail to fulfil its obligation, e.g. non-payment of royalty, the third company will pay up. There was of course, a private agreement between the

licensee and the third company that where such payments were made, will have to be paid back as soon as possible.

Using correlation coefficient analysis, there was an acceptable level of significance (significant at 0.10 level of significance) between level of royalty and competition from alternative suppliers on the outcome of the negotiations. This is explained by the fact that NOIP determines level of royalty on the basis of prevailing standard internationally. However, the factor analysis showed that of the ten independent variables, competition from alternative suppliers was the second least important variable. This is due to the fact that there was no competition amongst the licensors for Nigeria as a market. Consequently the results of the factor analysis showed that the availability of alternative technology suppliers did not have negative effect on licensor bargaining power as hypothesised in H5.

H6 : Restrictive government policy is negatively related to licensor bargaining power.

The hypothesis (H6) suggests that restrictive government control over technology transfer arrangements has negative impact on the licensor bargaining power. The research showed government policy had determining influence over the outcome of negotiations. Using frequency analysis, the results showed 90.3 per cent of the sample had their agreements screened, approved and registered with NOIP. Registered agreements were given certificates of registration with which financial transactions were conducted in relation to the licensing agreements.

The result of the NOIP screening had meant that ceiling levels for royalty payments were fixed by NOIP as in Figure 8.1. Only 9.7 per cent of the sample did not register with NOIP because royalty payments were not needed. In addition, the length of time (in terms of duration) for all the agreements that went through NOIP were considered before approval. Approvals for duration were given on the basis of what obtained in other parts of the world, and perceived complexity of the technology as well as expected length of time with which such technology will be assimilated into the economy.

Of the firms whose agreements were registered with NOIP, major restrictive and tie-in provisions were rejected in 96.4 per cent of the cases (only in 3.6 per cent of the cases was such restrictions approved, as discussed earlier under hypothesis H1). Given that the negotiations were conducted within the framework provided by the government through NOIP, it left the licensors with little scope to manoeuvre. It is important to point out that majority equity relationship did not enhance the licensor's bargaining power. Instead their bargaining stance was that of compromise in order to protect their equity involvement with the licensee. Emphasising on the significance of policy, Company ID11 explained that because the licensor had about 60 per cent equity stake in the licensee company, there was no formal negotiation as such between the licensor and the licensee. Company ID11 remarked that the bulk of the negotiation was with NOIP, and invariably, the government policy placed the licensee on a very strong bargaining position. Also another company in the sample, Company ID19 explained that because of government policy, they had difficulties in reaching agreement with the licensor over the

jurisdiction for arbitration and this difficulty was only resolved with a trade-off (i.e. licensor accepting arbitration in Nigeria at the expense of reduced number of training programmes to be offered by the licensor). Company ID19 pointed out that the final outcome of the negotiation had to be approved by NOIP anyway before registration, and this made the government policy supreme.

Also the coefficient correlation analysis showed that there was a high level of correlation between government policy and royalty. This result confirmed the frequency analysis. However these two statistical techniques did not indicate the actual ranking of the level of significance of government policy in the negotiation process vis-a-vis other independent variables. This problem was solved with the use of factor analysis. It showed that government policy was the second most important independent variable during the negotiation process, only behind technology, thereby confirming the results of frequency and coefficient correlation analyses. Therefore this study has shown that regulatory government policies have negative effects on licensor bargaining power, thereby supporting the hypothesis (H6).

H7 : Third party assistance to a licensee is negatively related to licensor bargaining power.

The hypothesis (H7) implies that the use of third party assistance by the licensee will affect the licensor bargaining power. Of all the companies in the research sample, 45.2 per cent received third party assistance during negotiations. The nature of assistance received varied

from company to company. In some firms negotiations were conducted by holding companies on behalf of licensees, thereby excluding the user firms in the actual negotiation processes. For instance, Company ID24 explained that the licensing negotiation was conducted on their behalf by a holding company, which happened to be a state-owned investment company. The respondent in Company ID24 argued that even though the licensor had 60 per cent equity interest in the licensee company, the holding company certainly had a significant influence on the negotiation.

On the other hand, Company ID9 remarked that third party assistance was perhaps the most important factor that made the agreement possible. Because of the volatile nature of developing country markets, the licensor was not particularly keen on the licensing proposal. However, because the licensee company had some ownership links with a third company based in the U.K, this third company provided the undertakings on behalf of the licensee, as discussed under H5 above. It has to be stressed that this arrangement was only acceptable to the licensor because the third company was based in the U.K. Therefore this confirms the significance of third party assistance to some of the licensees. Other forms of assistance received by the licensees included specialists advice and the inclusion of consultants in the negotiating panel. Those that used consultants argued that they did so in order to exploit possibilities within the government's framework/guidelines.

Also the correlation coefficient analysis did show that there was an acceptable level of significance (significant at 0.10 level of

significance) between third party assistance and the outcome of the negotiations. It has to be said that the t test did not indicate the level of importance of third party assistance amongst other independent variables. Nonetheless, the use of factor analysis showed that because of the weighting placed on third party assistance by those using it, it came out as the third most important independent variable during the negotiation process, only after technology and host government policy.

Given the results of the factor analysis, the indications are that the use of third party assistance by the licensees did enhance their bargaining power, as suggested by the hypothesis (H7).

H8 : Locational attractiveness of a host country is
negatively related to licensor bargaining power.

The hypothesis (H8) suggests that where a given location becomes extremely attractive to a licensor, its bargaining power is negatively affected. In other words, Licensors will be willing to re-assess their corporate objectives in relation to the strategic importance of a given market.

Respondents were asked of the impact of locational attractiveness on the negotiation, and the results showed that because of Nigeria's large population, expanding purchasing power among the lower classes, growing industrial sector and untapped mineral wealth, MNEs found the market very attractive and promising, and consequently was a very important determining factor for direct investment. 87.1 per cent of

the sample felt that locational attractiveness was very important. Another 6.5 per cent thought it was fairly important. Therefore in effect, 93.5 per cent of the sample considered it important.

It is however noteworthy that of the 31 companies in the sample, 18 had been in existence before the introduction of the Nigerian Enterprises Promotion Decree 1972 (NEPD 1972) which introduced new ownership structures. Although 93.5 per cent of the sample thought locational attractiveness was important, the respondents argued that it did not play a commanding role in the negotiation process because it was only paramount before the initial investments were made and not during licensing negotiations which came long after the initial investments were made. Moreover government policies such as NEPD 1972 had made Nigeria unattractive to potential foreign investors. This point is illustrated by the comment made by the respondent in Company ID9 that their licensor was literally begged to license its know-how to a Nigerian company.

Consequently, the correlation coefficient analysis did show that there was no significant correlation between locational attractiveness and the outcome of the negotiations. Its level of significance was not acceptable on the basis of t test. This was confirmed by the results of factor analysis. It ranked locational attractiveness as no. 8 of the ten independent variables.

Nonetheless, there were a few licensors who wanted to use licensing for market testing with the view to making active penetration into the market at a future date. In these situations, the licensing approach

were used to establish "toe-holds" in the market. Consequently, the long term objectives of the licensor companies such as full scale investment, were more important than the short term benefits of licensing fees and royalties. For instance, one of the companies in this category Company ID29 explained that the initial proposal for the licensing arrangements was made by the licensor and that the market attraction was very fundamental for the move. The licensing arrangements that was concluded with the licensor was royalty-free. However the compensation will be derived from increased volume of activities in the form of training, sales of components and parts, supply of essential equipment and machinery, as well as technical assistance calculated on man-hour basis. Also company ID18 argued that if the market was not as important as it is, they would not have been able to state their conditions which the licensors eventually accepted. Moreover, stringent government requirements would have put the licensor off completely. However, these companies were in the minority of the sample companies and consequently did not influence the result of this study.

The above results show that locational attractiveness did not provide the licensee with considerable bargaining power, thereby affecting the licensor bargaining power negatively. In other words, it showed that there was no relationship between locational attractiveness and the licensee bargaining power, thereby disproving hypothesis (H8).

H9 : Licensee size and sophistication is negatively related to licensor bargaining power.

This hypothesis (H9) suggests that the size of a licensee company and its sophistication is a possible source of bargaining power, and therefore affecting licensor bargaining power negatively.

The research results showed that majority of the companies in the sample (51.6%) considered size and sophistication important. When asked to explain how size and sophistication influenced negotiations, the respondents pointed out that this was one variable that provided the licensors with the confidence to enter into negotiation with the licensees in the first place, because licensors immediately felt that the licensees were capable of protecting their quality, image and trademarks. It was also explained that in large companies where licensors already had equity interests, equity involvements became more important than any other kind of relationship, such as affiliated licensing.

9.7 per cent⁽³⁾ of the sample that had royalty-free agreements were from the large companies that had considerable bargaining power and also had unaffiliated relationships with the licensor. Consequently, negotiations on the terms of the agreement were conducted on the basis of prevailing market conditions. For example, one of the respondents in this category explained that the licensing proposal for his company was initiated by the licensor, and that the approach was made because of their size, sophistication and known records of previous and existing associations with other foreign companies. Consequently,

negotiations were conducted on the basis of the credibility of the licensee and the inherent bargaining power. (see also case study no.6 in chapter nine).

Although correlation coefficient analysis did not support the above assertion, because no acceptable level of significance existed between company size & sophistication and the dependent variables. This was confirmed with the t test. However, the importance of this variable in terms of ranking was determined by use of factor analysis. Factor analysis showed that company size and sophistication was the fourth most important variable of the study. This is explained by the weight placed on this factor by respondents who considered it important.

The study shows that there is a positive relationship between the size and sophistication of licensee firm and its bargaining power, thereby having a negative effect on the licensor bargaining power. The findings therefore support the hypothesis (H9).

H10 : Existing ownership link with licensee operation in a host country is negatively related to its bargaining power.

The hypothesis (H10) implies that where a licensor has existing ownership link with the licensee in the form of investment and operation in a host country, the licensee bargaining power is enhanced, thereby affecting the licensor bargaining power, negatively.

The research results showed that of the 31 firms in the sample, 18 had been in existence before the Nigerian Enterprises Promotion Decree (NEPD) of 1972. These companies were mostly wholly-owned subsidiaries of foreign companies and the decree effectively altered the legal structure of the companies, in terms of ownership. The respondents were asked how these changes affected the licensor bargaining power, and they explained that when the decree was promulgated, the decision for the parent companies was either to withdraw from the market, or to remain in the market in order to protect technology that had already been transferred. One of the companies in this category, ID19 explained that their licensor (a certain leading multinational chemical company based in the U.K.) had a wholly-owned subsidiary relationship with them before the promulgation of NEPD/72. As soon as licensor equity interest was reduced to 40 per cent, the licensor reacted by withdrawing the permission for the licensee company to continue to operate under their name. However, because of the size of their investment, the licensor could not withdraw completely from the country. Once the decision to remain in the market was made, the problem that arose was how to maximise the returns on their investments in this market. Generally new arrangements were made, such as the parent company licensing its technology to the subsidiary, and/or the introduction of royalty payments.

The licensing strategy was not all smooth sailing for the licensor because the government had regulatory measures to ensure that "appropriate" compensations were paid by the licensees. Under these circumstances the ceilings for compensations were determined by the government, and in most cases, these terms would be unacceptable to

the licensors under normal conditions. However, because the licensors had already committed huge capital in investment in this market, protecting the investment and technology became more important than the licensing arrangements. The revenue generated from the licensing fees were therefore extra rent on technology.

This finding seems to have supported the results on hypothesis H2 (support capital) and because their presence as negotiating leverage was circumstantial, they did not play significant role in enhancing the licensor bargaining power in the licensing negotiation process. Also the correlation coefficient analysis did show that there was a significant relationship between existing ownership link with the licensee and the outcome of the negotiation. Suffice it to say it was of negative effect for the licensor as shown in table 8.1 above. It is also noteworthy that the support capital and existing ownership link with the licensee were both ranked closely by the factor analysis shown in table 8.3. Existing ownership link was ranked as no. 7 of the ten independent variables.

These results have shown that because of existing investments and operations of the licensors in the host country, their bargaining power were effectively reduced because of the need to protect investments which were of more importance than the licensing royalties, thereby confirming that existing licensor operation in a host country is negatively related to its bargaining power as suggested in the hypothesis (H10).

The ranking of the variables in order of importance has been summarised in table 8.3 below.

Table 8.3

Ranking of the Independent variables
on the Basis of Rotated Factor Matrix.

<u>Independent Variable</u>	<u>Ranking</u>
TECHNOLOGY	1
GOVERNMENT POLICY	2
THIRD PARTY ASSISTANCE	3
COMPANY SIZE & SOPHISTICATION	4
NEGOTIATING SKILL	5
SUPPORT CAPITAL	6
EXISTING OWNERSHIP LINK	7
LOCATIONAL ATTRACTIVENESS	8
SUPPLIER COMPETITION	9
ACCESS TO EXPORT MARKETS	10*

* In the factor analysis, the value of access to export markets could not be computed because it has zero variance. This can also be seen in the correlation coefficient analysis in table 8.1.

The results suggest that because of the statutory control on licensing of technology in Nigeria it meant that licensees had considerable bargaining leverage over licensors and particularly those already committed to the market. This licensee's bargaining leverage extends to both affiliated and unaffiliated licensees, as shown in the study.

8.3 Summary of Results against the Theoretical Model

The theoretical model discussed earlier in chapter four showed that the outcome of negotiation was a function of bargaining power. The bargaining power model as illustrated by Root and Contractor's configuration of the normative model of licensing negotiations (1984), postulated that the licensor enters into negotiation with a range of possible offer prices that the licensor is prepared to accept as compensation. The model shows that the licensor's offer floor price is the sum of the present values of the transfer costs and opportunity costs. The licensor's ceiling offer price is the lower of two present values : (1) the value of the technology package to the licensee as perceived by the licensor and (2) the cost to the licensee of obtaining the same technology package from another source, as perceived by the licensor. The authors argued that the licensors will refuse to enter an agreement if the compensation does not cover the transfer and opportunity costs, and will not expect to get more compensation than the ceiling price.

However, this study has introduced another dimension to the concept of bargaining power which has been largely ignored in the literature. And this concerns the impact of government control over the negotiation process of technology transfer arrangements. This research revealed that two principal factors determined the outcome of negotiations, namely the perceived importance of technology by the licensee and/or host government, and the statutory control over licensing of technology in Nigeria. It is significant that those two variables were confirmed by the three statistical techniques used for the analysis i.e. Frequency, Correlation Coefficient, and Factor analyses.

It has to be emphasised that the other variables played important role as part of the aggregate of the factors influencing the negotiation process. However the existence of multicollinearity between the independent variables has meant that the impact of these on other variables (other than technology and technology policy) had diluted efficiency their correlation coefficient. For example, even though third party assistance did not have significant correlation with the dependent variables on variable-by-variable basis, it was shown to be the third most important variable amongst the ten research variables. Therefore most of the independent variables were of considerable importance in the negotiation process with varying degrees as indicated in table 8.3.

Nonetheless, relating the research findings to the Root and Contractor model, the conclusion is that in the case of firms that had investments in Nigeria before the promulgation of the NEPD 1972, the

licensors did not make systematic assessment of transfer and opportunity costs or assigning proportion of the R & D costs to the licensing deal before deciding on acceptable price for the technology. Licensors were however determined to extract as much economic rent as they could possibly get in order to maximise their revenue.

With licensors that came in after the NEPD 1972, the objective was to license a technology without too much consideration for the transfer costs but to generate extra revenue through the licensing arrangements, in the form of sales of components and raw materials, as well as other intermediate inputs required by the licensees for the utilisation of the licences. The same can be said of licensors that provided royalty-free licences, as shown in the preceding section.

Root and Contractor argued, using the normative model, that from the licensees point of view, for a price to be determined, the licensor's offer price range is confronted with the licensees bid price range. The licensees bid floor price is the licensee's estimate of the licensor's transfer costs, but omits any allowance for the licensor's opportunity costs which does not concern the licensee. However, this study revealed that in setting the ceiling levels for royalty payment by the government, transfer costs as well as the industry norm all over the world, or prevailing market conditions were used. This suggests that while there is no relationship between the normative model of price determination by the licensor and what actually happened in the Nigerian context, there is certainly a relationship between the normative model of price determination by the licensee and what obtained in the Nigerian case.

Because of the limited scope of this model in terms of the variables covered, a comparison is made of this study and other previous empirical studies, as they relate to different bargaining power variables in the next section.

8.4 Comparison of Results with Previous Empirical Studies.

As mentioned earlier, because of the limited scope of the normative model in terms of variables covered, as it dealt only with the price factor, a summary of some of the previous empirical studies that have dealt with the issue of bargaining power determinants is discussed here. Since no single previous study had covered most of the variables as we have done in this study, this enables us to compare the results of those studies and this research.

In their study, Root and Contractor (1984) used the normative model to assess factors considered by U.S. managers in negotiating licensing compensation. The research was confined to the licensors and therefore their results showed only the behaviour of the licensors. Managers in the thirty nine sample companies were asked to rank by importance, the factors they considered in negotiating compensation in licensing agreements with independent foreign licensees.

Their findings were that the actual negotiation of licensing compensation differed from the normative model in two important aspects : 1. the practice of satisficing rather than maximising

behaviour; 2. the lack of any explicit or systematic attention to opportunity costs. As they do not seek to maximise contribution margins, because they believed that a successful agreement depended on a good working relationship, managers may obtain a lower share of an agreement's economic rent than they would obtain with more information about the value of the technology package to the recipient firm. Root and Contractor concluded by explaining that with maturing technologies, more intense rivalry among technology suppliers, growing sophistication of technology recipients, and greater involvement of governments, these factors are now creating a more competitive international technology market, thereby affecting licensor's power negatively.

These findings are similar to the results of the present study, although wider in scope in that the licensee behaviour was compared with the normative model in order to appreciate the two approaches to licensing negotiations. Looking at the satisficing issue raised in the Root and Contractor study, that may be another way of explaining the behaviour of licensors in Nigeria who already had equity interests in the licensee companies. Consequently, they were readily willing to accept terms negotiated within the framework set by the government, through the National Office of Industrial Property. The second aspect which this study has confirmed from the normative model is the fact that NOIP fixes technology prices on the basis of perceived transfer costs.

In Fagre and Wells study (1982), one of the hypothesis tested was that "the level of technology and the bargaining outcome are likely to be related". Using data from Latin American countries, the result

suggested that the relationship between technology and bargaining power was not a simple one. At the high end of the range of technological skills, they argued that technology does seem to place the multinational enterprises in a strong position. In the middle or more standardised range, the outcome would appear much less certain. Comparing the Fagre and Wells study with this research, it is significant that the data from the present study confirmed the Latin American study because in the Nigerian study, only the perceived importance of technology by the licensee was able to place a licensor in a stronger bargaining power than the licensee and invariably the, government.

The second aspect of Fagre and Wells study that is of relevance to this study, is the market access. They argued that in situations where a large portion of a subsidiary's output is sold or transferred to an affiliate of the same parent corporation, the parent company controls market access to a significant degree. They also argued that to obtain bargaining power, it is not necessary to export to affiliates. The authors explained that intra-systems transfers in manufacturing industries consist of intermediate goods which may have value only when combined with other intermediate goods made by the same enterprise. Automotive parts that fit only one make and model would be an illustration.

Their empirical findings showed that the two measures of market control were related i.e. licensor's control of export market and host government control of domestic market. These were in cases of affiliates that exported fifty per cent or more of their output within

the parent systems. However, Fagre and Wells concluded that they were not certain that product differentiation or technology was not the source of their bargaining power. But on their other hand, they showed that the difference between outcome of bargaining for exports and the non-exports were quite noticeable. The difference established some degree of confidence that market access was an important variable, as this also related to the host country markets.

In the Nigerian context, none of the firms in the sample was committed to exporting, and consequently, the control of export market was not assessed as an important variable. It is not clear what the licensor bargaining position would be if we had a situation where a Nigerian licensee depended on the licensor for about 50 per cent or more of its output, for sales in an export market of licensor origin. Nonetheless the situation concerning control of host country market is clear as it affects negotiation of technology transfer arrangements.

Reference for Chapter Eight.

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CHAPTER NINE

CASE STUDIES

CONTENT

- 9.1 Introduction
- 9.2 Volkswagen of Nigeria Limited
- 9.3 Metal Box Nigeria Limited
- 9.3(b) Kabelmetal Nigeria Limited
- 9.4 Thermacool Engineering Limited
- 9.5 Nigerian Bottling Company Limited
- 9.6 Witt & Busch Nigeria Limited

This chapter covers a series of short case studies which reflect the major findings of the study. As it is not possible to discuss all the sample companies on a case-by-case basis, these companies were selected to highlight the five most important independent variables of the study, namely technology, government policy, third party assistance, company size & sophistication, and negotiating skill. These case studies are useful in emphasizing the results of the analyses on the basis of the statistical techniques discussed in the preceding chapters.

VOLKSWAGEN OF NIGERIA LTD.

Volkswagen of Nigeria Limited was incorporated in 1973 following conclusion of an investment agreement between the Nigerian Government and Volkswagenwerk AG of Germany. The cooperation agreement entered into was for the production and marketing of Volkswagen passenger cars and light commercial vehicles in Nigeria.

Volkswagen of Nigeria Limited is a private company and a breakdown of the structure of the equity holding is as follows -

- | | | |
|------------------------------------|---|-----|
| 1. Nigerian Government and Dealers | - | 49% |
| 2. A German Financial Institution | - | 11% |
| 3. Volkswagenwerk AG of Germany | - | 40% |

Although automobile industry falls within capital-intensive venture operation, the Nigerian Plant is labour-intensive, and the entire

operation is done through manual labour. Consequently the total manpower strength of the company as at January 1987 was put at 1,568.

The company turnover has fluctuated over the years in line with the economic fortunes of the country. In 1985, the turnover was N220 million. The present economic difficulties facing the country have had adverse effect on the company's performance. Consequently in 1986 the company's turnover was N78.2 million and N11.4 million for the first quarter of 1987.

THE LICENSOR

VOLKSWAGENWERK AG OF GERMANY.

Volkswagenwerk AG of Germany is the largest European car manufacturer. It specialises in compact medium-sized vehicles. Cars are produced at six plants in Germany and in eight other countries around the world. It's subsidiary company Audi Nsu Auto Union complements the line with larger cars such as Audi 100 and Porsche 924. The two companies have a combined share of about 30 per cent of the German passenger car market, including imports. The equity structure of Volkswagenwerk AG is as follows -

- | | |
|--|-----|
| 1. Government of Federal Republic of Germany | 20% |
| 2. Government of Lower Saxony | 20% |
| 3. Widely dispersed shares among the Public | 60% |

All Volkswagenwerk AG's foreign operations are wholly-owned except in Nigeria, Yugoslavia, and Indonesia. Although the facility in Brazil is a joint venture, Volkswagenwerk has a controlling majority share of 80

per cent. It is significant that the Nigerian operation is not regarded as a subsidiary but a facility where it has a minority interest.

THE LICENSING AGREEMENT.

"ASSEMBLY AND MANUFACTURING"

The licensing agreement was negotiated between Volkswagenwerk AG and Volkswagen of Nigeria Limited for the assembly and manufacture of Volkswagen passenger cars and light commercial vehicles. Although Volkswagen of Nigeria Limited was incorporated in 1973, production did not commence until 1975 when the licensing negotiation was completed. Therefore the licensing arrangement was made independent of the joint venture agreement between the two companies.

The objective of the agreement was to enhance the country's manufacturing base and thus reduce dependency on importation of motor vehicles. To this end, the framework of the agreement provided that Volkswagenwerk AG will

1. advice and assist the licensee as far as possible and will put at its disposal all the necessary know-how;
2. grant the right to use the respective protective rights; and
3. endeavour with the licensee to increase the content of locally manufactured parts and materials.

The agreement has an open-ended duration (i.e. no time limit was set). The structure of the remuneration was expressed as 2.5 per cent of the value of the difference between free-on-board price and CKD (Completely Knocked Down) set per vehicle delivered per month, in currency shown on the invoice. The fee structure is significantly

different from the conventional method of royalty payment which is usually calculated as a percentage of either turnover, profit before tax, or net sales. It is noteworthy that the fee is free from foreign exchange rates fluctuations.

Other significant aspects of the agreement that are worth highlighting here are -

1. Arbitration - This provision ensures that all disputes between the parties arising out of the agreement which cannot be amicably settled will have to be settled by arbitration in Zurich, Switzerland in accordance with the rules of reconciliation and arbitration of the International Chamber of Commerce in Paris. However the laws of Switzerland governs the agreement. The significant thing about this clause is that the National Office of Industrial Property (NOIP) does not accept for registration purposes, any agreement that has provision for arbitration under foreign jurisdiction, as it is seen to undermine the sovereignty of the country.

2. The agreement made it clear that in the event of any provisions of the agreement being or becoming invalid or unenforceable for legal reasons, the remaining provisions will continue in force unaffected. It was also indicated that failure of either party to the agreement to exercise any of the rights to which it is entitled to, will not be regarded as a waiver of such rights. The purpose of this provision is the recognition of the fact that the government policy determines whether the terms of an agreement are in the best interest of the country. Therefore in future, should there be any re-evaluation of the agreement resulting to some of the provisions being rejected in line

with the prevailing mood of the government, the unaffected provisions of the agreement will remain in force.

3. Liability - The agreement indicated that the liability of Volkswagenwerk AG, its affiliated companies or employees will be limited to the indemnification of a direct loss sustained by the licensee. Therefore indemnification will be made with respect to indirect damage such as loss of profit and consequential damages.

The preceding discussion shows that the provisions of the agreement were generally restrictive. The respondent explained that at the time of the negotiation, the outcome reflected the determination of the government to enhance the country's manufacturing base. In addition, the government did not have a clearly defined technology policy and conditions of acquisition of foreign technologies. However the system has changed since the inception of NOIP. Although NOIP could not do anything about this agreement because it was registered in retrospect. Refusal of registration could have invalidated -

- i. agreement which has been in operation eight years before the inception of NOIP;
- ii. agreement negotiated by the government itself, as the principal agent of the licensee; and perhaps more significantly
- iii. because the agreement was open-ended, it was not required for periodic re-assessment through submission to NOIP. It is possible that should there be need in future to go through NOIP, changes will be made.

The respondent also explained that even though the licensor had substantial equity stake in the company, the terms and conditions of the agreement did not indicate in any way that certain concessions were made because of ownership link. Therefore ownership had no influence over the outcome of the agreement. The respondent pointed out that the joint venture arrangement between Volkswagen of Nigeria Limited and Volkswagenwerk AG was made possible in the first place because of the location characteristics of the country. He explained that locational attractiveness has always been the cornerstone of Volkswagenwerk's licensing policy and this is evident from the location of other licensees - Brazil, Mexico, Australia, Yugoslavia, Indonesia, Venezuela, Malaysia, Iran, Turkey and Belgium. It is noteworthy that location attractiveness did not enhance Volkswagen of Nigeria's bargaining position.

CONCLUSION:

The evidence from this licensing arrangement help to reinforce the results of the analysis discussed in chapter 8. Therefore the conclusions from this case study are that it has confirmed that -

- a. although ownership link existed between the two parties, the agreement was reached purely on the basis of arm's length negotiation. Volkswagenwerk AG did not see the Nigerian facility as a subsidiary but an operation where it simply had a minority equity interest;
- b. even though locational attractiveness was recognised as a key to Volkswagenwerk's licensing policy, they made capital out of Nigeria's desire to acquire technology which could enhance its manufacturing base. Consequently, locational attractiveness did not improve Volkswagen of Nigeria's bargaining power; and

c. technology was the sole determinant of the outcome of the negotiation since Nigeria did not have well defined technology policy at the time of the negotiation. It is important to point out that government policy played key role in the determination of the outcome of licensing negotiations after the inception of NOIP.

9.3

CASE 2(a)

METAL BOX NIGERIA LIMITED.

Metal Box Nigeria Limited is a heavy engineering company established in 1960 as a wholly-owned subsidiary of Metal Box PLC, U.K, to manufacture and market metal containers in Nigeria. The ownership of Metal Box Nigeria Limited was diluted as a consequence of the Nigerian Enterprises Promotion Decree (NEPD) 1972, revised in 1977. One of the features of the NEPD is the classification of industries according to technological inputs, into three industrial schedules namely, Schedules 1, 2, and 3. Schedule 3 consists of industries with the highest technological inputs and as such, foreign investors are allowed ownership participation up to 60%. Metal Box Nigeria Limited fell into this category and was compelled to transfer at least 40% of its equity holding to Nigerians. Therefore the present status of Metal Box Nigeria Limited is that of a joint venture operation between the Nigerian public and institutions and Metal Box PLC of U.K. The structure of equity holding is as follows -

1. Nigerian Public and Institutions	49%
2. Metal Box PLC, U.K.	51%

Changes in ownership structure was followed by a licensing proposal by Metal Box PLC which resulted to negotiations between the 'new' Metal Box Nigeria Limited and itself for know-how in return for royalty payment. The negotiations lasted for about 1 year before agreement was reached. The prolonged negotiation was caused mainly by the need to satisfy government's requirements.

Metal Box Nigeria Limited employs about 570 staff and has an average annual turnover of N25 million.

THE LICENSOR

METAL BOX PLC. OF U.K.

Metal Box PLC is a public company quoted on the London stock exchange. It is the largest metal container manufacturer outside the U.S. with production in all major Commonwealth countries except Canada and Australia, also in Italy, Greece, Portugal, Thailand, and the U.S. Its principal affiliates include -

Germany	49%
Nigeria	51%
Pakistan	33%
Portugal	40%
Singapore	41%
Thailand	24%

Matal Box PLC is also manufactures domestic and industrial central-heating equipment. MB has no major shareholder.

THE LICENSING AGREEMENT

"KNOW-HOW LICENCE"

The licensing agreement was negotiated between Metal Box PLC, U.k and Metal Box Nigeria Limited (after transfer of 49% equity interest to Nigerians) for manufacturing know-how needed to continue the production and marketing of metal containers in Nigeria. The initial agreement was concluded in 1975 for an initial period of 6 years, but renewable. The current agreement took effect on April 1 1987. The agreement's transfer package consists of supply of basic technical information in the form of engineering drawings, diagrams & instructions, detailed manufacturing process, material supplies as well as training of personnel.

The remuneration of this service is on the basis of running royalty calculated as 2% of profit before tax. Other important aspects of the agreement are -

1. Improvement/Adaptation - The licensor is obliged to make available to the licensee, any improvements made to the manufacturing process. The respondent pointed out that on the basis of this provision, the most recent transfer was the welded beverage can and food can technology as a result of new technology. Also additional technical assistance such as project management expertise will be provided when further major projects are undertaken.
2. Confidentiality - This imposes on the licensee, the obligation of non-disclosure of technical information, and detailed manufacturing process to third parties in-order to avoid giving away trade secrets to competitors.

3. Arbitration - In case of dispute, arbitration will be according to the laws of Nigeria.

The respondent explained that the negotiations between the licensor and the licensee were not problematic but the initial agreement between the two parties had to be changed in line with government requirement. Moreover, because of the ownership link, the level of royalty as determined by NOIP, was acceptable because it is only an additional income to licensor's dividend payment for equity interest in licensee company. Consequently, there was a general willingness on its part to accept certain terms and conditions. Therefore the most important determinant of the terms of its agreement with the licensee was the government through NOIP (see case 2(b) below for conclusion).

CASE 2(b).

KABELMETAL NIGERIA LIMITED

Kabelmetal Nigeria Limited was incorporated in 1973 as a wholly-owned subsidiary of Kabelmetal Electric GMBH of West Germany, to manufacture and market electric conductors, wires and cables, and telecommunications cables in Nigeria. Just as in Matal Box Nigeria Limited (case 2(a) above), Kabelmetal Electric GMBH was obliged to reduce its shareholding in Kabelmetal Nigeria Limited to 60%. As a heavy engineering company which falls within schedule 3 of the industrial classification, maximum equity holding allowed for foreign investors is 60%. Consequently Kabelmetal Nigeria Limited is now a joint venture operation between the Nigerian public and institutions on

the one hand, and Kabelmetal Electric GMBH of West Germany on the other. Therefore equity shareholding is as follows -

- | | |
|---|-----|
| 1. Nigerian Public and Institutions | 40% |
| 2. Kabelmetal Electric GMBH, W. Germany | 60% |

Kabelmetal Nigeria Limited currently employs about 575 staff with an average annual turnover of N25 million.

THE LICENSOR

KABELMETAL ELECTRIC GMBH, OF WEST GERMANY

Kabelmetal Electric GMBH is one of Germany's largest manufacturers of conductors and a wide range of electric and telecommunications cables and wires. It also manufactures data processing equipment.

Kabelmetal employs about 6,500 staff with average annual turnover of DM810 million.

THE LICENSING AGREEMENT.

"TRADEMARK AND KNOW-HOW LICENCE"

The agreement was for continued use of trademark and know-how of Kabelmetal Electric GMBH by Kabelmetal Nigeria Limited for the manufacture of electric and telecommunications cables in Nigeria. It became necessary to have a licence agreement with the parent company after the reduction of its equity holding in order to secure a continuous flow of technical information to Kabelmetal Nigeria Limited. Payment for the licence is in the form of running royalty which is calculated as 2% of profit before tax. The agreement imposes on the

licensor, the obligation to provide technical assistance in production, training of personnel and the supply of necessary machinery and equipment. Other important provisions of the agreement are -

1. Adaptation/Improvement - The agreement makes it a right of the licensee to demand the supply of information on improved technology or adaptation of existing process or know-how.

2. Confidentiality - The licensee owes the licensor a duty of non-disclosure of information made available to it, to competitor companies, otherwise it will be regarded as acting commercially against the interest of the licensor. Where this provision is abused, it will either result in termination of the agreement or it will seriously affect the prospects of regular flow of improved technical information.

3. The agreement prohibits the licensee from acting against the interest of the licensor commercially such as by entering into direct competition, except in circumstances where such behaviour will enhance the commercial viability of the licensee. In that case, licensor consent must be sought.

4. Liability - The agreement provides for shared liability. However the licensor is only liable where defective parts and components are supplied.

5. Arbitration - In case of dispute, arbitration will be according to the laws of Nigeria.

The significant thing about this agreement is that there was no "actual negotiation" between licensor and the licensee at micro-level, because of licensor's major commitment vis-a-vis equity participation in Kabelmetal Nigeria Limited. The respondent explained that the bulk of the negotiation was with NOIP for the terms of the agreement. Therefore the over-riding determinant of the terms of the agreement was the government through NOIP. he also pointed out that Kabelmetal Electric's initial investment was influenced by Nigeria's attractiveness, and consequently the need to continue to exploit this market was very vital.

CONCLUSION.

These two case studies (2a and 2b) are a confirmation of the significance of government policy in the determination of terms of licensing agreements in Nigeria. In the two cases, both licensors control majority equity interests in licensee companies, allowed by the government on the basis of their expected contributions to the development of technological infrastructures in Nigeria. Although there were no significant negotiations, the licensees "dictated" terms of the agreement to the licensors on the basis of government's stated requirements. As a consequence of government's involvement in the licensing process, Kabelmetal Electric GMBH, a licensor with 60% equity interest in Kabelmetal Nigeria Limited and Metal Box PLC with 51% equity interest in Metal Box Nigeria Limited were unable to dictate terms to their subsidiary companies. These cases reinforce and justify the ranking of government policy as the second most important independent variable of the study, determined on the basis of factor analysis.

THERMACOOL ENGINEERING LIMITED

Thermacool Engineering Limited was established in 1971 as a wholly-owned subsidiary of Paterson Zochonis Industries Limited (a public company quoted on the Nigerian stock exchange) with the objective of manufacturing and marketing of air-conditioning and refrigeration appliances in Nigeria - a market with growing demand for both industrial and domestic cooling appliances. The operation of Thermacool Engineering Limited are carried out on the basis of know-how and trademark licensing agreement between itself and Whirlpool Corporation of the U.S.A.

Paterson Zochonis Industries Nigeria Limited (the parent company of Thermacool Engineering Limited) is a joint venture between the Nigerian public and institutions and Paterson Zochonis PLC, Manchester, England, and the equity structure of the company is as follows-

- | | |
|-------------------------------------|-----|
| 1. Nigerian Public and Institutions | 60% |
| 2. Paterson Zochonis PLC, England | 40% |

A breakdown of the structure of equity holding among the Nigerian public and institutions is such that no one person holds more than ten per cent of the capital issued of the company.

Thermacool Engineering Limited currently employs about 1000 staff with an average annual turnover of about N43 million. There is no ownership link between Thermacool Engineering Limited or Paterson Zochonis Industries Limited and Whirlpool Corporation of the U.S.A.

THE LICENSOR

WHIRLPOOL CORPORATION OF U.S.A.

Whirlpool Corporation is one of the largest independent makers of large home appliances, and a major supplier to Sear and Roebuck & Co. It has foreign investments in Canada and Brazil. Its foreign interests other than exports are appreciable though not of major strategic importance to the company.

Home refrigeration and air-conditioning accounts for over one-third of its sales. Apart from the refrigeration and air-conditioning, Whirlpool manufactures home laundry appliances, commercial (coin-operated) laundry equipment, vacuum cleaners, central heating and cooling systems.

Whirlpool Corporation has no major shareholder.

THE LICENSING AGREEMENT.

"TRADEMARK & PATENTED KNOW-HOW"

The agreement was for Thermacool Engineering Limited to manufacture and market refrigeration and air-conditioning appliances in Nigeria under know-how and trademark licence from Whirlpool Corporation of the U.S.A. The licence agreement provided that production know-how and the associated assistance be made available to the licensee and will include such services as product testing and quality control. The fee is a running royalty calculated as follows - (i) 1% of net sales for technical assistance, and (ii) 2% of profit before tax for

know-how and trademark. The payment is made in Nigeria, and remitted to the licensor subject to the prevailing foreign exchange rates. Therefore the significance/value of the royalty is determined by the prevailing exchange rate.

Other significant aspects of the agreement are -

1. Liability - the agreement provides for a shared liability which means that where faults occur and are traced to wrong know-how or defective parts and components, licensor will be liable to claims for damages. However, where faults are traced to wrong application of know-how, the licensee will be entirely liable.

2. Confidentiality - The agreement imposes stringent confidentiality obligation on the licensee. The clause required that no technical details should be divulged to third parties except in circumstances where such disclosures will enhance the marketing of the manufactured products. The respondent explained that the licensor insisted on this clause in order to ensure that the licensee does not act commercially against its interest. He also pointed out that the initial demand by the licensor was for the clause to remain in force even after the agreement has been terminated. But this demand was later dropped, and the obligation ceases with the termination of the agreement.

3. Improvement/Adaptation - This clause ensured that any improvement made to the know-how or adaptation from the existing use, such improvement/adaptation will have to be reciprocally communicated to each party.

The significant thing about this agreement is that the entire negotiation was conducted between Paterson Zochonis PLC, England, on behalf of Thermacool Engineering Limited and Whirlpool Corporation. In addition to the negotiation, Paterson Zochonis PLC provided assurances that the terms of the agreement will be honoured by the Nigerian licensee. The respondent was quick to point out that inspite of the country's characteristics as an attractive location for investment, the licensor was not interested and was literally begged and persuaded by PZ PLC with necessary guarrantees. For instances, PZ PLC undertook to pay the royalty should there be any delay or failure on the part of the licensee. This will however be refunded whenever possible by Thermacool Engineering Limited.

It has to be said that PZ PLC was able to take the trouble because of its interest and commitment to PZ Industries Nigeria Limited, the parent company of Thermacool Engineering Limited.

CONCLUSION

The case study illustrates the significance of the third party assistance in the licensing negotiation process. It also helps to reinforce the conclusion made on the basis of factor analysis which ranked third party assistance as the third most important independent variable of the study.

NIGERIAN BOTTLING COMPANY LIMITED

Nigerian Bottling Company Limited was incorporated in 1951. It is the largest producer of soft drinks in Africa. Nigerian Bottling Co. Ltd. is a public company quoted on the Nigerian stock exchange, and 60% of its shares are owned by some 26,000 Nigerian shareholders, with the remaining 40% owned by AG Leventis & Co. (Nigeria) Limited.

Nigerian Bottling Co. Ltd. operates 14 soft drinks bottling factories throughout Nigeria, and is the sole bottler and distributor in Nigeria of Coca-Cola, Fanta Orange, Sprite, and Krest under licence from Coca-Cola Company of the U.S.A. Nigerian Bottling Co. also has a canning plant at OTTA near Lagos which produces canned coca-cola, fanta orange and sprite. It has set up or promoted the establishment of factories in Nigeria to manufacture most of the requirements of the bottling industry, including bottles, cans, crown corks, carbon dioxide and plastic cases. Its prominent subsidiaries are (i) Apapa Chemical Industries Limited (wholly-owned) which operates carbon dioxide plants; (ii) Crown Products Limited (60% owned) operating a crown cork manufacturing plant; and (iii) Nigerian Bottling Co. (Benin) Limited (wholly-owned) which owns land and buildings which house the Benin bottling plant and plastic crate factory.

Apart from these subsidiaries, Nigerian Bottling Co. Ltd. has a large investment in Delta Glass Company Limited - a N30 million glass works which produces bottles and domestic glassware, and in Continental Cans Nigerian Limited, a joint venture between Continental

Cans International Corporation and Nigerian investors to manufacture beverage cans in Nigeria.

Nigerian Bottling Co. Ltd. employs over 6000 people and with an average annual turnover of N231 million.

It is noteworthy that there is no equity/ownership relationship between Nigerian Bottling Co. Limited and Coca-Cola Company (the licensor). The negotiation of the agreements were conducted purely at arm's length basis. The outcome of the negotiations were influenced by licensee's considerable size and sophistication. In addition, because the agreement was "royalty-free", it was not registered with the National Office of Industrial Property (NOIP). Consequently the licensee did not need or receive assistance from NOIP in determining the outcome of the negotiations.

THE LICENSOR

COCA-COLA COMPANY OF U.S.A.

Coca-Cola is the world's largest manufacturer of soft drink concentrates and syrups. The company distributes soft drinks through independent as well as owned bottlers in almost every country. More recently, wines, juices, coffee, and tea were added to the traditional business.

The company's flavoured and diet soft drink include Coca-cola, Fanta Orange, Sprite, Krest, Tab and Fresca. about 90% of the concentrates and syrups are sold for further processing outside the

company, and 10% is converted into soft drinks by Coca-Cola itself. In the U.S. about two-thirds of the concentrates and syrups are distributed to 550 independent and 17 company-owned bottlers and canners, the remaining one-third to about 4000 authorised wholesalers. Abroad, Latin America has 240 independent bottlers, Europe and Africa 460 independent and 16 company-owned, and the pacific group which includes Canada, 210 independent and 25 company-owned bottlers and canners.

Coca-Cola Company has no major shareholder and no principal affiliate.

THE LICENSING AGREEMENT

"TRADEMARK AND BOTTLER'S LICENCE"

The licence agreement was signed between Nigerian Bottling Co. Ltd. and The Coca-Cola Company of the U.S.A. for trademark, bottling and marketing of Coca-cola, Fanta Orange, Sprite and Krest in Nigeria. The agreement is renewable at ten yearly intervals, and a nominal royalty of US\$1.00 is paid annually.

The principal element of the agreement is the trademark, and in order to "maintain quality standard" associated with the trademark, all concentrates and essential chemicals are supplied by the licensor. In addition, the agreement imposed strict confidentiality obligation on the licensee. The respondent explained that because of the poliferation of cola industry and the inevitable shrinkage of the cola market, those unique properties of Coca-Cola have to be preserved. The concentrates are entirely the product and know-how of the licensor and the unique

properties of coca-cola remain a secret and must not be divulged to third parties. There are other essential elements of the agreement which need highlighting -

1. As indicated earlier, there are 14 bottling plants in Nigeria. There is a separate trademark and bottling agreement for each plant. In addition, within each plant, there is a separate trademark and bottling agreement for each product. Therefore in a plant where all the four brands are produced, there will be four separate but similar trademark and bottling agreements. Consequently, the licence agreement contained territorial limitations over the marketing and distribution of these products. For example, no sales is allowed in a state where there is a bottling plant, and exporting is expressly prohibited, no matter the circumstances. The reason for the demarcation of plants is that each plant is taken as a separate unit and sales of concentrates are assessed on plant-by-plant basis. It is expected that certain level of production volume will be maintained to ensure the purchase of concentrates. Also introduction of other makes of soft drinks in any coca-cola bottling plant is forbidden and will violate the agreements.

2. The licensee is wholly liable for any problems arising from the production process, with the understanding that adequate precautions will be taken to ensure that every item supplied will reach the licensee in a good condition. The respondent explained that although the company will prefer a shared liability because supply of contaminated concentrates will not render the licensor liable, it is a standard clause in agreements issued by Coca-Cola Company worldwide. In addition, throughout its period of association with the licensor, it never had any cause/need to review the clause.

3. Arbitration - Should disputes arise over the implementation of the agreement, arbitration will be according to the laws applicable in the licensee territory i.e. Nigerian laws.

CONCLUSION

This case helps to highlight one of the conclusions of the results of the survey that licensee size and sophistication is a very important independent variable in the licensing negotiation process. This also confirms the ranking made on the basis of factor analysis that licensee size and sophistication was the fourth most important independent variable of the study.

9.6

CASE 5

WITT & BUSCH NIGERIA LIMITED.

Witt & Busch Nigeria Limited is a joint venture between Dale Electric International PLC of England and Nigerian Partners, and its activities include manufacturing and distribution of electricity generating sets, switch gear, pumping sets and agricultural machinery.

The company was registered in 1939 by two German merchants, Johann Witt and Oscar Theodor Busch as a trading company. In 1959 it was acquired by Deutsche Ost African Gesellschaft (DOAG), a company quoted on the Munich and Berlin stock exchanges. DOAG later increased the scope of Witt & Busch's trading activities to incorporate technical services. By this time pumps, welders, electricity generating sets, workshop machinery and power tools were being handled.

In 1972, 60% of the company's equity was sold to Nigerians in compliance with the Nigerian Enterprises Promotion Decree (NEPD) 1972, leaving DOAG with the minority 40% stake. As Nigeria faced the challenges of industrialisation, there existed the need for high level of technical and commercial competence. Therefore in order to underline Witt & Busch's position as Nigerian leading electricity generating set brand, it became necessary to make the transition from a trading company to a fully-fledged manufacturing and technical servicing company. In January 1986 DOAG sold its 40% share in Witt & Busch to Dale Electric International PLC of England, enabling the company to gain the know-how, products and investment necessary for the transition.

Dale Electric's interest in Witt & Busch stemmed from the fact that Nigeria has been one of its major markets with an estimated 3,000 generating sets in serviceable conditions. Consequently, Witt & Busch Nigeria Limited is now a joint venture operation between Dale Electric International PLC and Nigerian. It currently employs about 100 staff with an average annual turnover of N10 million.

THE LICENSOR

PERKINS ENGINES INC. OF U.S.A.

Perkins Engines Inc. is a large manufacturer of diesel engines for a range of applications including agricultural and industrial vehicles. In 1984, the company acquired the diesel section of the Rolls Royce engines.

Its operations are capital-intensive with modern and sophisticated technologies. Consequently, with labourforce of about 250, its annual turnover averages \$75 million.

THE LICENSING AGREEMENT.

"KNOW-HOW AND TRADEMARK LICENCE"

The licensing agreement which was signed in september 1986, was between Witt & Busch Nigeria Limited and Perkins Engines Inc. of the U.S.A. for the manufacture, distribution and servicing of Perkins' engines in Nigeria. It is noteworthy that these engines are manufactured and distributed under Rolls Royce trademark. (Under the acquisition agreement between Rolls Royce and Perkins Engines Inc., Perkins was permitted to use the Rolls Royce trademark until 1990).

Within the framework of the licensing agreement between Perkins and Witt & Busch, there was a provision for the development of indigenous training facilities for both own use, and for customers and retail groups. Such facilities will be managed at least initially, by licensor personnel. In addition, licensor will supply components and parts so as to "protect the Rolls Royce quality image".

No fee is actually paid or payable for this licensing agreement, but it is expected that licensor compensation/remuneration will be derived from increased volume of activities in the form of sale of components and parts, training, and supply of essential equipments and machinery, as well as technical assistance calculated on man-hour basis.

Other important aspects of the agreement are -

1. Improvement/Adaptation - This clause provides for reciprocal exchange of information on any major improvement. For example, Witt & Busch plans to start engine re-building to suit local needs. Such improvements/adaptations will have to be made known to the licensor.
2. Liability - This is a warrantee relationship. All parts and components supplied by the licensor should reach the licensee in good and working condition. Should these parts and equipment fail, licensor will be liable for damages. However where there is a wrongful application of the equipment or part e.g. the commissioning of plant by a third party other than the supplier, customer will be liable.
3. Confidentiality - The agreement imposes on the licensee, the obligation to maintain confidentiality on research and design details other than technical information provided as part of company's promotion campaign.
4. Arbitration - In case of dispute, arbitration will be according to English laws. This was possible because the agreement was royalty-free,

otherwise Witt & Busch would have been compelled to go through NOIP and almost certainly, this clause would have been rejected.

The most significant thing about this agreement is that it was not possible for the licensor to place a blanket limitations on licensee's international activities because of its existing commitment with other international companies. The limitations contained in the agreement were considered in the best interest of the association, as they will not affect licensee activities adversely. Therefore the licensing arrangement provides the licensee with the opportunity to use royalty-free technology and at the same time, have uninhibited association with other companies.

It is worthy of mention that there was no equity relationship between either Witt & Busch Nigeria Limited or Dale Electric International PLC and Perkins Engines Corporation, and consequently negotiations were conducted purely at arm's length basis. In addition, no assistance was sought or received from NOIP. Also because the terms of the agreement were of no economic cost to the country, there was no need to register it with NOIP.

CONCLUSION.

The preceding case study epitomises licensing arrangements made on the basis of licensee's technical expertise, reputation and wealth of negotiating experience. Although Witt & Busch is not a very large company compared with most of the companies in the study sample, its negotiating experience and skills were utilised to obtain such terms

and conditions that even the larger and publicly quoted companies would have been proud of.

This confirms the rating of negotiating experience as the fifth most important independent variable of the study, ahead of such important factors as support capital, ownership link and locational attractiveness.

Chapter Ten.

Reviews and Conclusions.

CONTENT.

- 10.1 Review of Study.
- 10.2 Conclusions from the Study.
- 10.3 Policy Implication of the Study
- 10.4 Suggestions for Further Research.

In this study, we have considered both theoretical and empirical evidence on the issue of bargaining power, and the relevance of the bargaining power model in a controlled economy such as Nigeria.

In the literature review section of this study, the complex issue of technology was discussed with the view to clarifying the ambiguity over what technology really means, and its transferability, especially as they affect the developing countries and their needs. From the literature, it has been established that technology can be represented in various forms, e.g. in the form of intermediate or capital goods, it can be manifested in the form of human resources, or it can even be in the form of commercial information. Technology can be transferred either vertically from one firm to its subsidiary and/or sister company in different locations thereby internalising the know-how, or it can be a horizontal transfer between unaffiliated companies. It has been shown in studies such as Mascarenhas (1982) and Ghertman & Allen (1982) that the horizontal transfer of technology is more effective for economic development in underdeveloped economies of the world because of the diffusion effect of such transfers.

The study also looked at different modes of technology transfer with discussions on the principal methods namely people, literature and the multinational enterprises (MNEs). In reviewing the possible ways through which MNEs transfer technology, all options were considered, ranging from exporting to foreign direct investment in wholly-owned subsidiaries. It is from these options that the study has concentrated

on licensing of know-how as an alternative to the traditional methods of transfer such as exporting and direct investment. The licensing model in chapter three shows the decision process and the factors that make licensing an attractive alternative.

Given that industrialisation and economic development imply the application of science and technology to raise productivity per worker, thereby releasing resources for other productive tasks, it is therefore important to stress that the availability of technology enhances economic development. However, the acquisition of technology by developing countries is never problem-free. The ability of a less developed country (LDC) to acquire the much needed technology on favourable terms, depends among other things, on her bargaining power vis-a-vis the technology supplier.

The multinational enterprises (MNEs) have been identified as the major source of this technology acquisition by the less developed countries. It is also known that the MNEs occupy this unique position because of the LDCs' almost total dependence on technology imports from the developed countries (Lall and Streeten, 1977).

The MNEs contribute toward the industrial growth of developing countries in a number of forms as stated earlier. Although the extent of the contributions of the MNEs to the industrial performance of a host country depends on the channel used for the technology transfer; the level of development of the host country's technological infrastructures; the efforts made by the domestic firms at assimilating

the imported technology; and the nature of host country's policies and their effect on the MNEs.

The last two decades have seen changes in the host country attitude toward MNEs, particularly in developing countries. These changes range from open hostility and confrontation, to the provision of investment incentives. Different countries have in the past, tried different policy measures in order to maximise the economic benefits derivable from the imported technology. And in the wake of harsh economic difficulties that the LDCs are faced with, licensing of technology has emerged as a possible alternative to exporting and foreign direct investment, in that licensing has been shown to be one of the cheap options in the technology acquisition process. In the earlier chapters of this study, particularly in chapter three, we demonstrated the various reasons why licensing has such a seductive appeal for both the multinational enterprises and the developing host countries.

Because of market imperfection, licensing like any other means of technology transfer, has its problems. Some of the problems as identified in literature included difficulties such as determining the "price" of technology and host government policies distorting the free market principles.

In determining the terms and conditions of licensing arrangements, the most significant factor that influences the outcome of negotiation is the bargaining power of both the transferor and the transferee. Although the concept of bargaining power has become quite important in

the discussion of international technology transfer, the impact of host government's control on the negotiation process has been largely ignored. It is important to emphasize that it has been shown in the literature that the concept of negotiating strength is an aggregate which incorporates a wide variety of variables affecting the relationship between a multinational investor and a host developing country firm. (see De La Torre, 1981; Fagre and Wells, 1982; and Poynter, 1985).

Such aggregate will include variables such as power to command resources and supply what other party needs. Moran (1985) pointed out that in theoretical terms, bargaining power model of a relationship between technology supplier and host countries is that of bilateral monopoly : the foreign investor has control over capital, technology, management, and marketing skills needed to launch a project successfully; the host country has control over access before investment is made and over conditions for operating afterwards. The bargaining power concept therefore assumes that the balance of power shifts in favour of the party that possesses more significant factor needs. Therefore the agreement that is reached will reflect the need for and the scarcity of the resources owned by the two parties as well as perhaps, their negotiating skills.

It is not intended that the determinants of bargaining power be discussed here, having done so extensively in chapter four, but it is important to reiterate the role of host country policies because of the threat they pose to the principles of free market and invariably the effect on licensor bargaining power.

Nigeria, like most developing countries, has in the past introduced policy measures aimed at expanding the industrial base of the economy as well as enhancing the technological infrastructures for effective assimilation of imported technologies. However, some of these measures interfere with the operations of the market forces especially as it relates to bargaining power of the licensors, as demonstrated by the empirical aspect of this study.

The empirical study was conducted with the view to testing the hypotheses formulated on the strength of information obtained from the review of literature on international technology transfer and bargaining power. Ten hypotheses were tested for the study and the results showed a departure from the conventional bargaining power model to a situation where negotiating parties (i.e. the transferor and the transferee) have to adopt more compromising posture in order to achieve long term benefits from an arrangement. This change in the orientation has been as a result of possible "shrinking" of world market and the government involvement and/or requirements.

Given the statutory control on licensing of technology in Nigeria, there has been a significant shift in the balance of bargaining power in favour of Nigerian licensees. The most important issue that emerged from the study is perhaps the bargaining relationship between affiliated firms. Consequently, in the next section of this chapter, we draw conclusions for each and all the hypotheses, on the basis of the research findings.

10.2 Conclusions from the Study.

A series of conclusions were reached based on the research findings. These conclusions primarily reflect the objectives of the study which are : to determine the variables that influence the negotiation process of licensing arrangement; and to assess the degree of importance of these variables. In addition, a set of conclusions are drawn on the influence of ownership links i.e. majority and minority equity interests in the licensee company.

Consequently, the research hypotheses are considered individually under two broad areas - (a) Ownership-specific factors and (b) Location-specific factors.

Ownership-specific Factors.

1. Technology, coupled with the perception of the host country of its contribution to her economic development emerged as the most important determinant of licensor bargaining power in the negotiation of the licensing arrangements, and also the most important independent variable. Using frequency analysis, the research results showed that of the 31 companies in the research sample, 96.7 per cent of the sample agreed that technology was a very important factor which provided the licensors with considerable amount of bargaining influence during licensing negotiations. The use of the factor analysis was very important in that it actually ranked all the independent variables in their order of importance, showing technology as the most important independent variable. This was of course, a confirmation of the result of frequency analysis. In addition, this point was further illustrated

with case study no.1. It showed that because of the importance attached to this technology by the government, their stance on key issues had to be compromised in favour of the licensor.

2. Support capital, although important, did not provide any significant bargaining leverage to the licensors during licensing negotiations in this controlled market (i.e. Nigeria). This is explained in part by the fact that most support capital were provided in the form of payment for licensor equity interest in licensee company. Consequently, this did not attract any special bargaining influence. However, it has to be stressed that this result does not represent the likely outcome of negotiation with the impact of support capital in a situation where free market forces operate, e.g. in the western economies.

3. The control of export market access by licensor was not an important factor in the determination of licensor bargaining power. Because Nigeria as a market is very large and lucrative, there were no immediate incentives in the companies studied, for export drive and consequently exporting and/or control of export market access did not affect the bargaining conditions.

4. The licensor bargaining skills did come through, in the Nigerian context, as an important factor during licensing negotiations. It has to be said that this was particularly apparent in those agreements with royalty-free arrangements. It is noteworthy that negotiating skills and experience was ranked as the fifth most important independent variable of the study. Case study no.5 in chapter nine summarises this conclusion.

5. Availability of alternative technology suppliers did not have any influence on the negotiation process. The most important consideration for the licensee was to be able to find licensors willing to do business in Nigeria. Moreover, some of the licensors already had equity interests in the licensee companies, and it made it almost impossible to consider alternative licensors. Consequently, supplier competition was ranked 9 out of the 10 independent variables.

Location-specific Factors

6. Restrictive government policy was another factor that determined the outcome of the licensing negotiations. It is significant that of all the companies that had their agreements registered with the National Office of Industrial Property, 96.4 per cent had major restrictions and tie-in provisions altered in favour of the licensees in order to achieve fair terms and conditions. All the three statistical techniques used for the analysis of this study confirmed the significance of this variable, and was ranked second only after technology.

7. Third party assistance was a very important factor during the licensing negotiations and provided the licensees with bargaining advantage. This variable was ranked as the third most important independent variable of the study. It is also illustrated with case study no.3 in chapter nine.

8. Locational attractiveness/market characteristics was not an important factor during negotiations as one would expect. Consequently,

it did not have any significant impact on the negotiation. This is explained by the fact that most of the licensing arrangements were made with companies already operating in Nigeria before the licensing negotiations. Locational attractiveness was an important factor for the initial investments but was not of any significance during the licensing negotiations.

9. Size and sophistication of licensee firm was an important factor which enhanced the licensee bargaining leverage. It was particularly important in situations where licensors were concerned about the ability of the licensees to live up to expectations and maintain their image and reputation. The research showed that the licensors became more flexible with the belief and confidence that licensees could protect their reputation satisfactorily. This point was illustrated with case study no.5.

10. Existing licensor operation in a host country was another fundamental factor which affected the licensor bargaining power adversely. Because these operations cannot readily be uplifted to another environment, the licensors were forced to comply with the government control measures, perhaps with little importance attached to the licensing arrangements. Therefore the licensing arrangements were of secondary importance to the existing operation.

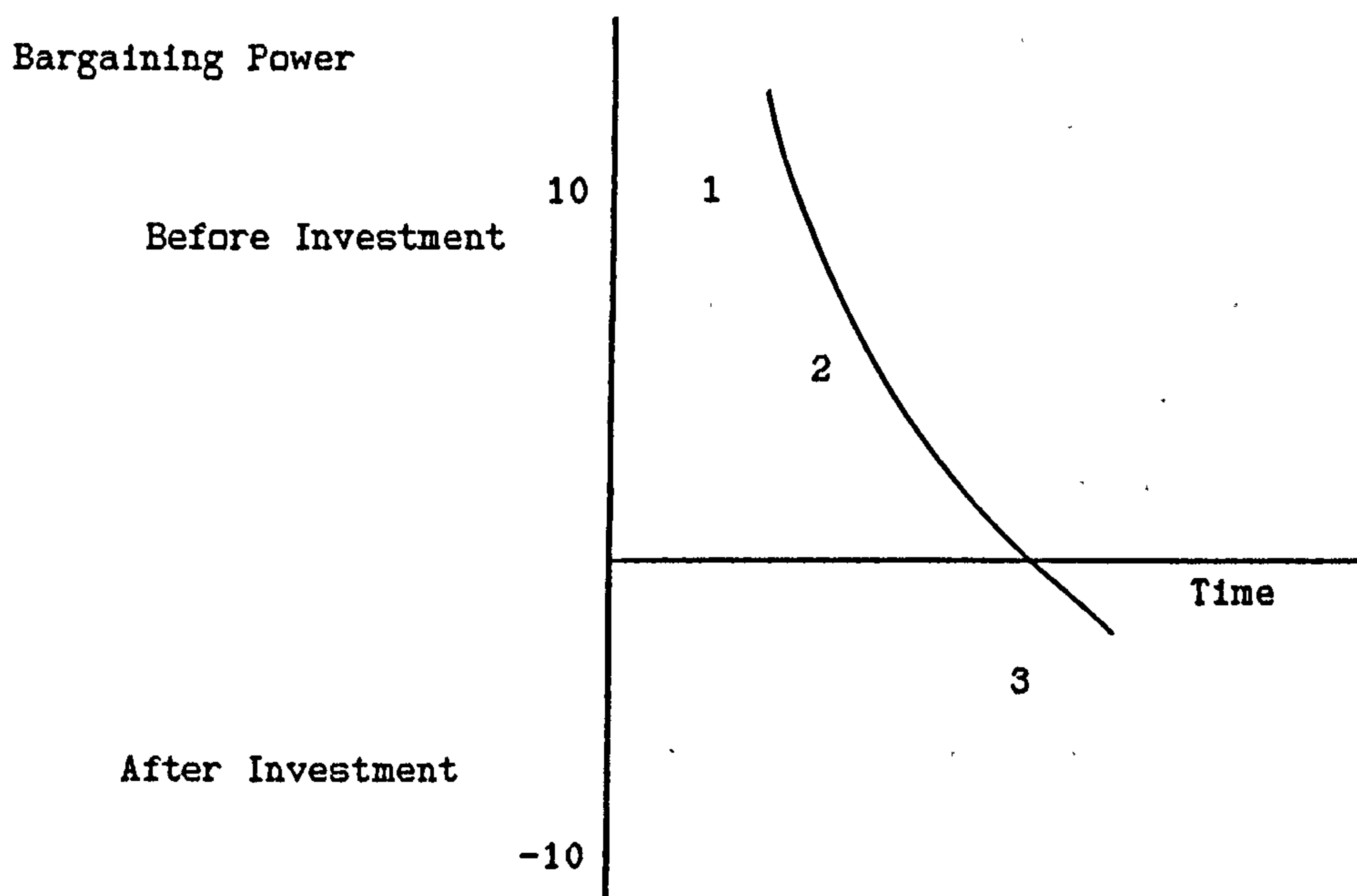
This study therefore confirms that two factors were of decisive importance on the outcome of the negotiation for the licensing arrangements, and these were - i. Technology and its perceived importance by the licensee; and ii. Government control measures.

Bargaining Model.

On the basis of the research findings, the following bargaining model has been hypothesized. This model epitomises multinational enterprises' bargaining power via-a-vis developing countries. It shows three different stages that the MNEs' bargaining power goes through, from time of initial contact to investment being made. These important variables as identified above, determine the direction which the bargaining cycle flows.

Figure 10.1

A Model of Multinational Enterprises' Bargaining Power with Developing Countries.



Note : Stage 1 = Initial contact by licensee
Stage 2 = Market considerations
Stage 3 = Huge resources committed to the Market.

At stage one of the cycle, a developing country prospective licensee makes an initial contact with a prospective MNE licensor. The licensor bargaining power is highest at this stage because the MNE has to consider the opportunity costs and other economic factors that will influence the decision whether to go ahead and license the LDC firm or decline the approach. The most important determining factor at this stage is the technology - its perceived importance and perhaps the availability of alternative suppliers who are willing to license their technologies.

At stage two of the cycle, the most important factor determining the level of MNEs' bargaining power is the locational attractiveness/market characteristics. Once the MNE agrees to consider a licensing proposals, preliminary investigation is carried out to find out more about the viability of the proposed arrangement in the market. Where the MNE finds the market very lucrative, its stance changes from attempting to extract maximum economic rent on the technology to a more compromising position. This attempt or willingness to compromise on the issues, affect the MNEs' bargaining power negatively as indicated by the shift from stage one to stage two in figure 9.1 above.

The third stage of the bargaining cycle shows that once the MNE has committed resources in the host country, its bargaining power virtually disappears. The most important variable that determines bargaining cycle flow in this stage, is the government policy. Where governments decide to introduce policy measures concerning economic development, the effect of such changes are never negotiated with the MNEs before they are introduced. At this stage, the MNE is faced with

the difficult choice of either having to accept the government's position or consider withdrawal from the market. Usually the latter is seldom taken, given the size of investment already committed to the market. Consequently, the MNEs continue to operate in the market within the boundaries of constraint as dictated by the government. In other words, the host country applies the "hostage effect" on the multinational enterprises.

Policy Implications
of the Study.

This study has added a new dimension to the issue of negotiation and bargaining power relating to international technology transfer agreements, especially as it affects the less developed countries (LDCs). It has been shown that negotiations for technology transfer in general and foreign licensing agreements in particular at micro level inevitably involves a macro level dimension, in the form of government's control requirements. Consequently, a prospective licensing agreement has to satisfy not only the requirements of the prospective licensee but also the control agency. Therefore the policy implications of the study have been considered from three strands in order to address issues as they affect the principal actors in the technology transfer process, namely :

1. The Licensor,
2. The Licensee, and
3. The Host Government.

1. The Licensor.

The study has shown that about 95 per cent of licensing agreements that involved royalty payments had fixed durations. In addition, all the agreements were registered with the National office and are subjected to periodic reviews. It is argued that as time elapses, nationals of the host country learn or acquire expertise in the use or duplication of a given technology. Consequently, their need for the MNEs (licensors) diminishes, and it becomes easier to harass the MNEs. They may decide that the licensors' contributions have declined relative to the rewards

that are ^{being} taking out ^{of} the country. Therefore because of the need to satisfy not just the prospective licensee but also the control agency, it is important for the licensors to review their policies vis-a-vis technology licensing to developing countries. This will have to be reviewed from two perspectives, namely the pre-licensing stage and the review of post-licensing effect.

(a) At the pre-licensing stage, prospective licensors will have to consider very carefully the strategic objectives of their licensing policies both in the short and long-run. Most developing country markets are so volatile and sometimes very unpredictable that it becomes difficult to expect to achieve the initial objectives of the licensing arrangements. With this in mind, the licensor has to assess the implications of possible collapse of licensing arrangements due to intervention of the government or promulgation of laws which will hamper the execution of these agreements. Where the licensing arrangements are used as a means of market testing, or a way of establishing a 'toe-hold' in the market, in which case the performance of the arrangement is viewed in light of long-term strategic objectives. The experience effect becomes more important here than the economic benefits derivable from the arrangement.

(b) Given the possible range of factors which may affect a licensing arrangement adversely, the objective of the post-licensing monitoring will have to be appraisal of experience. On the one hand, the experience which the licensor acquires in the market will help in deciding whether to pull out or press on with other objectives such as developing the market as an export channel for materials and components on the

strength of it being lucrative. On the other hand, the licensor will have to consider other ways of enhancing its position in the market. Poynter (1985) described this as upgrading bargaining power. To counter the effect of obsolescing bargaining power as depicted in figure 10.1, negotiating strength may be increased by introducing new and more complex/efficient process technology; and introducing new products or services or better versions of existing products using existing technologies and management skills. However, the eventual decision which the licensor makes will depend on the overall corporate plans for the market, and more significantly, how lucrative and attractive the market was. Also the experience of the company in this market will help determine future licensing decisions for other markets in terms of planning and execution.

2. The Licensee.

(a) For the licensee, the study has shown that its bargaining power vis-a-vis the licensor is likely to increase with rapid and effective assimilation of the licensed know-how. However where the licensor maintains its bargaining power by constant upgrading of technological support for the licensee, it is likely to have major implications for the licensee, mainly implementation and cost issues. The preparedness of the licensees for the upgraded technologies has to be taken into account. It is argued that relatively new products and processes involve uncertainties. These uncertainties make implementation of product and process upgrades more difficult. It will require perhaps more technical and managerial skills to sort out.

Some subsidiaries and/or licensees experience considerable problems in obtaining their technical and managerial skills. In addition, a drastic change of licensee strategy can be expensive. The retraining of executives experienced in low efficiency, protected economies is usually slow and costly. Often the viable alternative is to bring in new executives from the licensor in order to successfully implement the change, thereby increasing the cost of technical support from the licensor. Therefore in order to avoid being perpetually dependent on the licensor for technologies, it is important that proper efforts are made to ensure efficient and effective assimilation of imported know-how. This will reduce the cost of adopting the changed and/or improved technologies. In addition, the licensee will decide whether it is actually prepared for rapid upgrade of technologies, and how far it is ready to go in a given space of time.

(b) Where there is clear evidence that manufacturing firms are consciously and effectively making efforts to limit excessive transfer of funds for imported know-how, thereby releasing resources for other productive uses, it is unlikely that there will be unnecessary intervention by the government both in the transfer negotiations as well as in monitoring of the execution of the agreements. After all, the objective of the intervention by the government in the technology transfer process is to ensure that appropriate technologies were transferred at "reasonable" terms and conditions, and also the government gets involved in the monitoring of the performance of transferred technologies in order to ensure rapid and effective assimilation.

3. The Host Government.

(a) The overall bargaining power of a host nation is based on the availability of technical and managerial resources, and the attractiveness of the domestic market. However, the general economic depression and lack of growth in the economies of most less developed countries (LDCs) have effectively reduced the attraction which these LDCs had for the multinational enterprises. Consequently, direct investment in LDCs is no more an attractive proposal to the MNEs. Therefore for the LDCs, licensing and other contractual arrangements are the few options left for acquisition and upgrading of their technology stock. Any policy measure that threatens these options should be re-considered carefully. This can be illustrated with the Indian experience in the late 1970s. It was suggested that India erred when it instituted and enforced stringent localisation rules against foreign-owned firms. The collective response of the foreign investors in India was to reduce activities, and the inflow of foreign direct investment nearly stopped completely.

(b) Where licensees feel that stringent government control of technology transfer process was jeopardising their efforts or chances of acquiring needed know-how, these licensees may resort to assisting the licensors wherever possible in circumventing government regulations, particularly in areas such as transfer pricing through imported material, component and parts, thereby weakening the efforts of the government to help obtain "favourable terms" for the licensee.

Suggestions for Further Research.

On the basis of the study and resultant conclusions, it has become clear that the bargaining power model has very little relevance and perhaps inapplicable in a controlled market like Nigeria. However, it cannot be said that the result of this study has universal application in all "controlled markets" of the developing world. This is more so because different countries/locations have different market characteristics that determine control measures and responses from prospective multinational licensor. Consequently, the following suggestions have been made for further research :

1. It will be very useful to assess the relevance of the bargaining power model in other developing countries where market forces are controlled by government regulations. This will test the bargaining model derived from this study and perhaps develop it further.

2. It will also be interesting to study corporate responses to obsolescing bargaining power over time, and the actions which multinational enterprises are likely to take in order to upgrade their bargaining power in a host country that still holds attraction for them.

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APPENDICES

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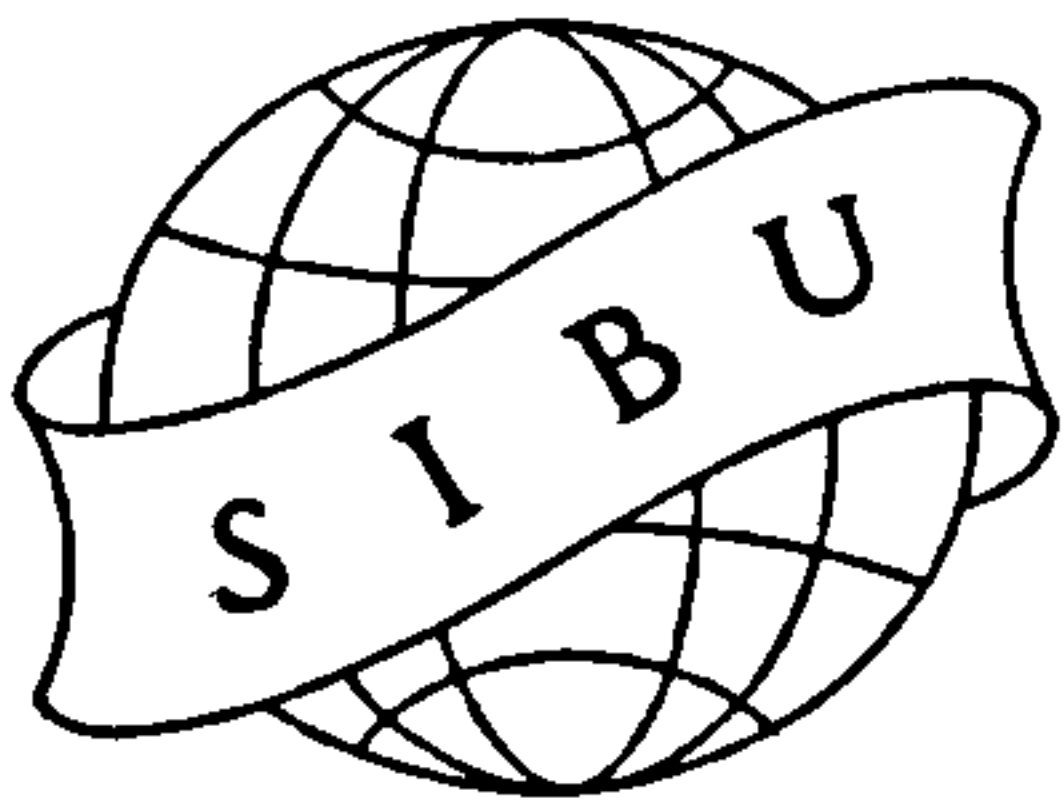
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Strathclyde International Business Unit

Director: Mr Stephen Young

Department of Marketing

Strathclyde Business School
University of Strathclyde, Stenhouse Building,
Glasgow G4 0RQ Tel: 041-552 4400 Ext 3146



SM/SCW

21st March, 1987.

Dear Sir,

I am a doctoral research student in International Business at the above University. As part of my study, I am conducting research on Foreign Licensing Agreements in Nigeria, with specific reference to:


- (a) the content of agreements
- (b) the negotiation of agreements and
- (c) the impact of licensing on Nigerian licensees.

The study will be based on personal interviews with a representative sample of companies in agro-based industries, mineral-based industries, light and heavy-engineering industries. It is for this reason that I am writing to you. I would be grateful if I could arrange for an interview appointment with you or your nominee who is very familiar with foreign licensing arrangements in the company to discuss the above issues. It is expected that the length of the interview will not exceed one hour.

Information provided is for your use since it has been analysed in appropriate form only for your reference. It is not to be used for any other purpose. Moreover, a summary of results will be made available to you on request. I shall contact you again in a few days time to arrange a mutually agreed time and date for the interview.

I sincerely hope that I can rely on the goodwill and cooperation of your company. The success of my research depends on interviewing a large and representative sample of companies. Please find enclosed an introductory letter from my research supervisor, Dr. J. Hamill.

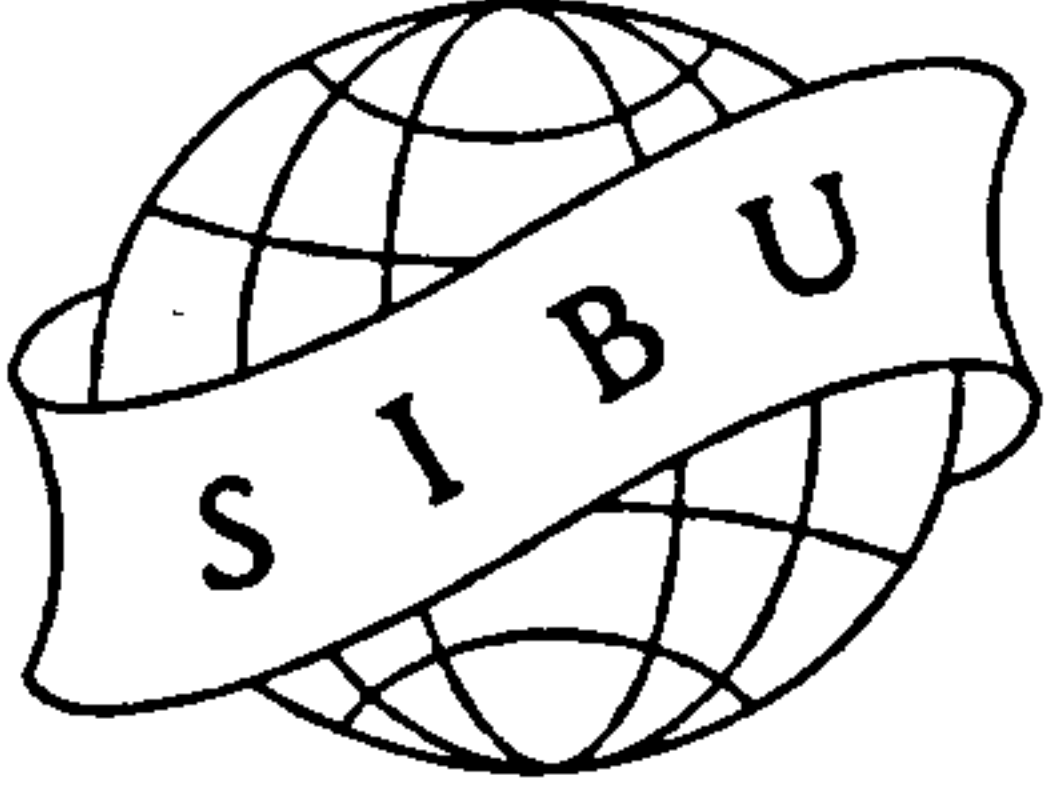
Yours faithfully,


Sylvester O. Monye.

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Encl.

Strathclyde International Business Unit



Director: Mr Stephen Young

Department of Marketing

Strathclyde Business School
University of Strathclyde, Stenhouse Building,
Glasgow G4 0RQ Tel: 041-552 4400 Ext 3146

SM/SCW

21st March, 1987.

Dear Sir,

Mr. Sylvester O. Monye

I am writing to introduce Mr. Monye who successfully obtained a Master's degree at this University in 1985 and is now studying for a Ph.D under my supervision with Strathclyde International Business Unit. As a business school our interests concern the behaviour of international companies and the work of Mr. Monye falls within this. I hope that you will be prepared to meet and talk to him about foreign licensing agreements in Nigeria.

For your interest I enclose a copy of our brochure.

Yours faithfully,

DR. J. HAMILL,
Supervisor.

Encl.



FEDERAL REPUBLIC OF NIGERIA

**OWNERSHIP STRUCTURE
OF
ENTERPRISES IN NIGERIA**

(NIGERIAN ENTERPRISES PROMOTION ACT)

Compiled by :—

**Nigerian Investment Information
and Promotion Centre**

**Federal Ministry of Commerce and Industries
P.M.B. 12614
New Secretariat, Ikoyi, Lagos.
Phone 680794**

**OWNERSHIP STRUCTURE OF
ENTERPRISES IN NIGERIA
(NIGERIAN ENTERPRISES PROMOTION ACT)**

INTRODUCTION

Joint effort in any human undertaking facilitates the accomplishment of tasks. In the field of industrial investments, particularly where joint-participation by foreign and indigenous investors is involved, it lightens the burden of investment, allows equitable sharing of risks as well as profits, and increases the industrial contribution to the national economy.

The Nigerian Enterprises Promotion Act is not, as is sometimes misconstrued, intended to expunge foreign interests from the industrial scene of the country, nor is it an indication of the country's future march to public controlled economy. Rather, it is designed to encourage Nigerian and foreign investors to work together in mutual trust and for mutual gain, and thus facilitate local acquisition of skills. The businesses which are within the competence of indigenous expertise are exclusively reserved for Nigerians and listed in Schedule I. Other businesses which encourage joint-ventures are classified in two categories and listed in Schedules 2 and 3. The following schedules include enterprises which were reclassified in accordance with Nigerian Enterprises Promotion (Alteration of List of Scheduled Enterprises) order 1981.

PAGE
NUMBERING
AS ORIGINAL

**SCHEDULES 1, 2 and 3 OF NIGERIAN ENTERPRISES PROMOTION
DECREE, 1977 (As Reclassified)**

SCHEDULE 1

ENTERPRISES EXCLUSIVELY RESERVED FOR NIGERIANS

1. Advertising and public relations business.
2. All aspects of pool betting business and lotteries.
3. Assembly of radios, radiograms, record changers, television sets, tape recorders and other electric domestic appliances not combined with manufacture of components.
4. Blending and bottling of alcoholic drinks.
5. Blocks and ordinary tile manufacture for building and construction works.
6. Bread and cake making.
7. Candle manufacture.
8. Casinos and gaming centres.
9. Cinemas and other places of entertainment.
10. Commercial transportation (wet and dry cargo and fuel).
11. Commission agents.
12. Departmental stores and supermarkets having an annual turnover of less than ₦2,000,000.
13. Distribution agencies excluding motor vehicles, machinery and equipment and spare parts.
14. Electrical repair shops other than repair shops associated with distribution of electrical goods.
15. Estate agency.
16. Film distribution (including cinema films).
17. Hairdressing.
18. Ice-cream making when not associated with the manufacture of other dairy products.
19. Indenting and confirming.
20. Laundry and dry-cleaning.
21. Manufacturers' representatives.
22. Manufacture of suitcases, brief cases, hand-bags, purses, wallets, portfolios and shopping bags.
23. Municipal bus services and taxis.
24. Newspaper publishing and printing.
25. Office cleaning.
26. Passenger bus services of any kind.
27. Poultry farming.
28. Printing of stationery (when not associated with printing of books).
29. Protective agencies.
30. Radio and television broadcasting.

- 31. Retail trade (except by or within departmental stores and supermarkets).
- 32. Singlet manufacture.
- 33. Stevedoring and shorehandling.
- 34. Tyre retreading.
- 35. Travel agencies.
- 36. Wholesale distribution of local manufactures and other locally produced goods.

1	...
2	...
3	...
4	...
5	...
6	...
7	...
8	...
9	...
10	Commercial and professional services
11	Commission agents
12	Department stores
13	Wholesale distribution (including clearing firms)
14	Handicrafts
15	Food and drink
16	Textiles
17	Leather goods
18	Woolen goods
19	Knitwear
20	Manufactures of metal
21	Manufactures of wood
22	Manufactures of glass
23	Manufactures of plastic
24	Manufactures of rubber
25	Manufactures of paper
26	Manufactures of stone
27	Manufactures of cement
28	Manufactures of brick
29	Manufactures of pottery
30	Manufactures of glass

SCHEDULE 2

ENTERPRISES IN RESPECT OF WHICH NIGERIANS MUST HAVE MAJORITY INTEREST, AT LEAST 60 PER CENT EQUITY INTEREST

1. Banking—commercial, merchant and development banking.
2. Basic iron and steel manufacture.
3. Beer brewing.
4. Boat building.
5. Bottling of soft drinks.
6. Business services (other than machinery and equipment rental and leasing) such as business management and consulting services ; fashion designing.
7. Clearing and forwarding agencies.
8. Canning and preserving of fruits and vegetables.
9. Coastal and inland waterways shipping.
10. Construction industry.
11. Departmental stores and supermarkets having annual turnover of not less than ₦2,000,000.
12. Distribution agencies for machines and technical equipment.
13. Distribution and servicing of motor vehicles, tractors and spare parts thereof or similar objects.
14. Establishments specialising in the repair of watches, clocks and jewellery, including imitation jewellery for the general public.
15. Fish and shrimp trawling and processing.
16. Garment manufacture.
17. Grain mill products including rice milling.
18. Industrial cleaning.
19. Insecticides, pesticides and fungicides.
20. Internal air transport (scheduled and charter services).
21. Insurance—all classes.
22. Lighterage.
23. Manufacture of bicycles.
24. Manufacture of biscuits and similar dry bakery products.
25. Manufacture of cosmetics and perfumery.
26. Manufacture of cocoa, chocolate and sugar confectionery.
27. Manufacture of dairy products, butter, cheese, milk and other milk products.
28. Manufacture of food products like yeast, starch, baking powder, coffee roasting ; processing of tea leaves into black tea.

29. Manufacture of furniture ; and interior decoration.
30. Manufacture of metal fixtures for household, office and public building.
31. Manufacture of jewellery and related articles, including imitation jewellery.
32. Manufacture of leather footwear.
33. Manufacture of matches.
34. Manufacture of paints, varnishes or other similar articles.
35. Manufacture of plastic products such as plastic dinnerware, tableware, kitchenware, plastic mats, plastic machinery parts, bottles, tubes and cabinets.
36. Manufacture of rubber products, rubber footwear, industrial rubber specialities such as gloves, mats, sponges and foams.
37. Manufacture of tyres and tubes for bicycles and motorcycles ; of tyres and tubes for motor vehicles.
38. Manufacture of soap and detergents.
39. Manufacture of wire, nails, washers, bolts, nuts, rivets and other similar articles.
40. Other manufacturing industries such as non rubber and non-plastic toys, pens, pencils, umbrellas, canes, buttons, brooms and brushes, lamp-shades, tobacco pipes and cigarette holders.
41. Mining and quarrying.
42. Oil milling, cotton ginning and crushing industries.
43. Paper conversion industries.
44. Printing of books.
45. Production of sawn timber, plywood, veneers and other wood conversion industries.
46. Petro-chemical feedstock industries.
47. Publishing of books, periodicals and such like.
48. Pulp and paper mills.
49. Restaurants, Cafes and other eating and drinking places.
50. Salt refinery and packaging.
51. Screen printing on cloth ; dyeing.
52. Inland and coastal shipping.
53. Slaughtering, storage associated with industrial processing and distribution of meat.
54. Tanneries and leather finishing.
55. Wholesale distribution of imported goods.
56. Photographic studios, including commercial and aerial photography.
57. Tin smelting and processing.

SCHEDULE 3

ENTERPRISES IN WHICH NIGERIANS MUST HAVE AT LEAST
40 PER CENT EQUITY INTEREST

1. Distilling, rectifying and blending of spirits such as ethyl alcohol, whisky, brandy, gin and the like.
2. Fertilizer production.
3. Manufacture of basic industrial chemicals (organic and inorganic).
4. Tobacco manufacture.
5. Manufacture of synthetic resins, plastic materials and man-made fibres except glass.
6. Manufacture of drugs and medicines.
7. Manufacture of pottery, china and earthenware.
8. Manufacture of glass and glass products.
9. Manufacture of burnt bricks and structural clay products.
10. Manufacture of miscellaneous non-metallic mineral products such as concrete, gypsum and plastering products, including ready-mixed concrete ; mineral wool, abrasive ; asbestos products ; graphite products.
11. Manufacture of primary non-ferrous metal products such as ingots, bars and billets ; sheets, strips, circles, cecrous, rods, tubes, pipes and wire rods; casting and extrusions.
12. Manufacture of (fabricated metal) cutlery, hand tools and general hardware.
13. Manufacture of structural metal products—components, of bridges, tanks, metal doors and screens and window frames.
14. Manufacture of miscellaneous fabricated metal products, except machinery and equipment, such as safes and vaults ; steel springs, furnaces ; stoves, and the like.
15. Manufacture of engines and turbines.
16. Manufacture of agricultural machinery and equipment.
17. Manufacture of metal and wood working machinery.
18. Manufacture of special industrial machinery and equipment, such as textile and food machinery, paper industry machinery, oil refining machinery and equipment and the like.
19. Manufacture of office, computing and accounting machinery.
20. Manufacture of other machinery and equipment except electrical equipment, pumps, air and gas compressors ; blowers, air-conditioning and ventilating machinery ; refrigerators and the like.
21. Manufacture of electrical industrial machinery and apparatus.

22. Manufacture of radio, television and communication equipment and apparatus.
23. Manufacture of electrical appliances and houseware.
24. Manufacture of electrical apparatus and supplies not elsewhere classified, such as insulated wires and cables, batteries, electric lamps and tubes, fixtures and lamp switches, sockets, switches, insulators and the like.
25. Ship building and repairing (excluding boat building).
26. Manufacture of railway equipment.
27. Manufacture of motor vehicles and motorcycles.
28. Manufacture of aircraft.
29. Manufacture of professional and scientific and measuring and controlling equipment, such as laboratory and scientific instruments, surgical, medical and dental equipment, instruments and supplies and orthopaedic and prosthetic appliances.
30. Manufacture of photographic and optical goods.
31. Manufacture of watches and clocks.
32. Manufacture of cement.
33. Manufacture of metal containers.
34. Agricultural Plantation for tree crops, grains and other cash crops.
35. Ocean transport/shipping.
36. Oil servicing companies.
37. Storage and warehousing—the operation of storage facilities and ware-houses (including bonded and refrigerated warehouses) for hire by the general public.
38. Textile manufacturing industries.
39. Hotels, rooming houses, camps and lodging places.
40. Data processing and tabulating services (on a fee or contract basis).
41. Production of cinema and television films (or motion picture production).
42. Machinery and equipment rental and leasing.
43. All other enterprises not included in Schedule 1 or 2 not being public sector enterprises.
44. Sugar Plantation and processing".

NATIONAL OFFICE OF INDUSTRIAL PROPERTY DECREE 1979



ARRANGEMENT OF SECTIONS

<p>Section</p> <p><i>National Office of Industrial Property</i></p> <p>1. Establishment of National Office of Industrial Property.</p> <p>2. Governing Council.</p> <p>3. Power of the Commissioner to give directions.</p> <p>4. Functions of the National Office.</p> <p><i>Registration of Contracts, etc.</i></p> <p>5. Application for registration of contracts and agreements.</p> <p>6. Registration.</p> <p>7. Effect of registration.</p> <p>8. Cancellation of registration.</p> <p>9. Appeals, etc.</p> <p><i>Provisions as to Staff and Finances</i></p> <p>10. Director and other staff of the National Office.</p>	<p>11. Service in the National Office to be pensionable.</p> <p>12. Financial provisions.</p> <p>13. Annual estimates, accounts and audit.</p> <p><i>Miscellaneous and Supplementary</i></p> <p>14. Power to obtain information.</p> <p>15. Penalties for false returns, obstruction, etc.</p> <p>16. Restriction on disclosure of information by staff and penalty therefor.</p> <p>17. Offences by bodies corporate and unincorporate.</p> <p>18. Annual reports.</p> <p>19. Staff regulations.</p> <p>20. Fees.</p> <p>21. Interpretation.</p> <p>22. Citation.</p> <p>Schedule—Supplementary Provisions relating to the Council.</p>
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Decree No. 70

[24th September 1979]. Commence-
ment.

THE FEDERAL MILITARY GOVERNMENT hereby decrees as follows :—

National Office of Industrial Property

1.—(1) There is hereby established a body to be known as the National Office of Industrial Property (hereinafter in this Decree referred to as "the National Office") which shall have the functions conferred on it under or pursuant to this Decree.

(2) The National Office shall be a body corporate with perpetual succession and a common seal and may, sue or be sued in its corporate name.

2.—(1) There shall be as the governing body of the National Office a council to be known as the Governing Council of the National Office of Industrial Property (hereinafter in this Decree referred to as "the Council") which shall be responsible for the formulation of policy for the National Office and for the discharge of the other functions conferred on it by this Decree.

Establish-
ment of
National
Office of
Industrial
Property.

Governing
Council.

(2) The Council shall consist of a Chairman and the following other members, that is—

(a) one representative each of the following Federal Ministries—

- (i) Economic Development,
- (ii) Finance,
- (iii) Internal Affairs,
- (iv) Justice,
- (v) Trade, and
- (vi) Works and Housing;

(b) one representative of the National Science and Technology Development Agency;

(c) one representative of the universities in Nigeria to be appointed by the Commissioner after due consultation;

(d) one representative of polytechnics and colleges of technology in Nigeria to be appointed by the Commissioner after consultation with the rectors and principals thereof; and

(e) the Director.

(3) The Chairman shall be the Permanent Secretary of the Federal Ministry of Industries or such other officer of that Ministry not below the rank of Principal Secretary as the Permanent Secretary may designate in that behalf.

(4) The supplementary provisions in the Schedule to this Decree shall have effect with respect to the proceedings of the Council and the other matters therein mentioned.

Power of
the Com-
missioner
to give
directions

3. The Commissioner may give to the Council directions of a general character or relating generally to particular matters but not to any individual or case with regard to the exercise by the Council or the National Office of its functions under this Decree and it shall be the duty of the Council to comply with the directions or cause them to be complied with.

Functions
of the
National
Office.

4. Subject to section 2 (1) of this Decree, the National Office shall carry out the following functions—

(a) the encouragement of a more efficient process for the identification and selection of foreign technology;

(b) the development of the negotiating skills of Nigerians with a view to ensuring the acquirement of the best contractual terms and conditions by Nigerian parties entering into any contract or agreement for the transfer of foreign technology;

(c) the provision of a more efficient process for the adaptation of imported technology;

(d) the registration of all contracts or agreements having effect in Nigeria on the date of the coming into force of this Decree, and of all contracts and agreements hereafter entered into, for the transfer of foreign technology to Nigerian parties; and without prejudice to the generality of the foregoing, every such contract or agreement shall be so registrable

if its purpose or intent is, in the opinion of the National Office, wholly or partially for or in connection with any of the following purposes, that is to say—

- (i) the use of trade-marks,
 - (ii) the right to use patented inventions,
 - (iii) the supply of technical expertise in the form of the preparation of plans, diagrams, operating manuals or any other form of technical assistance of any description whatsoever,
 - (iv) the supply of basic or detailed engineering,
 - (v) the supply of machinery and plant, and
 - (vi) the provision of operating staff or managerial assistance and the training of personnel ; and
- (e) the monitoring, on a continuous basis, of the execution of any contract or agreement registered pursuant to this Decree.

Registration of Contracts, etc.

5.—(1) Every contract or agreement which on the date of the coming into force of this Decree had been entered into by any person in Nigeria and which still has effect on the commencement of this Decree in relation to any matter referred to in section 4 (d) of this Decree shall be registered with the National Office in the prescribed manner not later than six months after the commencement of this Decree.

Application
for registra-
tion of
contracts
and agree-
ments.

(2) As from the commencement of this Decree, every contract or agreement entered into by any person in Nigeria with another person outside Nigeria in relation to any matter referred to in section 4 (d) of this Decree shall be registered with the National Office in the prescribed manner not later than 60 days from the execution or conclusion thereof.

(3) Every application for the registration of a contract or agreement under this section shall be addressed to the Director and shall be accompanied by such number of certified true copies of such contract and agreement and by all other related documents including annexures thereto and such other documents and information as may be specified in any particular case by the Director.

6.—(1) Where the Director is satisfied that none of the specifications mentioned in subsection (2) of this section has been contravened he shall issue the applicant therefor a certificate in such form as may be prescribed.

Registrati-

(2) The Director shall not register any contract or agreement where he is satisfied that it falls within any of the following specifications, that is to say—

(a) where its purpose is the transfer of technology freely available in Nigeria ;

(b) where the price or other valuable consideration therefor is not commensurate with the technology acquired or to be acquired ;

(c) where provisions are included therein which permit the supplier to regulate or intervene directly or indirectly in the administration of any undertaking belonging to the transferee of the technology and are, in his opinion, unnecessary for the due implementation or execution of such contract or agreement ;

(d) where there is an onerous or gratuitous obligation on the transferee of the technology to assign to the transferor or any other person designated by the transferor patents, trade-marks, technical information, innovations or improvements obtained by such transferee with no assistance from the transferor or such person ;

(e) where limitations are imposed on technological research or development by the transferee ;

(f) where there is an obligation therein to acquire equipment, tools, parts or raw materials exclusively from the transferor or any other person or given source ;

(g) where it is provided that the exportation of the transferee's products or services is prohibited or unreasonably restricted or where there is an obligation on such transferee to sell the products manufactured by it exclusively to the supplier of the technology concerned or any other person or source designated by the transferor ;

(h) where the use by the transferee of complementary technologies is prohibited ;

(i) where the transferee is required to use permanently or for any unconscionable period personnel designated by the supplier of the technology ;

(j) where the volume of production is limited for sale and where re-sale prices are, in contravention of the Price Control Decree 1977 or any other enactment relating to prices, imposed for domestic consumption or for exportation ;

(k) where the transferee is required to appoint the supplier of technology as the exclusive sales agent or representative in Nigeria or elsewhere ;

(l) where the contract or agreement is expressed to exceed a period of 10 years or other unreasonable term where this is less than 10 years ;

(m) where the consent of the transferor is required before any modification to products, processes or plant can be effected by the transferee ;

(n) where an obligation is imposed on the transferee to introduce unnecessary design changes ;

(o) where the transferor, by means of quality controls or prescription of standards, seeks to impose unnecessary and onerous obligations on the transferee ;

(p) where there is provision for payment in full by the transferee for transferred technology which remains unexploited by him ;

(q) where there is a requirement for the acceptance by the transferee of additional technology or other matter, such as consultancy services, international sub-contracting, turn-key projects and similar package arrangements, not required by the transferee for or in connection with the principal purpose for which technology is to be or has been acquired by him ;

(r) where the transferee is obliged to submit to foreign jurisdiction in any controversy arising for decision concerning the interpretation or enforcement in Nigeria of any such contract or agreement or any provisions thereof.

(3) Notwithstanding the foregoing provisions of this section, in any case where the Council is satisfied that it would be in the national interest so to do, it may direct the Director to issue a certificate to an applicant notwithstanding any convergence between the terms and conditions of a contract or agreement and the specifications laid down in subsection (2) above.

(4) Where the parties, on the direction or advice of the Director, subsequent to a refusal by the Director to issue a certificate of registration, make required adjustments in respect of any contract or agreement or terms and conditions thereof, the Director may issue the requisite certificate of registration.

7. For the purposes of the Exchange Control Act 1962 and subject to section 8 of this Decree, no payment shall be made in Nigeria to the credit of any person outside Nigeria by or on the authority of the Federal Ministry of Finance, the Central Bank of Nigeria or any licensed bank in Nigeria in respect of any payments due under a contract or agreement mentioned in section 4 (d) of this Decree, unless a certificate of registration issued under this Decree is presented by the party or parties concerned together with a copy of the contract or agreement certified by the National Office in that behalf.

Effect of registration. 1962 No. 16.

8.—(1) Where the Director is satisfied that any contract or agreement has, subsequent to the registration thereof, been amended or modified in contravention of the provisions of this Decree, he shall give notice in writing to the parties concerned of his intention to cancel the certificate of registration and the provisions of section 9 of this Decree relating to appeals shall apply to any such notice as if it were a notice to reject an application for registration.

Cancellation of registration.

(2) Where no appeal is lodged as provided under subsection (1) above, the Director shall with the approval of the Council cancel the certificate of the party concerned.

9.—(1) Any person aggrieved by the proposal of the Director to reject an application for registration may, within 60 days after the date of notice of intention to reject the application is given to him, lodge with the Secretary a notice of appeal to the Council.

Appeals, etc.

(2) The notice of appeal shall be in writing setting out the grounds on which it is made and the Secretary shall lay it before the meeting of the Council next holding after the notice of appeal was lodged with him.

(3) Where an appeal is allowed the Council shall cause the Director to issue a certificate of registration in that behalf and where an appeal is disallowed the aggrieved party shall, subject to the applicable rules of court, have a right of further appeal to the Federal Revenue Court.

(4) Appeals shall lie from decisions of the Federal Revenue Court under this section in the same manner and to the same extent as appeals from the decisions of the Court in civil proceedings given by that Court sitting at first instance.

Provisions as to Staff and Finances

10.—(1) There shall be an officer of the National Office to be known as the Director who shall be appointed by the Federal Executive Council on the recommendation of the Commissioner.

Director and other staff of the N.O.P.

(2) The Director shall be the chief executive officer of the National Office and shall hold office on such terms and conditions as may be specified in his letter of appointment or on such other terms and conditions as may be determined from time to time by the Federal Executive Council and, generally, by the Council in relation to the other staff of the National Office.

(3) There shall be appointed by the Council, a Secretary who shall carry out such duties as the Council or the Director may specify or as may be imposed on him by this Decree.

(4) There may be appointed from time to time by the Council such other staff as may be required for the purposes of the efficient performance of the functions conferred on the National Office under or pursuant to this Decree.

Service in
the
National
Office to be
pensionable.
Cap. 147.

11.—(1) Notwithstanding the provisions of the Pensions Act it is hereby declared that service in the National Office shall be approved service for the purposes of that Act and, accordingly, officers and other staff of the National Office shall in respect of their service in the National Office be entitled to such pensions, gratuities and other retirement benefits as are enjoyed by persons holding equivalent grades in the public service of the Federation, so however that nothing in this Decree shall prevent the appointment of a person to any office in the National Office on terms which preclude the grant of a pension or gratuity in respect of that office.

(2) For the purposes of the application of the provisions of the Pensions Act in accordance with this Decree—

(a) subsection (1) of section 7 of that Act (which confers on the Federal Commissioner for Establishments power to waive the requirement to give notice of desire to retire at the age of 45) shall have effect as if for references therein to that Commissioner they were substituted references to the Council ; and

(b) the power under subsection (1) of section 9 of that Act to require an officer to retire at any time after attaining the age of 45, subject to his being given six months' notice in writing, shall be exercisable by the Council and not by any other authority.

Financial
provisions.

12.—(1) The National Office shall establish and maintain a fund the proceeds of which shall be applied—

(a) to the cost of administration of the National Office and the Council ;

(b) for reimbursing members of the Council or of any committees set up by the Council for such expenses as may be authorised by the Council and in accordance with the rates approved in that behalf by the Federal Executive Council ;

(c) to the payment of salaries, allowances or other emoluments and pensions, gratuities and other terminal benefits of the employees of the National Office ;

(d) for the maintenance of any property vested in or acquired by the National Office ; and

(e) for or in connection with all or any of the functions of the National Office or the Council under or pursuant to this Decree.

(2) There shall be paid and credited to the fund established pursuant to subsection (1) above—

(a) such sums as may be provided in each financial year by the Government of the Federation for payment into the fund ;

(b) fees charged for registration of contracts and agreements and for other services rendered by the National Office ; and

(c) all other sums accruing to the National Office under or pursuant to this Decree.

13.—(1) The Council shall cause to be prepared not later than 31st December in each year an estimate of the expenditure and income of the National Office during the next succeeding financial year, and when prepared they shall be submitted through the Commissioner for approval by the Federal Government.

Annual estimates, accounts and audit.

(2) The Council shall cause to be kept proper accounts of the National Office and proper records in relation thereto and when certified by the Council the accounts shall be audited as provided in subsection (3) below.

(3) The accounts of the National Office shall be audited as soon as may be after the end of each financial year by auditors appointed by the Council with the approval of the Federal Executive Council and the fees of the auditors and the expenses of the audit generally shall be paid from the moneys available to the National Office.

(4) Before appointing any auditor pursuant to subsection (3) above, the Council shall consult the Federal Commissioner for Finance.

Miscellaneous and Supplementary

14.—(1) The Director or any other staff of the National Office may by notice in writing served on any person carrying on an industrial or commercial undertaking require that person to furnish in such form as he may direct, information on such matters as may be specified by him.

Power to obtain information.

(2) A person required to furnish returns pursuant to subsection (1) above shall within 45 days of the notice comply with such notice.

15.—(1) If any person required to furnish returns pursuant to section 14 of this Decree fails to furnish those returns as required thereunder he shall be guilty of an offence and liable on conviction to a fine of N2,000 or imprisonment for six months or to both such fine and imprisonment.

Penalties for false returns, obstruction, etc.

(2) If a person in purported compliance with a requirement to furnish returns as aforesaid knowingly or recklessly makes any statement in the returns which is false in a material particular he shall be guilty of an offence and liable on conviction to a fine of N1,000 or imprisonment for six months or to both such fine and imprisonment.

(3) Any person who—

(a) wilfully obstructs any employee of the National Office acting in the execution of his duties under this Decree ; or

(b) without reasonable cause fails to give any such employee acting as aforesaid any information or other assistance which such employee may reasonably require of him for the purposes of the performance by such employee of his functions under this Decree, or of any subsidiary legislation made hereunder,

shall be guilty of an offence and liable on conviction to a fine of N1,000 or imprisonment for six months or to both such fine and imprisonment.

Restriction on disclosure of information by staff and penalty therefor.

16.—(1) Any person appointed or employed for the due administration of this Decree who communicates to any other person (not being a member of the Council or another employee of the National Office authorised to receive such communication) any document, drawing, photograph, plan, model or other information whatsoever which to his knowledge describes, represents or illustrates—

(a) any existing or proposed machinery, plant, installation or other structure whatsoever ; or

(b) any patent, process or any design ;

submitted by any person to the National Office for or in connection with any application for registration under this Decree shall be guilty of an offence.

(2) Any person found guilty of an offence under this Decree shall on conviction be liable to a fine of N2,000 or to imprisonment for two years or to both such fine and imprisonment.

Offences by bodies corporate and unincorporated.

17. Where an offence under this section is committed by a body corporate or firm or other association of individuals—

(a) every director, manager, secretary or other similar officer of the body corporate ;

(b) every partner or officer of the firm ;

(c) every person concerned in the management of the affairs of the association ; or

(d) every person who was purporting to act in such capacity as aforesaid, shall severally be guilty of that offence and liable to be proceeded against and punished for the offence in like manner as if he had himself committed the offence, unless he proves that the act or omission constituting the offence took place without his knowledge, consent or connivance.

Annual reports.

18. The Council shall, not later than 30th June in each year, submit to the Commissioner a report on the activities of the National Office during the immediately preceding year and shall include in such report the audited accounts of the National Office.

Staff regulations.

19.—(1) Subject to the provisions of this Decree, the Council may make staff regulations relating generally to the conditions of service of the employees of the National Office and, without prejudice to the generality of the foregoing, such regulations may provide for—

(a) the appointment, promotion and disciplinary control (including dismissal) of the employees of the National Office ; and

(b) appeals by such employees against dismissal or other disciplinary measures ;

and until such regulations are made, any instrument relating to the conditions of service of public officers shall, with such modifications as may be necessary, be applicable to the employees of the National Office.

(2) Staff regulations made under subsection (1) above shall not have effect until approved by the Commissioner ; when so approved they may not be published in the *Gazette* but the Council shall cause them to be brought to the notice of all affected persons in such manner as it may from time to time determine.

20. The fees payable for registration of a contract or agreement or for other services rendered by the National Office (and any variations to such fees) shall be such as may be fixed by the Council with the prior approval of the Commissioner.

Fees.

21. In this Decree, unless the context otherwise requires—

Interpre-
tion.

“the Chairman” means the Chairman of the Council ;

“the Commissioner” means the Federal Commissioner charged with responsibility for industry ;

“contract or agreement” includes any arrangement whatsoever which is capable of enforcement between the parties concerned or by an interested or affected third party ;

“the Council” means the Governing Council of the National Office established by section 2 of this Decree ;

“the Director” means the Director of the National Office appointed under section 10 of this Decree ;

“member” means any member of the Council including the Chairman ;

“the National Office” means the National Office of Industrial Property established by section 1 of this Decree ;

“prescribed” means prescribed by regulations made by the Commissioner ;

“the Secretary” means the Secretary to the Council appointed under section 10 of this Decree.

22. This Decree may be cited as the National Office of Industrial Property Decree 1979.

Citation.

SCHEDULE

Section 2

SUPPLEMENTARY PROVISIONS RELATING TO THE COUNCIL

Proceedings of the Council

1.—(1) Subject to this Decree and to section 26 of the Interpretation Act 1964 (which provides for the decisions of a statutory body to be taken by a majority of the members of the body and for the person presiding to have a second or casting vote), the Council may make standing orders regulating the proceedings of the Council or of any committee thereof.

1964 No. 1.

(2) The quorum of the Council shall be the Chairman and four other members, and the quorum of any committee of the Council shall be determined by the Council.

2.—(1) The Council shall meet not less than four times in each year and, subject thereto, the Council shall meet whenever it is summoned by the Chairman ; and if the Chairman is required to do so by notice given to him by not less than three other members he shall summon a meeting of the Council to be held within fourteen days from the date on which the notice is given.

(2) At any meeting of the Council, the Chairman shall preside, but if he is absent, the members present at the meeting shall appoint one of their number to preside at that meeting.

(3) Where the Council desires to obtain the advice of any person on a particular matter, the Council may co-opt him as a member for such period as it thinks fit ; but a person who is a member by virtue of this sub-paragraph shall not be entitled to vote at any meeting of the Council and shall not count towards the quorum.

(4) Notwithstanding anything in the foregoing provisions of this paragraph, the first meeting of the Council shall be summoned by the Commissioner.

Committees

3.--(1) The Council may appoint one or more committees to carry out, on behalf of the Council, such of its functions as the Council may determine.

(2) A committee appointed under this paragraph shall consist of the number of persons determined by the Council, who need not necessarily all be members of the Council ; and a person other than a member of the Council shall hold office on the committee in accordance with the terms of his appointment.

(3) A decision of a committee of the Council shall be of no effect until it is confirmed by the Council.

Miscellaneous

4.--(1) The fixing of the seal of the National Office shall be authenticated by the signature of the Chairman or of some other member authorised generally or specially to act for that purpose by the Council.

(2) Any contract or instrument which, if made or executed by a person not being a body corporate, would not be required to be under seal may be made or executed on behalf of the National Office by any person generally or specially authorised to act for that purpose by the Council.

(3) Any document purporting to be a document duly executed under the seal of the National Office shall be received in evidence and shall, unless the contrary is proved, be presumed to be so executed.

5. Members of the Council who are not public officers shall be paid out of moneys at the disposal of the Council such remuneration, fees or allowances in accordance with such scales as may be approved from time to time by the Federal Executive Council.

6. The validity of any proceedings of the Council or of a committee thereof shall not be affected by any vacancy in the membership of the Council or committee, or by any defect in the appointment of a member of the Council or of a committee, or by reason that a person not entitled to do so took part in the proceedings.

7. Any member of the Council, and any person holding office on a committee of the Council, who has a personal interest in any contract or arrangement entered into or proposed to be considered by the Council or a committee thereof shall forthwith disclose his interest to the Council and shall not vote on any question relating to the contract or arrangement.

MADE at Lagos this 24th day of September 1979.

GENERAL O. OGBANJO,
*Head of the Federal Military Government,
Commander-in-Chief of the Armed Forces,
Federal Republic of Nigeria*

EXPLANATORY NOTE

*(This note does not form part of the above Decree but is
intended to explain its purport)*

The Decree establishes the National Office of Industrial Property to monitor, on a continuing basis, the transfer of foreign technology to Nigeria. For this purpose the National Office is empowered to scrutinise every contract or agreement relating to transfer of technology before registration thereof.

Penalties are provided for in the Decree for any contravention of its provisions while foreign exchange will not be released in respect of any contract or agreement which is not so registered.

TECHNOLOGY LICENSING IN INTERNATIONAL BUSINESS:

NEGOTIATION AND IMPACT ON NIGERIAN LICENSEES

Q U E S T I O N N A I R E

This questionnaire is designed for companies operating in Nigeria under license from foreign firms. Licensing arrangement in this context is loosely defined to include both affiliated and unaffiliated licensees.

The questionnaire is divided into five sections (A - E).

- A - Background Information
- B - Details of Licensing Agreement
- C - The Bargaining Process
- D - Bargaining Power and Independent Variables
- E - The Impact of Licensing on the Licensee

SECTION A - BACKGROUND INFORMATION

The aim of this section is to obtain background information relating to the licensee company, as well as that of the licensor.

1. Date of interview
2. Name of company (as registered in Nigeria).....
.....
3. Name of interviewee
4. Position of interviewee
5. The main products in the company's product range
-
-
-
-
-
-
6. a. Total sales in each of the last 5 years (approximately):

1982
1983
1984
1985
1986
- b. Proportion of sales accounted for by export (by year)

1982%
1983%
1984%
1985%
1986%
7. Number of employees

8. a. Licensing agreement(s) - characteristics of all agreements (where more than one exist)

Date of Agreement	TECHNOLOGY SUPPLIER		Type(s) of License (eg. Equipment, Patent)	Duration of Agreement
	Licensor Firm(s)	Licensor Country(ies)		

b. Of these, which agreement is most important to your company?

c. Why is it the most important one?

 (The rest of the questionnaire will concentrate on the most important agreement.)

9. How long has the company been in existence before the licensing arrangement?

10. a. Are there ownership links between the licensee and the licensor?
YES / NO

b. If so, what is the nature of the link?.....

c. What percentage of the licensee company is owned by the licensor?

11. Have there been changes in the ownership structure of the licensee company since the agreement was made?

YES / NO

If yes, please explain the nature of the change.

.....

SECTION B - DETAILS OF LICENSING AGREEMENT

The purpose of this section is to obtain as much information as possible, relating to the agreement.

12. Please rank in order of relative importance 1 - 5 the main reasons for entering into this licensing agreement (1 = most important, 5 = least important).

- a. i technology
- ii market potential of the licensed item
- iii export market access
- iv technical assistance
- v support capital

b. Please explain your reasons

.....

.....

13. a. Please tick and rank in order of relative importance, 1 - 11, the following factors which are included in the licensing package (1 = most important, 11 = least important).

Licensing Package	Tick	Rank
i Machinery and equipment		
ii Technical assistance in production		
iii Right for utilisation of patents/trademarks		
iv Right for utilisation of design, formula etc.		
v Technical assistance in design and construction of plant		
vi Technical assistance in product design		
vii Technical assistance in quality control		
viii Technical assistance in purchasing of inputs/ components		
ix Rights to the use of advertising materials		
x Technical assistance in marketing and administration		
xi Personnel training		

b. Please explain the nature of package e.g. nature of technical assistance. etc

.....
.....
.....
.....

15. Is it possible to substitute some of the elements of the package either locally or through other foreign firms?

YES / NO

Please explain.

.....
.....

16. a. Are there alternative licensors for this product/process?

.....

b. If so, why the preference for this licensor?

.....

- i reputation/brand name
- ii sophistication of technology
- iii ownership links
- iv access to licensor distribution system
- v others, please specify

17. a. Describe the structure of royalty payment, i.e.

- i fixed sum
- ii running royalty
- iii a combination of i and ii above

b. Please give details:

- i percentage of revenue/specified amount
- ii currency of payment
- iii duration

18. a. Does the agreement specify obligation on?

- i selling price YES / NO
- ii production volume YES / NO
- iii utilisation on technical assistance YES / NO
- iv restriction on R & D YES / NO

- v restriction on introduction of other products YES / NO
- vi secrecy YES / NO
- vii others, please specify YES / NO

b. What is the nature of these obligations?

.....

.....

.....

.....

19. Does the agreement contain improvement/adaptation clause?

YES / NO

If yes, please explain the nature of the clause

.....

.....

20. Does the agreement contain liability clause i.e. to guard against defective product/process?

YES / NO

If yes, please describe the nature of such clause

.....

.....

21. Who has the power to determine when and how an agreement should be terminated?

- i licensee
- ii licensor
- iii mutual agreement

22. Does the agreement impose limitations on market coverage i.e. locally or internationally?

YES / NO

If yes, please describe the nature of the restriction.

.....

.....

23. Did the licensor provide support capital for the start-up of the project?

YES / NO

24. How is arbitration carried out, where there is disagreement over interpretation and implementation of the agreement?

.....
.....
.....
.....

25. a. What is the nature of obligation imposed by the agreement on confidentiality, on matters relating to the arrangement?

.....
.....
.....
.....

b. Could you explain why this clause is necessary?

.....
.....
.....
.....

26. Are there restrictive/tie-in clauses in the agreement?

YES / NO

If yes, what are the restrictions?

- i licensor as sole agent for licensee products
- ii intermediate input supplies by the licensor
- iii equipment of machinery supply by the licensor
- iv provision of technical assistance by the licensor
- v others, please specify

.....
.....

27. Are there other important aspects of the agreement?
.....
.....

SECTION C - THE NEGOTIATION PROCESS

The aim of this section is to establish how the negotiation for licensing agreement took place and the factors that have influenced the negotiation process.

28. Which party made the initial contact?

- i licensee
- ii licensor
- iii linked up by a third party

29. a. Is there any special licensing department? YES / NO

b. Who conducted the negotiation for:

i. Licensee.....
 Position in the company.....

ii Licensor.....
 Position in the company.....

30. a. How long did the negotiation last from time of initial contact to reaching an agreement?

.....

b. How many contacts were made/or meetings held?

31. Did the licensee have any previous experience in the negotiation of licensing agreements?

YES / NO

If yes, please specify.

.....

.....

32. Was there a third party assistance (eg. consultants) during the negotiation?

YES / NO

If yes, what was the nature of assistance received?

.....
.....

33. Were there 'trade-offs' during negotiation?

YES / NO

If yes, what were the trade-offs?

.....
.....

34. What influence (if any) did government policy on licensing have on the negotiation process?

.....
.....
.....

35. a. Are you happy with the outcome of the negotiation?

b. Would you have preferred a different outcome?

c. What changes would you have preferred? Please give details.

.....
.....
.....

SECTION D - BARGAINING POWER AND INDEPENDENT VARIABLES

The purpose of this section is to determine the relative importance of those factors that determine or influence the outcome of an agreement (eg. technology, locational attractiveness etc.)

36. Please describe the effect of technology on the outcome of the agreement.

.....
.....

37. Where support capital was provided by the licensor, please explain its effect on the outcome of the agreement.

.....
.....
.....

38. a. Does the licensed product/process have export potential? YES / NO

b. If yes, does the company rely on the licensor's marketing network abroad for export marketing? YES / NO

c. If yes, what impact did export market access have on the outcome of the agreement?

.....
.....

39. a. Did the size of your company have any influence on the outcome of the negotiation? YES / NO

b. If yes, what kind of influence did it have?

40. a. Did competition from alternative technology suppliers influence the outcome of the negotiation. YES / NO

b. If Yes, explain the extent of the influence

41. What influence did ownership link have on the negotiation process? Please give details.

.....
.....
.....

42. How significant was locational attractiveness on the negotiation process (eg. market size)?

.....
.....

43. Where third party assistance was used, what was its influence on the negotiation process?

.....
.....
.....

44. How would you assess the major factors that have influenced agreement on the level of royalty?

.....
.....
.....

45. In your opinion, how do you assess the duration of the agreement?

- i neither long nor short duration
- ii normal duration (compared with similar agreements)
- iii excessively long duration (compared with similar agreements)

46. a. Where the agreement contained restrictive or tie-in clauses, why were they acceptable?

.....
.....
.....

b. Was the agreement registered with the National Office of Industrial Property (NOIP)?

YES / NO

c. If YES, were these clauses acceptable to the NOIP?

.....
.....
.....

d. If NO, how will the royalty payments be remitted? Please explain.

.....
.....
.....

47. On a scale of relative importance 1 - 5, how would you describe the influences of the determining factors (eg. technology, locational attractiveness, ownership links etc.) on the substance of the agreement (i.e. terms and conditions of the agreement)?

Independent variables	Unimportant	Fairly unimportant	Neither important nor unimportant	Fairly important	Very important
Technology	5	4	3	2	1
Support capital	5	4	3	2	1
Ownership link	5	4	3	2	1
Locational attractiveness	5	4	3	2	1
Third Party assistance	5	4	3	2	1

SECTION E IMPACT OF LICENSING ON THE LICENSEE

The aim of this section is to assess the impact of the licensing agreement on the licensee firm both in the short-term and in the long-term.

48. What impact did the agreement make on licensee's:

- i revenue/profitability
-
-
- ii technical expertise
-
-
- iii marketing skills
-
-

iv market share/reputation

.....

.....

v growth

.....

.....

vi development of indigenous technology

.....

.....

vii others, please specify

.....

.....

.....

49. What has been the effect of this agreement on:

a. employment level

.....

.....

b. skill content of employment

.....

.....

c. training and re-training

.....

.....

50. a. Have there been changes in capital investment due to the licensing agreement?

YES / NO

b. If yes, what is the nature and extent of these changes?

.....
.....
.....

51. Did the agreement fulfil its expectations? Please explain.

.....
.....
.....

52. Do you think that more benefits would have been derived from the agreement, had terms and conditions been different? Please explain.

.....
.....
.....

53. a. What is your impression of technology acquisition through licensing?

.....
.....
.....

b. Finally, would you in future recommend licensing to your company, any other company or persons?

.....
.....
.....

APPENDIX VI.

COMPUTER CODING SCHEME FOR RESULTS.

<u>VARIABLE</u>	<u>CODING SCHEME</u>	<u>COLUMN.</u>
Identifier (ID)	Company 1 - 31	1 - 2
Record	Deck No. 1	3
Position of respondent	1 = Managing Director 2 = General Manager 3 = Company secretary	4
Product Range	1 = Paints/Chemicals 2 = Agro-products 3 = Motor vehicle 4 = Beer/Beverages 5 = Electronics 6 = Food products 7 = Cement & Allied Products 8 = Pharmaceuticals 9 = Heavy Engineering	5
Sales 1982	0 - 999 in million	6 - 8
Sales 1983	0 - 999 in million	9 - 11
Sales 1984	0 - 999 in million	12 - 14
Sales 1985	0 - 999 in million	15 - 17
Sales 1986	0 - 999 in million	18 - 20
No. of Employees	1 = 0 - 100 2 = 101 - 250 3 = 251 - 500 4 = 501 - 1000 5 = 1001 and above	21
Licensor countries -		
A	1 = U.K. 2 = U.S.A. 3 = Europe & Japan (minus UK). 4 = Others	22
B	1 = U.K. 2 = U.S.A. 3 = Europe & Japan (minus UK) 4 = Others	23
C	1 = U.K. 2 = U.S.A. 3 = Europe & Japan (minus UK) 4 = Others	24

Types of License :		
Country A, Type 1, A1	1 = Patent 2 = Trademarks 3 = Technical Assistance 4 = Equipment	25
Country A, Type 2, A2	1 = Patent 2 = Trademarks 3 = Technical Assistance 4 = Equipment	26
Country A, Type 3, A3	1 = Patent 2 = Trademarks 3 = Technical Assistance 4 = Equipment	27
Country B, Type 1, B1	1 = Patent 2 = Trademarks 3 = Technical Assistance 4 = Equipment	28
Country B, Type 2, B2	1 = Patent 2 = Trademarks 3 = Technical Assistance 4 = Equipment	29
Country B, Type 3, B3	1 = Patent 2 = Trademarks 3 = Technical Assistance 4 = Equipment	30
Country C, Type 1, C1	1 = Patent 2 = Trademarks 3 = Technical Assistance 4 = Equipment	31
Country C, Type 2, C2	1 = Patent 2 = Trademarks 3 = Technical Assistance 4 = Equipment	32
Country C, Type 3, C3	1 = Patent 2 = Trademarks 3 = Technical Assistance 4 = Equipment	33
Duration (Years)	1 = 0 - 5 2 = 6 - 10 3 = Indefinite	34
Most important agreement	1 = Patent 2 = Trademarks 3 = Technical Assistance 4 = Equipment	35

Reason	1 = Technology component 2 = Sales Potential 3 = Technology and sales	36
Age of company	In Years	37 - 38
Ownership Links	1 = Yes 2 = No	39
Nature of Link	1 = Minority 2 = Majority	40
% owned by Licensor	In percentage	41 - 42
Changes in ownership	1 = Yes 2 = No	43
Nature of changes	1 = Increase 2 = Decrease	44
Reason for change	1 = Voluntary 2 = Government regulation	45
Reason for licensing	1 = Technology 2 = Market potential 3 = Export market access 4 = Technical Assistance 5 = Support capital	46
Licensing Package (Relative importance)		
Machinery & Equipment	11 - 0	47 - 48
Tech. assistance in production	11 - 0	49 - 50
Patent/Trademarks	11 - 0	51 - 52
Design and formula	11 - 0	53 - 54
Plant design and construction	11 - 0	55 - 56
Technical assistance in product design	11 - 0	57 - 58
Quality control	11 - 0	59 - 60
Input purchase	11 - 0	61 - 62
Advertising	11 - 0	63 - 64
Marketing	11 - 0	65 - 66
Training	11 - 0	67 - 68

Alternative licensor available	1 = Yes 2 = No	69
Preference for licensor	1 = Reputation/Brand name 2 = Technology 3 = Ownership links 4 = Distribution access 5 = Others	70
Royalty structure	0 = No royalty 1 = Fixed sum 2 = Running royalty 3 = Combination of fixed & running	71
Percentage of revenue	1 = 1 - 2 percent 2 = 3 - 4 percent	72
Duration	0 = No duration allowed 1 = 0 - 5 years 2 = 6 - 10 years 3 = Indefinite	73
Restrictions on selling Price	1 = Yes 2 = No	74
Production volume	1 = Yes 2 = No	75
Technical assistance	1 = Yes 2 = No	76
R & D	1 = Yes 2 = No	77
Introduce other product	1 = Yes 2 = No	78
Secrecy	1 = Yes 2 = No	79
Improvement clause	1 = Yes 2 = No	80
Identifier (ID)	Company 1 - 31	1 -2
Record	Deck no. 2	3
Nature of clause	1 = Licensor not to inform licensee 2 = Reciprocal exchange of information 3 = Licensee not to inform licensor	4

Liability clause	1 = Yes 2 = No	5
Nature of liability	1 = Licensor indemnified 2 = Licensee indemnified 3 = Shared liability	6
Termination power	1 = Licensor 2 = Licensee 3 = Either party with notice	7
Limitation on market coverage	1 = Yes 2 = No	8
Nature of restriction	1 = Locally 2 = Internationally 3 = Both locally and internationally	9
Support capital	1 = Yes 2 = No	10
Arbitration	1 = Licensor country 2 = Licensee country 3 = Neutral country	11
Tie-in clauses	1 = Yes 2 = No	12
Nature of Tie-in	1 = Licensor as sole agent 2 = Intermediate input supplies 3 = Equipment supplies 4 = Technical assistance 5 = Others.	13
Initial contact	1 = Licensee 2 = Licensor 3 = Linked by third party	14
Licensing dept.	1 = Yes 2 = No	15
Negotiator for licensee	1 = M.D. with management 2 = Consultants 3 = Holding company	16
negotiator for licensor	1 = M.D. with Management 2 = Consultants 3 = Holding company	17
Length of negotiation	1 = 1 - 6 months 2 = 7 - 12 months 3 = 13 months and over	18

Number of contacts	1 = 1 - 5 times 2 = 6 - 10 times	19
Negotiating experience	1 = Yes 2 = No	20
Third party assistance	1 = Yes 2 = No	21
Nature of assistance	1 = Consultants 2 = Consultation with govt. agency	22
Trade-offs	1 = Yes 2 = No	23
Policy influence	1 = Yes 2 = No	24
Nature of influence	1 = Royalty 2 = Duration 3 = Restrictive clauses	25
Satisfied with outcome of negotiation	1 = Yes 2 = No	26
Changes wanted	0 = No changes 1 = More royalty for licensor 2 = Less royalty for licensor 3 = Less duration 4 = More licensor liability 5 = Generally more favourable terms	27
Technology	1 = Very important 2 = Fairly important 3 = Neither imp. nor unimportant 4 = Fairly unimportant 5 = Unimportant	28
Support capital	1 = Very important 2 = Fairly important 3 = Neither imp. nor unimportant 4 = Fairly unimportant 5 = Unimportant	29
Ownership link	1 = Very important 2 = Fairly important 3 = Neither imp. nor unimportant 4 = Fairly unimportant 5 = Unimportant	30
Location attractiveness	1 = Very important 2 = Fairly important 3 = Neither imp. nor unimportant 4 = Fairly unimportant 5 = Unimportant	31

Third party assistance	1 = Very important 2 = Fairly important 3 = Neither imp. nor unimportant 4 = Fairly unimportant 5 = Unimportant	32
Licensors Network	1 = Important 2 = Unimportant	33
Company size	1 = Important 2 = Unimportant	34
Supplier competition	1 = Important 2 = Unimportant	35
Determinant of royalty level	1 = Government regulation 2 = Licensor power 3 = Licensee power	36
Assessment of duration	1 = Too short 2 = Normal duration 3 = Excessively long	37
Registration with NOIP	1 = Yes 2 = No	38
Restriction accepted by NOIP	1 = Yes 2 = No	39
Reason for acceptance	1 = Indispensible technology 2 = Agreement operational before NOIP 3 = Bargaining power of licensor	40
Not registered with NOIP	1 = Yes 2 = No	41
Reason for not registering with NOIP	1 = Rejected by NOIP 2 = Remittances not needed	42
Revenue/profitability	1 = Increase 2 = Decrease 3 = No change	43
Technical expertise	1 = No change 2 = Increase	44
Marketing skills	1 = Increase 2 = No change	45
Market share/reputation	1 = Increase 2 = No change	46

Growth	1 = Increase 2 = No change	47
Development of tech.	1 = Increase ability 2 = No change	48
Employment	1 = Increase 2 = No change	49
Skill content	1 = Highly skilled 2 = Largely skilled 3 = Unskilled	50
Training	1 = Increase training 2 = Decrease 0 = No change	51
Changes in capital investment	1 = Yes 2 = No	52
Where yes, Nature	0 = No change 1 = Increase 2 = Decrease	53
Expectations of agreement	1 = Achieved more than expected 2 = As expected 3 = Below expectation	54
Impression about licensing	1 = Highly desirable 2 = Just alright 3 = Not desirable	55
Recommendation	1 = Recommended 2 = Reservations 3 = Not recommended	56