

THE UNIVERSITY OF ZAMBIA  
SCHOOL OF LAW  
OBLIGATORY ESSAY L411

*School of Law*

*oblig-essay*

*1993/94*

THE TRANSFER OF TECHNOLOGY FROM DEVELOPED TO DEVELOPING COUNTRIES:  
A CASE STUDY OF ZAMBIA

BY

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BEING A FINAL YEAR DISSERTATION SUBMITTED TO THE UNIVERSITY OF ZAMBIA,  
FACULTY OF LAW IN PARTIAL FULFILLMENT TO THE CONDITIONS FOR THE AWARD  
OF THE BACHELOR OF LAWS (LL.B) DEGREE

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DATE: *21 November 1994*

THE UNIVERSITY OF ZAMBIA

SCHOOL OF LAW

I RECOMMEND THAT THE OBLIGATORY ESSAY PREPARED UNDER MY SUPERVISION

BY

JUDY ZULU

ENTITLED

THE TRANSFER OF TECHNOLOGY FROM DEVELOPED COUNTRIES TO DEVELOPING  
COUNTRIES: A CASE STUDY OF ZAMBIA

BE ACCEPTED FOR EXAMINATION. I HAVE CHECKED IT CAREFULLY AND I AM  
SATISFIED THAT IT FULFILLS THE REQUIREMENTS RELATING TO THE FORMAT  
AS LAID DOWN IN THE REGULATIONS GOVERNING OBLIGATORY ESSAYS.

DATE...21<sup>st</sup> November 1994...

SUPERVISOR:..........

## Dedication

To my parents with love, for everything.

### Acknowledgment

I would like to extend my sincere gratitude to the following:

MR. K. M. Hansungule for constant supervision of this paper and also for his brilliant comments and ideas, Mr L. Mulenga for his help and time rendered for this paper, Mr F. Mulenga and Mr B. Malongo of the Patents Office for the material and information they supplied which has made this work possible also Mr Lipimile from the Ministry of Commerce and Industry, my beloved friends Mufalo Sikute, Conceptar Chinyanwa, and Susan Mkandawire for always being around and finally I am deeply indebted to my aunt Mrs Rose Kawandami who typed this paper. To you all I say thank you very much and may God richly bless you all.

## ABSTRACT

When we speak of transfer of technology in this paper we use the expression to mean the transfer of systematic knowledge for the manufacture of a product, for the application of a process, rendering a service, including managerial and marketing technologies but not to transactions including only the sale of goods.

In the expression are therefore included, first the assigning, selling and licensing of all forms of industrial property including patents, industrial designs as well as trademarks and trade names. Second, it includes providing technical know-how and technical expertise in the form of feasibility studies, plans, diagrams, models, instructions, guides, formulae, basic or detailed engineering, designs, specifications and equipment for training, services including technical, advisory and managerial personnel and personnel training. Third, transfer of technology includes the provision of technological knowledge necessary to acquire, install and use machinery, equipment, intermediate goods and or raw materials which have been acquired by purchase lease or other means.

The problem of transfer of technology are inter alia; high costs of the technology, continued dependence on Developed countries do not benefit from the transfer because forms are not fair and the inappropriateness of the technology transferred.

This paper will also review the legislations relating to the transfer of technology in Zambia and also the legal methods of transferring technology employed in Zambia.

Thus, the problems of transfer of technology and the problems of available legislations form the subject matter of this paper. Proposal and recommendations are made on the basis of problems identified.

### OBJECTIVES OF THE STUDY

The objectives of this study are as follows:

1. To highlight the problems of the legislations relating to the control of transfer of technology, that is, to show whether or not there exists an effective legal system capable of ensuring transfer of technology under fair and reasonable terms.
2. To investigate the best way in which transfer of technology can be utilised and obtained to the benefit of Zambia.

## METHODOLOGY

The study was carried out through the review of literature and documents from various Governmental departments like the Ministry of Commerce and industry, international documents and field research in the form of interviews. Interviewees were officers from the Patents office and the Ministry of Commerce and Industry. I also held discussions with my supervisor on the theory of technology transfer and the structure of the institutions.

## ORGANIZATION

The chapters will be set as follows:

### Chapter one: Definition of various concepts

This chapter will name the definitions of the concepts, 'technology', 'transfer', and 'transfer of technology', and will highlight the problems of transfer of technology from developed to developing countries.

### Chapter two: mechanisms of transfer of technology

The chapter will specifically deal with the mechanisms of transfer of technology employed in Zambia and the methods raised by the same.

### Chapter three: Review of Available legislations

This is a review of the available legislations ie attempts made by the Government of Zambia to control transfer of technology.

### Chapter four: Summary, Proposals/Recommendations and the conclusion

This will mark the end of this paper. It will have a summary of the study, proposals will be given in view of identified problems and finally the conclusion of the whole study.

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## Chapter 1: CONCEPT & PROBLEMS OF TECHNOLOGY TRANSFER TO DEVELOPING COUNTRIES

### DEFINITION OF CONCEPTS

#### 1.1 DEFINITION OF TECHNOLOGY

It is important from the outset to define the concept technology. Many people have tried to define technology.

According to Geokjian,

"the concept technology as used by third World countries: goes considerably beyond its traditional concept as understood in Western Countries, as it covers in addition to scientific and industrial know how, operational and managerial know how such as how to organise and operate industrial, agricultural, ~~touristic~~ and other types of large projects. "1

Sherwood's conceptualisation of technology agrees with that of Geokjian. He says .....

"I assume we are considering technology not only of techniques of science but are including managerial, marketing and technical skills and training techniques because all of these are included in a package which a company from an industrialised country brings to a developing country."2

Gladwin and Walter consider technology simply as the primary determinant of the efficiency with which labour and capital resources are used in production process<sup>3</sup>. Technology has also been referred to as knowledge of how to do all those things associated with economic activity ~~capitales~~ conceptualises technology as

"the combination of types of knowledge indispensable to carry out the necessary operations for transmitting factors of production into products, the use of knowledge or the provision of services."4

In other words, it is the rational organised incorporation of scientific knowledge into the system of production.

Balasubramanyan views it as being.

"an amorphous term which embraces all the tangible and intangible assets in which knowledge employed in the factors of production is embedded. The tangible resources are machinery, plant and equipment that embody technology while the intangible ones are knowledge stored in the media of general accessibility or entrepreneurial and organised skills of individuals who work in harmony with a company."5

According to Hall and Johnson "technology is knowledge or information that permit some task to be accomplished, some service rendered or some product produced."6

In this paper, the concept technology constitutes a special form of human resource which can be defined as the body of knowledge that is used in the production of goods and provision of services.

In a wider sense technology is basically a commodity embedded in a variety of different forms. It is a commodity in the sense that it is marketable, it can be hired, bought or sold.

The developing countries have to acquire technology through a process of transfer. The concise Oxford Dictionary defines transfer as "convey, remove, handover a thing from one person or place to another." 7

#### 1.11 DEFINITION OF TRANSFER OF TECHNOLOGY

The concept of transfer of technology like that of technology has been defined by many people.

Schmitt views it as .....

"the application of technology outside the sphere for which it was specifically developed and in which it was initially applied."8

Lake considers the concept of transfer of technology to convey a generally but not necessarily commercial activity which brings about wider application of a single technology and it takes place in a territorial as well as in a technological sense,"<sup>9</sup>

Huybrecht says the transfer of technology.

"covers all action whereby developing countries obtain theoretical and practical knowledge and industrial knowhow from one culture to another and especially from an industrial developed country. It is a cultural, social and political process and not just an imitation of manufacturing process."<sup>10</sup>

In this paper, ~~transfer~~ of technology is the acquisition by the people in one country of economically useful knowledge from the people in another country.

According to Tumurine Mukubwa, the term transfer of technology is misleading for two reasons. Firstly, technology is not transferred but sold hence commercialization of technology would have been more appropriate. Secondly, the word technology is all embracing. It includes inter alia intermediate products, machinery and equipment, knowhow systems of production, patents, Trademarks and marketing systems.

The term is thus misleading because when technology is sold the selling may be of one, several or all of the above.

Acquisition of technology by Zambia or a Zambian enterprise from a foreign country or source constitutes a transfer. It involves the bringing into Zambia, a piece of technology that was non-existent until such acquisition was effected.

## 1.2 HOW AND WHY TECHNOLOGY IS ACQUIRED

Technology is a vital part of the development process, a necessary input into all activity. Because of the historical background of developing countries, a very large part of the technology used is transferred from developed countries. The transfer raises four major issues:

those of the costs of the transfer, the appropriateness of the products and techniques transferred, the effects of the transfer on learning and technological development in less developed countries. These are discussed in the next chapter.

Technology transfer from one country to another is effected through the transmission of technical knowledge for example, through patents, licences or through the execution of agreement for the supply of know how etc. In Zambia, many if not most of the methods through which technology transfer takes place depend upon legal relations that is, consensual legal arrangements between the parties to the transfer. The terms agreed upon by the parties governing technology transfer are incorporated in a legal instrument called licence, contract or agreement.

There are general clauses which are found in every transfer of technology agreement and these are hardship, technical and Arbitration clauses.

The transfer of technology consists in part in the transfer of required knowledge and in part in the transfer of various marketing rights associated with the knowledge. These include the right to use trademarks, access to specified markets and so on.. In many cases the two are inextricably connected so that if the buyer wishes to purchase the knowledge he also has to purchase the market rights and vice versa.

Technology transfer is essential for industrialisation and as most third world countries are underdeveloped, they have to acquire technology from developed countries. Indicators that Zambia is underdeveloped are unemployment among the youth, lack of technology, finance, equipment skills, poor standard of living and lack of adequate medical facilities.

Zambia lacks knowhow and so has to look elsewhere for the supply of entrepreneurship, management and knowhow. Since technology has been referred to as knowledge of how to do all those things associated with economic activity then its acquisition is as important to the development process, and an essential aspect of the process of investment as is the accumulation of financial resources. Moreover, because technology is continuously changing with new products and processes being developed year by year, the need to acquire technology is also a continuous one.

The idea of acquisition of technology by the developing countries all began due to the fact that immediately following the attainment of political independence most countries were keen to industrialise quickly and to maximise the technology inflow. In Zambia Government encouraged private enterprise. In 1967, former president Kenneth Kaunda reaffirmed the ruling Party's policy of encouraging private enterprise in Zambia when he said.....

"Government recognises the necessity for giving appropriate incentives to Potential investors in the industrial sector in Zambi."11

## 1.21 PROBLEMS OF TECHNOLOGY TRANSFER

The terms under which technology is transferred are not fair and do not encourage industrial development in the underdeveloped countries. This has invariably led to the main problem of transfer of technology which is that of dependence. The terms are such that the underdeveloped countries have always remained dependent on the developed countries, terms should instead have been such that the developing countries should later be able to develop their own technologies. However, the status quo is that the developing country does not benefit because the terms and how technology transfer is effected are not fair.

The technology maybe simplified to suit the local situation it still remains a complex issue as observed by Schmidt and UNIDO, particularly because technology and techniques to be transferred are not just transferrable like some material object for example, a liquid being poured from one vessel to another. It is a much more complicated process which in turn is affected by legal, socio-political and other economic factors.

The other problems of transfer of technology are that firstly, it limits the independence of decision making which is desired in itself as an essential element of the learning process so that countries may develop the capacity first to make independent technological choices and subsequently to develop their own technology. Carlos Andres Perez apthy expressed the view of many third world Leaders when he declared that:

"Today industrialised nations must share decision making with us. We believe in interdependence among equals rather than an interdependence in which there are subordinates."12

Inappropriate technology is one another's problem. The technology which is introduced is inappropriate in the sense that technology recently developed in developed countries tends to be inappropriate in many respects for the developing countries.

This maybe so because it is designed to meet the needs of the advanced countries and such products are ill-suited to meet the basic needs of the poor people. The technology is also inappropriate as only a limited amount of it is transferred because most of the research and development is concentrated in a few firms located in the developed countries (TransNational Corporations). These firms have no commercial interest in diffusing their knowledge to potential native competitors, they minimise the transfer of technology by neglecting to train host country nationals for research and development posts.

The pricing of technology is also excessive and TransNational corporations argue that since they invest in research and development which produce or improve technology then they should recover expenses by selling plants and equipments at high prices and charging high fees for royalties for the management services, licences for the use of their patents and brand names as can be exemplified from the following quotation:

"It seems unreasonable to expect a free gift of such technology to the host state. Such a gift is a kind of development aid, hence should be made or paid for by the home state out of appropriate development funds." 13

The other problem associated with the transfer of technology is the creation of market divisions in that there are cases whereby products from for instance, Zambia are prohibited from being exported to another country, example Zaire.

In order to fully understand the need for and the many problems affecting the transfer of technology, it is necessary to gain an understanding of the past and present economic relations between the developing countries and their former colonial masters. Because the nature of these economic relations are similar, it will suffice to give no more than a start history.

It has been correctly observed and it is axiomatic that contemporary underdevelopment is largely the consequence of past and continuing relations of production in the world economy. 14

These relations, it has been further lightly asserted are an essential part of the structure and development of the international capitalist system. 15 This international capitalist system developed the local economy in such a way as to make it a mere appendage of the economy of the colonial master. The local economy became specialised as a producer of primary products such as copper in Zambia, cocoa in Ghana and sisal in Tanzania. These raw materials were processed into finished products in the metropole and re-exported to the dependency. Thus, even after political independence, there remained deep rooted economic dependence on the foreign market since the principal exports have no home base but were produced simply to complement the economy of the metropole.

There was also dependence on import of capital goods and sometimes raw materials for the limited industrial activity generated by import substitution and on foreign investment and enterprenuers in the absence of domestic capital and a local bourgeoisie. Increased productivity has been attained in developed countries as a result of the extension of specialization and exchange accompanied by the increasingly systematic introduction of modern machinery and technology in all branches of the economy. Unfortunately, in the developing countries this specialization and exchange has been external in the sense that the whole economy specialized in raw materials.

It is this background that has necessitated the transfer of technology from developed countries to developing countries to benefit the local economy.

FOOTNOTES

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## CHAPTER 2

### MECHANISMS OF TRANSFER OF TECHNOLOGY EMPLOYED IN ZAMBIA: ADVANTAGES & DISADVANTAGES

#### 2.1 INTRODUCTION

There is a variety of mechanisms of transferring technology from one country to another. Some of the mechanisms include the transmission of technology knowledge for example through patent licence of the execution of the agreement for the supply of know-how, the sale and importation of capital goods provision of technical services and assistance, direct foreign investment, the training of personnel of the target country or by the immigration of qualified personnel into that country.

Despite the existence of so many methods in Zambia, only two methods are mainly employed namely licencing of industrial property rights and the supply of know-how.

#### 2.11 INDUSTRIAL PROPERTY LICENCE

An industrial property licence relates to the permission granted to the licensee to do certain acts covered by the exclusive rights conferred by Law in the fields of patents, trademarks and industrial designs, only the licensee and his agents are given power, exclusive privilege and authority during the term of the patent in force to make use and vend the invention within Zambia any other person risk being sued for infringement.

#### 2.12 PATENTS

A patent is basically a monopoly granted to the owner of the patent for an invention"1 it has further been described as "nothing more than a piece of paper which confers ownership of an invention on the recipient, the patentee"

This ownership entitles the patentee to exclude others from using the invention for a specified number of years, in Zambia, this is the term of the patent which is sixteen years. It is in other words, creates in the invention property rights.

The legal effect of a patent is that a right and can be enforced by law. It can also be assigned in law by an instrument in writing.

An invention on the other hand means, "any new and useful art (whether producing a physical effect or not) process, machine, manufacture or composition of any new and useful improvement thereof which is not obvious, capable of being used are applied in trade or industry and includes an alleged invention."<sup>3</sup>

In Zambia, patent licences are regulated by the provisions of the patent Act. Technology transfer through patent licensing is not only a matter of interest between private individuals but it also involves the Government. The Zambian Government grants the patent through the patent office which is the same office as the registrar of companies.

The effect of a grant of a patent according to the Act is that, the patentee, his Agents, assignees and licensees are given power, exclusive privilege, and authority during the term of the patent to make, use and vend the invention within Zambia."<sup>4</sup> Other persons risk being sued for the infringement of the patent. The life of a patent is sixteen years with the possibility of extending the patent for a further ten years.<sup>5</sup>

The Act prohibits grant of a patent, where what is claimed as an invention is a substance capable of being used as food or medicine or any invention which in the opinion of the Registrar of patents might be used in any manner contrary to law. Accordingly, patent licensing is not possible under the Act: If the object of the licence relates to food or medicine or any substance which in the opinion of the Registrar could be used contrary to law or morality."<sup>6</sup>

Under the Act, patented technologies must contribute to the economic development of Zambia therefore inventions must be worked in Zambia. Non-working of an invention is an abuse of the right conferred on the patentee by a patent and in the event that a patent abuses his right, like failure to work the patented invention, it will be compulsorily acquired."<sup>7</sup>

The Act further prohibits the inclusion of restrictive terms in the patent licence, if included such terms are null and void."<sup>8</sup>

The main advantage of patent licence is that the patentee is under an obligation to make a full disclosure of his invention through the patent documents and the manner in which the invention has to be worked. Once the documents are lodged with the patent office they are examined and published for public information to which the public then has access. "The public will receive the information before the licensing agreement."<sup>9</sup>

The advantage is summed up by UNIDO as follows:

"in fact the licensee can compare patents in a competitive products area and thus negotiate a favourable contract. In a pure know-how agreement on the other hand the licensee is in a poor negotiating position since the licensor's information is obtained only after the contract is signed."10

## 2.13 Trademarks

In contract, a trademark is, " a device, word or words secured by legal registration or established by the use as representing a company, product etc. "11 According to the Trademarks Act, a trademark means ..... " a mark used or proposed to be used in relation to goods for the purpose of indicating or so as to indicate a connection in the course of trade between the goods and some person having the right either as proprietor or as registered user to use the mark, whether with or without any indication of the identity of that person..."12

The trademark licence is governed by the provisions of the trademarks Act, chapter 693 of the laws of Zambia.

The Act provides that there shall be established under the director of the Minister an office to be called the trademarks office."13 Further that there shall be kept at trademarks office, the register of trademarks which shall contain all the registered trademarks, addresses, names... and other matters as maybe prescribed "14

An important feature of a trademark is that it should be distinctive and according to the Act Distinctive means adapted in relation to the goods in respect of which a trademark is registered or proposed to be registered to distinguish goods with which the proprietor of the trademark is or maybe connected in the course of trade from goods in the case of which no such connection subsists either generally or where the trademark is registered or proposed to be registered subject to limitations in relation to use within the extent of the registration."15

A trademark should distinguish goods or products manufactured by one produce from those of another. Below is an example of a trademark:

Johnson and Johnson

This mark distinguishes products from Johnson and Johnson from those of other companies who deal in similar products like vaseline or Interchem.

Under the Act, registration is in four parts namely A,B,C and D. D. Parts A and B are most important while registration in C and D

depend on either A or B. Before registration is done the degree of distinctiveness is taken into consideration. The degree in part A is higher than in B while C and D are special kinds.

The procedure for registration which is done by the patent office is as follows: Firstly a search is conducted on application by a person in a form to find out if the mark is distinct or if anything similar has been already registered.

After this a formal and substantive examination is made during which many records are consulted. This is done by officers at the patents office. Formal examination is made to ensure that provisions of the Act are complied with while substantive examination is made to find out if in consequence of the search and findings, the trademark is registrable or not, what factors does it contain? and so forth. If it's distinct it would be accepted if not the applicant will be informed in writing even if a mark is distinct but is similar to other marks it cannot be registered and the applicant will be informed in writing that there's prior registration of the mark and thus it can't be accepted.

If, after the search, the mark passes the examinations the application is accepted and advertised in the Trademark Journal then the applicant will send this advertisement to the Government printer with a copy of the trademark and he shall pay all the necessary fees. This should be done at once, if delayed or not done at all the application will be withdrawn from the pending list never to be revived except to file in a new application.

The mark is advertised to inform members of the public of the impending intention of registration of the trademark. If some members of the public think their interests will be prejudiced they should let the patent office know within two months after the advertisement. If there's no opposition the applicant will pay the remaining fees and the certificate of registration will be issued.

A trademark in part A should also contain at least one of the following particulars:

- a. The name of a company, individual or firm represented in a special or particular manner.
- b. The signature of the applicant for registration or some predecessor in his business
- c. On invented word or words ....16 etc

Insurance of the certificate is evidence of the registration of the trademark which is not registered for an indefinite period. Initially, it is for seven years but this maybe renewable from time to time for a period of fourteen years."17

The procedure for registration under part C is the same as discussed as above. Trademarks registered under this part are called certification trademarks and the degree of distinctiveness is the same as part A or B. The difference is that under part A or B the owner of a trademark has the right to use it while in part C the owner has no legal right to use the mark if he uses it he is infringing it. The person who registers under part C is an institution whose function is to issue standards example, the Zambia Bureau of Standards issues regulations which have to be complied with by any person wishing to use the mark.

The marks registered under part D are called defensive trademarks. For part D registration to be made, valid registration must have been made in part A. This means that two types of registration must be done because registration in part D is only done after registration in A and when the mark becomes famous on the market, Part D registration is done. The difference is that registration in A is ordinary and the mark is required to be used if not used for five years or more it is open to attack for non-use, whereas the mark in part D can't be attacked, further the owners of the mark in part D have the right to block others from use for example, the trademark "Fanta" for drinks someone can take advantage of the mark for being famous on the market and register "Fanta" for cars part D blocks out such unfair arrangements or intentions unlike part A.

Where the registrar refuses to accept an application, a person may appeal against such decision."18

## 2.14 INDUSTRIAL DESIGNS

An industrial design means features of shape configuration, pattern or ornament applied to an article by any industrial process or means being features which in the finished article appeal to and are judged solely by the eye, but does not include a method or principle of construction or, features of shape or configuration which are dictated solely by the function which the Article to be made in that shape or configuration has to perform."19

The Governing Act for industrial designs is the registered

designs Act, Chapter 696 of the Laws of Zambia.

Accordingly, a licence means in the case of a right conferred by a patent, trademark or industrial designs the permission given by the owner of that right, the licensor, to another person, the licensee to perform certain acts which are covered by that right." 20

A U.N study defined a licence agreement as:

"a contract under which the  
licensor is granted certain  
rights to manufacture and  
sell products, utilising inventions,  
process techniques and other  
industrial property rights of  
the licensor".21

A licence agreement differs from a contract of sale in that while a licence agreement gives temporary authorization to use proprietary technology, a sales contract involves an outright sale.

Despite the fact that the terms of a licence agreement may be attractive, this type of mechanism does not supply complete technological skills covering marketing and training. In addition, licences are usually imposed with restrictive practices which impose restrictions on the licensee such as having clauses which oblige the licensee to buy materials and equipment from the licensor, clauses limiting sales to the domestic market or certain specific markets only and those that limit the quantity of production.

A United Nations study observed that licenses can effectively play the role of transferring technology if the technology supplied is basic process know-how which is not generally available in identical form, the licensing agreement allows for assimilation of know-how and if the recipient enterprise takes positive and deliberate efforts intended to allow employees to assimilate the knowhow, since assimilation of know how does not naturally follow the process of transfer of technology nor does it come about simply because the agreement document provides for it.

## 2.2 CASE STUDY OF LICENSING AGREEMENT<sup>22</sup>

The Agreement is between Livingstone Motor - Assemblers (Licensee) The licensing agreement is for the assembly of fiat cars, Peugeot models 504, Saloon 504, one ton pick up and Isuzu pickup model for a maximum aggregate quantity of 2,500 per year. In Articles 2.3.1 and 4.1, the agreement prohibits the assembly of any vehicles other than the above mentioned it also prohibits the use of any modified

parts in the production of vehicles without the consent of the licensor and also covers the licensing of fiat Auto spa patents, trademarks and the technical Assistance in Article 3.

The agreement covers so many things in one agreement. According to the scholar, the agreement for a patent, licence, trademark, supply of know-how and technical assistance should have been in separate and distinct agreement, to enable each to cater for specific elements of transfer of technology such as engineering designs, plant construction, marketing arrangements and management service.

Article 3 also provides for the remuneration of the seconded staff to be paid in foreign exchange in addition to a local salary. This is not only expensive but constitutes a serious drain on Zambia's foreign currency reserves. This should therefore have been renegotiated to enable each party to bear its expenses in so far as upkeep and travel expenses are concerned, when it comes to sending specialised personnel from Italy to Zambia and the sending of trainees from Zambia to Italy respectively.,

The licensee is restricted to the production of 2,500 vehicles per year and this denies it the opportunity of going into export trade at the expense of self-sufficiency and national autonomy section 49 of the patents Act could have been invoked to prevent the inclusion of terms that are likely to restrict trade. The licensee is further restricted to use of tools, assembly equipment, fixtures and parts exclusively from the licensor. In other words the licensee cannot procure the materials from other sources even if they were to be offered at reduced costs.

Further the licensee is obliged to maintain patents and trademarks and pay the necessary fees for their maintenance but according to the Patents Act it is only a Patentee or an assignee who can register and maintain a patent, licensees have not been designated as assignees. In the absence of this the obligation to maintain patents falls away and to the licensee this means unless the patents which are a subject of the licensing agreement are protected in Zambia, the technology contained therein is free and when used no question of payment of royalties can be legally enforced neither can infringement proceedings be instituted unless the patent is in existence and legally protected the encroachment in a non-existent patent is not possible.

The agreement is for a duration of six years and maybe terminated by either party upon giving notice. The agreement also provides that all disputes arising have to be referred to the International

chamber of commerce and since arbitration can be costly, the licensee should have insisted arbitration proceedings to be conducted in Zambia and governed by the laws of Zambia.

For the above stated reasons the agreement was not properly negotiated and in the absence of a hardship clause the question of renegotiation is not feasible.

### 2.3 TECHNOLOGY TRANSFER THROUGH SUPPLY OF KNOW-HOW

Supply of know-how is an important channel through which technology can be acquired in Zambia. Unlike the licensing of Industrial property rights no clear definition of know-how exists. In the case of Inland Revenue Commissioner V. Rolls Royce<sup>22</sup>, it was held inter alia that know-how is not single entity but is the kind of intangible entity that can change its character according to the use to which it is put by the owner. Lord Raddiffe further had this to say about know-how:

"first as to know-how: I see no objection to describing it as an asset. it is intangible ... An asset of this kind is sui-generis. Know-how is an ambience that pervades a highly specialised production ... know-how has a peculiar quality that it can be communicated to and shared with outsiders outside the manufacturer's business, without in any sense destroying its value to him ... It is the kind of intangible entity that can very easily change its category according to the use to which the owner himself decides to put it." <sup>23</sup>

In Zambia, supply of know-how is effected through many ways including joint ventures, turnkey packages and service contracts.

#### 2.31 JOINT VENTURES

In Zambia, joint venture as a mechanism of transferring technology implies the existence of partnership between the local investor and foreign investors with the foreign investor supplying the technology and usually part of the capital for the project. This is one of the main ways in which the needed technology is being attained



obtained through Partnership with multinational corporations and other foreign companies.

A joint venture is not under the exclusive direction of the head office of the Transnational group. Its management is dealt with under an agreement between two or more enterprises which have collaborated in the establishment of the joint venture. A company set up under a joint venture is said, to enjoy independence since its interests coincide with those of either participation.

TransNational Corporations usually agree to take part in the joint venture agreement and depending on the terms and conditions of the agreement the TransNational may be able to retain control over the based advantages by tight licensing agreements which curtail the co-partners access to technology. If this is coupled with a management contract which vests all the responsibility for management in the TransNational then the part played by the local partner is that of a mere shareholder. If this is compared to a partnership then the local partner is like a sleeping partner who never takes part in the running of the Partnership but merely looks on.

It is argued that in a joint venture the TransNational as a partner has come to stay and is not making a one time sale or entering into the same purely for a fee but is interested in the property of the joint venture. As such the joint venture should benefit in the research that is carried on at home but usually this is not so given the manipulative tendencies of the TransNationals and the fact that they are reluctant to part with their technologies."24

The advantage of a joint venture as a means of transferring technology lies in the fact that there's commitment by all the parties since they all want to see the venture succeed, failure to succeed entails losing all the capital invested in the project.

## 2.32 TURNKEY CONTRACTS

A turnkey contract is one whereby the technology supplier carries out the full range of technical and managerial operations needed to establish an enterprise and turns over the management of the enterprise in fully operational conditions to the local owner as soon as he is prepared to assume it. 25

Under turnkey contracts, the responsibility of designing, constructing and commissioning the plant is for the transferer. This normally includes the supply of know-how and technology, tender of a complete plant and equipment together with the training of the

operators and so on.

For a number of developing countries that secure technology through turn key contracts their involvement is limited to providing capital and the site for the project, this is also the case in Zambia. Turnkey industries set up here include Nitrogen Chemicals of ZAMBIA Limited, which was put up by the Kobe Steel of Japan.

Under the turnkey arrangement the obligation of the transferer is limited to ensuring that the plant will function properly on the date of handover. The past-start-up performance of the plant, the training of the local personnel in ensuring that they acquire the expertise that would enable them to run the plant properly is usually outside the ambit of the transferer's responsibility.

In many instances after the completion of the plant by the foreign contractor, developing countries encounter serious difficulties in operation and maintenance of the plant and equipment. This is why most Governments in developing countries have reacted to the traditional turnkey contracts and insisted that the foreign contractor should take responsibility beyond the commissioning stage.

Such contracts have become known as Products-in-hand agreement. It has been argued that this is a ~~very~~ effective mechanism because it is a ~~pre~~-condition that the design and plant, its adoption to the local conditions and training of local staff must be planned and is implemented in such a manner that a buyer of the technology will be able to manage the plant independently. Though this may not always be the case, under the product-in-hand agreement, the transfer is under an obligation to guarantee the project quality and output in the past commissioning period.

To safeguard interests of developing countries in the turnkey and product-in-hand contracts, negotiators from these countries, should insist on ensuring that the transferer is made responsible for an initial management period for the plant constructed by him. The period can be determined depending on the nature of the technology transferred and during this period the transferer should have no excuse for ~~having~~ failing to meet his guarantee as to quantity and quality from the project put up by him.

The main distinguishing feature between turnkey contracts and products-in-hand is that in the latter, the transferer gives a

guarantee for quality and quantity of production of the plant he has constructed and he takes charge of the initial

management of the plant before his departure leaving the management of the plant in the hands of the transferee who he has trained pursuant to terms of the contract.

In drawing a distinction between the two, professor Benchikh of Algeria said that in traditional turnkey contracts:

"the transferor generally guarantees the due erection of the plant and not product, output or quality even where provisions are inserted to guarantee product, output or quality these have proved ineffective because of the vague terms in which they have.. .. been drafted and also because low product, output or quality can plausibly be blamed on the owner of the project who takes charge of the plant after its commissioning"26

However, despite the drawbacks associated with turnkey contract there is no doubt that this mechanism has played a crucial role in the development of industries of developing countries. This is in the sense that many developing countries have been able to obtain industrial plants of high technology levels from the developed countries and also quicken the pace at which the developing countries can industrialise.

### 2.33 SERVICE CONTRACTS

A service contract is another way by which technology transfer is effected in Zambia. In this country the most important service contracts have been technical assistance and consultancy, and management contracts.

Under technical assistance and consultancy, two aspects of the contract often come out. The contract involves training of the local personnel and management of the enterprise to some limited extent. The owner of the industrial establishment seeks to have the technology transfer effected through the training process for his personnel by experts from another enterprise.

The training may relate to the production, operations, plant repair, maintenance and marketing. This may include setting up an in plant training programme and administering a local training

centre. The training in some instances would include the sending of personnel to other countries. The acquisition of technology and training of indigenous manpower would have the greatest impact on any nation's technological potential to achieve the rate of industrialisation deemed necessary and this cannot be achieved through technical consultancy contracts.

Pugh defines a management contract as

"arrangements where potential control of the enterprise...is vested by a contract in a separate enterprise which performs the necessary managerial functions in return for a fee".<sup>27</sup>

According to Gabriel it is

"an efficient method of controlling the enterprise in a developing country without the need to make any investment in terms of capital. The indigenous owner retains ownership."<sup>28</sup>

## 2.34 MANAGEMENT CONTRACTS

Management contracts are legal arrangements which enable an enterprise deficient in managerial skills to invite managers from another country to manage a particular project for a specified period. When the agreement is in force skills may be acquired by managers of recipient enterprises through learning by joint management and organisation with the help of consultants or they may be entirely provided through management or service contracts.

The main criticism of this mechanism is that it is a serious drain on the foreign Exchange resources of the developing countries because the managers from other countries have to be paid in foreign currency.

Zambia's experience in the field of management contracts has not been a pleasant one. The typical examples are the ones the Zambian Government signed with two mining companies i.e. the Anglo-American corporation and Roan Selection Trust.

FOOTNOTES

17. I laid section 55
18. Law Dictionary with Pronounciations by James A. Ballentine  
1948 ecl p 367
19. WIPO: Licensing Guide for Developing countries  
WIPO Publication N°. 820 (e) Geneva 1977 p 46
20. In Charlse Cooper, mechanisms of transfer of technology from  
advanced to developing countries 1964, New York p 23.
21. KUNKUTA M.C LL. M thesis, Technology and the legal framework  
of its transfer in Zambia p 55.
22. (1962) 1 WLR p 425
23. Opattpp431
24. Sherwood Sidney, The Role of International Business in the  
transfer of technology to Developping countries, 1966 p 45.
25. TransNational Corporations and the Transfer of Technology"  
by Kasozi W.L.G - Lesotho Law Journal p 119, 1989 Vol. 5 N°.1
26. opcit p 119
27. Pugh R.C. 'Promotion of International flow of capital' In  
Charles Cooper, mechanisms if transfer of technology from  
Advanced to developing countries 1964 New York p 26.
28. Opcit p 26

FOOTNOTES

1. Section 228 of the Patents Act chapter 692 of the laws of Zambia
2. The concise Oxford Dictionary, 8th (ed) edited by R.E Allen, Clarendon press oxford p 871
3. Section 2 of the Patents Act
4. Ibid section 28 (4)
5. Ibid section 18 (1) (c) and 2
6. Ibid 537
7. Ibid section 49
8. Ibid section 14 (3)
9. UNIDO: Development and Transfer of Technology series N°. 12 New York (1979) p 10
10. The concise Oxford Dictionary 8th ed by R.E Allen Clarendon Press Oxford, p 1293
11. Section 2 of the Trademarks Act, CAPp 693
12. Ibid section 5
13. Ibid section 6
14. Ibid section 14 (2)
15. Ibid section 14 (1) (a) (b) (c)
16. Ibid section 18.

### CHAPTER 3

#### REVIEW OF LEGISLATION RELATING TO TRANSFER OF TECHNOLOGY IN ZAMBIA:

As has already been discussed in the last chapter, there are two methods through which technology transfer is done in Zambia, namely: Licensing of industrial property rights and the supply of know-how. This chapter is a review of the legislation relating to the same.

##### 3.1 LEGISLATION OF INDUSTRIAL PROPERTY RIGHTS:

The Paris convention is the main instrument for regulating the transfer of technology through patents, trademarks and industrial designs. Zambia acceded to this treaty at independence in 1964 through the Federation of Rhodesia and Nyasaland. The Patents Act, the Trademarks Act and the Registered Designs Act are all ancilliary to the convention.

##### 3.II THE PATENTS ACT, CHAPTER 692 OF THE LAWS OF ZAMBIA:

The Patents Act governs patent licences and these licences are only granted to countries which have patent laws. The Act was enacted in 1958 during the colonial era and is the most important piece of legislation relating to transfer of technology in Zambia.

Under the Act, the duration of a patent licence is sixteen years, after expiry it can be renewed for ten years<sup>1</sup> Further patented technologies must be worked in Zambia. Non-working of an invention is an abuse of the right conferred by the patent and in the event that a patentee abuses his right like failure of work the patented ~~invention~~ it will be compulsorily acquired.<sup>2</sup> This means that any one interested can apply to the Registrar of patents on such grounds and the patent will become public domain whether or not the duration has expired. In other words, any person is then entitled as of right to the grant of a licence. In practice this provision is flouted very few patents are usually worked and patents that are not worked cannot transfer technology and developing countries like Zambia will not benefit from the transfer. The Act does not define working of a patent and so it is difficult to know what is meant by this term and this also amounts to an omission. For example, in Israel the patent laws provide that the exercise of the rights is regarded as an abuse if the product the subject of the patent is not manufactured in Israel.<sup>3</sup> The Act also states that the patent should be in the public interest without specifying any particular aspect. This renders the clause open to abuse by administrators.

The Act requires that the patentee makes a full disclosure of his invention through the patent documents and the manner in which the invention has to be worked. Once the documents are lodged with the patent office they are examined and published for public information to which the public then has access so that the licensee will know what they will receive before the licensing agreement is signed. <sup>4</sup> Information included in patents is not always enough to play an effective role in the transfer of technology even though it is required that a full disclosure be made concerning an invention or a new process. Very often information is withheld by the patentee that an outsider cannot obtain from the letters patent sufficient knowledge to work the invention and because of such practices by the Developed countries transfer of technology cannot be enhanced and is not beneficial to the developing countries. And that there shall be conducted a search and examination of the substance. Developed countries lack the necessary qualified staff to carry out such search and examination, they are at a loss or disadvantaged position.

The Act prohibits the inclusion of restrictive terms in the agreements and if such terms are included they are null and void.<sup>5</sup> The provision is flouted in that Developed countries or firms from Developed countries do include such terms in the agreements. These restrictive terms hinder the development of industry in the underdeveloped countries and also hamper the smooth operation of transfer of technology.

In the agreement between Livingstone Motor Assemblers (Licensees) and Fiat Auto Spa (Licensor) which was discussed in chapter Two, the licensee is restricted firstly to use figs, fixtures assembly equipment and parts exclusively from the licensee. This leaves the licensee with no means of adapting the technology to local conditions and cannot procure the materials from other sources even if they were to be offered at reduced costs.<sup>6</sup> Secondly, the licensee is restricted to the production of 2,500 per year and thus denying it an opportunity of going into export trade.<sup>7</sup> The provision which prohibits the inclusion of restrictive terms could have been invoked by the licensee in practice this is not done so that developing countries will always remain dependent on the developed countries and this dependence it has been asserted is self-perpetrating because there are provisions like section forty-nine of the patent



Act which prohibit the use of restrictive terms in transfer of technology agreements but which provision is not being used properly.

The Act also provides that there shall be set up a patent tribunal to determine the decisions of the Registrar.<sup>8</sup> According to research conducted at the patent office, the patent tribunal is non-existent up today. Although the Act provides for it. Our research revealed that the tribunal is non-existent because the qualifications to head it are quite high and also because of lack of finances to run the same. Some of the qualifications are that the President of the tribunal shall be a person who, "a. has been a judge of a court having unlimited jurisdiction in civil and criminal matters in some parts of her Britannic's Majesty's dominion or<sup>9</sup> b. is, and has for not less than ten years been qualified and entitled to any court or courts having such jurisdiction."<sup>10</sup>

The fact that the Act provides for a tribunal which is non-existent is a clear indication of how ineffective it is and this calls for an amendment to strengthen it.

The Patents Act is capable of playing an effective role in the transfer of technology to the benefit of the developing country if and only if its provisions are obeyed. In practice however as already discussed its provisions are flouted and the language used is too technical for the technology recipients who lack the necessary skills to unpackage the agreement.

### 3.12 THE TRADEMARKS ACT, CHAPTER 693 OF THE LAWS OF ZAMBIA:

Like the Patents Act, the Trademarks Act was also enacted in 1958 during the colonial era.

The Act is meant to protect and govern trademarks of goods only<sup>11</sup> During the colonial era when the Act was enacted, this provision was reasonable but today, in view of prevailing circumstances, there's need to extend the Act to Service marks for the benefit of institutions providing services like banking institutions, Airlines and so forth. In the case of banking institutions for instance, in the past there were few banks mainly four namely: Zambia National Commercial Bank, Barclays Bank, Standard Chartered Bank and Grindlays Bank. Each institution had its own logo or service mark and there was very little competition. But today, there are many banks and some take advantage of the goodwill of old banks by making similar or using the same logos or

marks and because of this there's need for protection to prevent such practices.

In Zambia there's never been a case where the owner of a trademark takes an infringer to court probably because they don't know what to do and some are ignorant of the fact that such action can be commenced. This was revealed in the Premium Oil saga when the Managing Director stated that there was no legal provision to take care of such offences in Zambia. The Premium Oil saga involved an infringement of the Premium Oil trademark by street vendors who were selling cooking oil in containers with trademarks like the premium oil trademark but the cooking oil was in fact not Premium oil product. According to the Act it is up to the owner to deal with an infringer and since they are ignorant and lack good legal system to advise them, the infringer will get away with no punishment at all.

Under the Act any person who is guilty of an offence shall be liable to pay a fine not exceeding K1,000...<sup>12</sup> The punishment is outrageously low that it is an incentive for further infringement because today an infringer can easily pay K1,000 unlike in the past. The Act also provides for a patent tribunal which is non-existent today. The Act should be amended so as to take care of the current or prevailing circumstances.

The existence of trademarks enhances restrictions that is to say, in most licencing agreements of trademarks it is usual to include restrictive terms. The licence or agreement for use of trademarks is usually granted with respect to specific registration of the marks in the country within which the foreign country is located above is an example of such restrictions in the agreement...."the distribution of our products bearing our trademarks is normally to areas within such countries." <sup>14</sup> The effect of such provisions is self-evident. They are intended to eliminate the licensee from competing with the licensor in his home and other export markets. As already stated restrictions also hinder the development of industry in developing countries since most of the potential industries are already in existence in developed countries and no benefit will derive from the transfer.

There is also a tendency of abusive practices by the Developed countries. Usually licencing agreements will contain all the items that is to say, trademarks, patents and so on in one agreement. This cannot help the development of industry in Zambia because there are so many items in one agreement. In our view, the agreement should contain one item so that each can take care of particular aspects of the transfer of technology.

Most provisions in the Act should be amended in order to take account of the current situation and thereby effectively transfer technology to the benefit of the country. Use of restrictions should be prohibited as well as abusive practices. In our view this would affect foreign investment in that both parties would benefit from the agreement because technology should be freely transferable.

Investors will still invest under such conditions because they won't use anything so long they have guarantee that investment won't be nationalised.

### 3.13 REGISTERED DESIGNS ACT, CHAPTER 696 OF THE LAWS OF ZAMBIA:

This Act also makes provision for a patent tribunal which is non-existent<sup>15</sup> and this calls for amendment. According to the Act in proceedings of infringement of copyright in a registered design, damages shall not be awarded against a defendant who pleads that he was not aware...that the design was registered and a person shall not be deemed to be aware only by reason of the marking of an article with the word "registered"...<sup>16</sup> It appears the Act sides with infringers because such a provision encourages them to commit the offence and then claim to have been unaware of the design being registered. In our opinion, an infringer should be liable whether he was aware or not.

The Act further provides that any person who a. falsely represents that a design applied to any article sold by him is registered in respect of that article or b. after a copyright in a registered design has expired marks any article to which the design has been applied with the word "registered" or any words implying that there is a subsisting copyright shall be guilty of an offence and liable to a fine of K100...<sup>17</sup> The effect is a very serious one but the punishment is not severe. K100 is nothing today and it is outrageous that the Act still has such provision. It should be amended to take account of the current circulation of money.

The fact infringers of this Act are not prosecuted is the reason for lack of revisions in the law particularly the penalties because violators are white collar criminals i.e. the upper class and as a white collar crime prosecution does not always follow, violators easily pay fines which are usual punishments. Infringements are usually acceptable in the business society and there's lack of revision in the law because violations are accepted business practices and laws themselves affect only a limited class of people.

The Registered Designs Act should have most of its provisions amended in relation to the current situation and thus be more effective.

### 3.2 LEGISLATIONS RELATING TO SUPPLY OF KNOW-HOW AGREEMENTS:

In Zambia there was no legislation to deal with the transfer of technology through the supply of know-how until 1977 when the Industrial Development Act was enacted. It was repealed later in 1986.

#### 3.21 THE INDUSTRIAL DEVELOPMENT ACT:

The Act came into force on 15th October, 1977. According to the Act every agreement for the transfer of technology had to be registered with the Minister of Commerce and Industry as soon as it was made and that it was not to be acted upon unless it was so registered.<sup>18</sup> In our view nullification of the agreement for failure to register would have been more effective than the provision specifying imprisonment for a term not exceeding six months or to both such fine and imprisonment,<sup>19</sup> we favour nullification because we feel that neither transferee nor transferer would like to have their contract nullified and would ensure that it gets registered. Further the Act did not stipulate time limit for registration and as a result it's difficult to impose.

The Act also provided that any royalties or fees charged by the transferer should bear reasonable relationship to the use of such technology or expertise<sup>20</sup> and, "that any liability to pay royalties or fees shall cease upon the lawful termination of the agreement or if such technology becomes public domain otherwise than through the fault of the licensee."<sup>21</sup> This stipulates the rights and obligations of the parties including the right of the transferee to the continued utilization of the technology or expertise after the termination of the agreement. The requirement under the Act to pay royalties was perennial in instances where

there was no termination. We feel that the Act should have drawn a distinction between these agreements based on patents and related rights and those based on know-how.

Further the Act provided that "there shall be a reduction in royalties or fees if a third party acquires and uses such technology or expertise otherwise than through the fault of the transferee."<sup>22</sup>

The above provisions though aimed at ameliorating the effect of royalties and fees are unlikely to have any real effect because they are vague or at any rate the relevant facts will be difficult to establish. What, for example amounts to a "reasonable relationship" referred to in the Act? Moreover it would be rather difficult to prove the fault of the licensee also referred to. The benefit to be derived from such provisions of the Act it provided for a penal sanction of five hundred Kwacha fine or six months' imprisonment or both,<sup>23</sup> the penalty is for failure failure to register an agreement and not for failing to comply with the substantive provisions as to what should or should not be in a technology transfer agreement. The assumption here seems to be that before an agreement is registered the Minister will have satisfied himself as to its compliance with the Act.

According to the Act, technical assistance where necessary included technical personnel as well as full instructions and practical explanations expressed in clear and comprehensive English on the operation of any equipment involved.<sup>24</sup> The provision was well intentioned, but there are practical problems. Firstly, due to the technological inequality of the parties full disclosure and practical explanations may not be fully communicated and secondly, the emphasis in the Act is on disclosure and not what is disclosed and how.

The Act went on to provide that a contract for the transfer of technology and expertise was not to contain any condition which restricted the use of competitive techniques,<sup>25</sup> provided for any form of control over the management of the licencees' enterprise,<sup>26</sup> restricted the manner of sale of products or the export of products of any country<sup>27</sup> and many others. In practice these provisions are flouted for example in the agreement between Cooper (Zambia) Limited (then) and the Wellcome Foundation Limited,<sup>28</sup> which was entered into after the Act came into force, this agreement gives the exclusive

right to purchase "for resale in Zambia". This means that Cooper have no right to export and this was a direct contravention of the Act which prohibited restriction on the manner of sale of products or ~~the export~~ of products to any country but this clause was allowed by the registering authority.

The Act did not declare that any provision in an agreement which conflicts the Act will be of no effect. What for example would be the legal effect of such an agreement where the parties have entered into contracts by which they have substantially altered their financial positions? It is not proposed to pursue this matter further.

### 3.22 THE INVESTMENTS ACTS:

The Investments Act of 1986 repealed the Industrial Development Act.

Under the Act there was provision for establishment of an investment council<sup>29</sup> and that every agreement had to be registered with the Director of Investments who had to keep a register containing all the details pertaining to the transfer.<sup>30</sup>

The Act also spelt out certain conditions in agreements for the transfer of foreign technology or expertise<sup>31</sup> for instance that "any royalties or fees charged shall bear a reasonable relationship to the use of such technology or expertise..."<sup>32</sup>

"Any liability to pay royalties or fees shall cease upon the lawful termination of the agreement or if such technology or expertise becomes public knowledge otherwise than through the fault of the licensee..."<sup>33</sup>

According to research conducted at the Ministry of Commerce and Industry the difficulties faced by the Investment Council were that its smooth implementation depended upon co-operation from the patents office and the Management Service Board. The activities of the two were not included nor referred to in the Act and thus the council worked independently of all the other bodies currently doing some work relating to transfer of technology.

The 1986 Act was repealed by the Investment Act of 1991. The 1991 Act had no provisions relating to the transfer of technology.

The 1991 Act was repealed by the Investment Act of 1993.

The 1993 Act, like that of 1991, has no provision on the transfer of technology. This is a clear indication that the Government is not concerned with the transfer of technology and the problems already highlighted will continue. Zambia will remain dependent on foreign technology and industrial development will not be properly achieved unless the Government is concerned and involved in the process of technology transfer. As we saw in the first chapter transfer of technology agreements are not just a matter between Private individuals but involve the Government as well. If Zambia is really to benefit from the transfer of technology, the Government should be concerned.

It should come up with legislations to effectively ensure that the transfer is conducted under fair and reasonable terms. The Investment Act of 1993 is a very recent piece of legislation and it does not have any provision on transfer of technology. This is a very serious development on the part of the Government which ought to be reversed.

### 3.23 MANAGEMENT SERVICE BOARD ACT 1981:

In 1981 the Government passed the Management Service Board Act to deal with management consultancy contracts.

There was established the Management Service Board which was charged with the responsibility of providing impartial advice, research consultancy and training in priority areas of management. The Government was confident that the Board would make it unnecessary for any foreign management consultancy service to be imported. Since 1981 after the Act was enforced foreign consultancy can only be engaged with the approval of the Government.

The Act does not require the Board to disclose or publish the consultancy contracts that have been concluded under its auspices and it has been asserted that the Board is reluctant to disclose what it has done and is doing in specific details as a result it is very difficult to review its performance.<sup>34</sup>

The establishment of the Act is a reflection of Government's desire to regulate the terms under which the technology is to be acquired in Zambia. But it is unlikely that Zambia will be able to do away completely with the expatriates consultants as the Act envisages.

In certain areas Zambia lacks local professional

managers and for this reason it has no option but to look elsewhere for assistance.

Zambia lacks an effective legal framework or system to regulate the transfer of technology through the supply of know-how. We propose that the Government should address this situation and come up with a system to regulate the same. The system should ensure that the transfer of technology is fair and has reasonable terms. It should also ensure that Zambia will benefit from every supply of know-how agreement and that abusive practices by the developed countries are not tolerated. Provisions of the law are to be followed and law breakers punished maybe by way of fines or declaration that whole agreement is a nullity.

3.3 THE EXCHANGE CONTROL ACT, CHAPTER 593 OF THE LAWS OF ZAMBIA

The Act had provisions relating to the payment of transfer of technology agreements. According to the Act, "notwithstanding anything to the contrary contained in any enactment, the Minister may by statutory instrument make regulations relating to directly or indirectly to...the control of imports and exports from Zambia and the transfer or settlement of property and....payments..."<sup>35</sup>

The Act has since been repealed and now there are no guidelines as to payments. This implies that parties to the agreement have a discretion to fix whatever payment they deem fit and this will affect the party buying i.e. Zambia, because the seller, the developed country, might charge high fees and the buyer might be unable to pay, the buyer is therefore at a disadvantage.



FOOTNOTES

1. Section 29 (a) of the Patents Act
2. Ibid 537
3. 'Guidelines for the studying of the transfer of technology to developing countries', United Nations p22
4. Section 14(3) of the Patents Act
5. Ibid Section 49
6. In Kunkuta U.M. theses, 'Licensing Agreement between Livingstone Motor Assemblers and Fiat Auto Spa
7. Ibid p
8. Section 74(1) of the Patents Act
9. Ibid section 74 (2)(a)
10. Ibid section 74 (2)(6)
11. Section 8 of the Trademarks Act
12. Ibid section 72
13. Ibid section 51 (2)
14. Lesotho Law Journal Vol 1 No 1 1988
15. Section 35 Registered Designs Act
16. Ibid Section 16
17. Ibid Section 48 (1) (9) and (16)
18. Section 14 (1) of the Industrial Development Act
19. Ibid section 14 (2)
20. Ibid Section 15 (9)
21. Ibid Section 15 (b)
22. Ibid section 15 (c)
- 23 Ibid Section 14 (z)
24. Ibid Section 15 (d)
25. Ibid Section 16 (a)
26. Ibid Section 16 (b)
27. Ibid Section 16 (c)
28. In "The transfer of technology and the Industrial Development Act, 1977", Article by B.H. Simamba
29. Section 3 of the Investment Act 1988

30. Ibid Section 36
31. Ibid Section 37
- 32 Ibid Section 37 (1) (a)
33. Ibid Section 37 (1) (b)
34. Kunkuta M.C., U.M. Thesis
35. Section 3(1) (c) (i) (ii) (iii) of the Exchange Control Act

## CHAPTER 4

### SUMMARY, PROPOSALS AND CONCLUSION:

#### 4.1 SUMMARY:

This study has been an attempt to highlight the problems of transfer of technology from developed to underdeveloped countries. in particular Zambia.

In Chapter One we introduced a number of concepts and definitions of 'technology', 'transfer' and 'transfer of technology' in a comparative perspective. Further, we examined the general clauses which are found in every transfer of technology agreement and these are namely: Hardship Clauses, technical expertise and arbitration clauses respectively.

The advantage of hardship clauses is that they are a legal method through which renegotiation may be done or that according to which parties may request re-arrangement of the initial contract linking them due to an inevitable change or changed circumstance which has the effect of changing, causing either the transfer or transferee to bear an unfair burden.

Technical expertise clauses on the other hand are meant to remedy difficulties arising in a situation whereby disagreements arise in relation to the technology and parties can't agree on who is to remedy the situation. The clauses provide that parties may refer to an expert for a decision. The clause should also specify the manner of appointment of the expert.

Arbitration clauses as the name suggests are for resolving disputes arising between the parties. The clauses also ensure speedy resolution of disputes unlike court proceedings which are cumbersome and take long to resolve disputes.

Chapter One also contains a short history of Africa to help understand the status quo in developing countries and further it exemplifies the problems of transfer of technology which are inter alia: the high cost of technology, inappropriateness of the technology transferred and continued dependence by the developing countries on foreign technology from developed countries because of the unfair terms under which technology is transferred.

Chapter Two spells out the mechanisms of transfer of technology employed in Zambia and the advantages and disadvantages of the same. In Zambia two methods are mainly employed namely licencing the Industrial property rights and the supply of know-how.

An Industrial property licence relates to the permission granted to the licensee to do certain acts covered by the exclusive rights conferred by law in the fields of patents trademarks and industrial designs. In Zambia, supply of know-how is effected through many ways including joint-ventures, turnkey packages and service contracts which are discussed in this paper.

Chapter three is a review of the available legislations relating to the transfer of technology in Zambia and how effective these legislations are. In this respect we looked at, for Industrial property rights, the Patents Act, the Trademarks Act and the Registered Designs Act. For legislations relating to change of technology through supply of know-how we reviewed the Industrial Development Act, the Investment Act of 1986, 1991 and 1993, and the Management Service Board Act 1981.

#### 4.2 PROPOSALS:

In any legal relationship the expertise rights and obligations of the parties should be clearly defined. It's our view that this should be so even in transfer of technology agreements even if parties live several million miles apart and are of different nationalities.

We propose that there should be incorporated into the various legislations provisions prohibiting the proprietor from developed countries from abusive practices like fixing the prices at which the licensee can sell the licenced property, restricting the number of products to be produced by the licensee for example, in the agreement between Livingstone Motor Assemblers and Fiat Auto Spa, the licensee, Motor Assemblers was restricted to the production of 2500 vehicles per year. This denies the opportunity of going into export trade, other practices are imposing tying clauses forcing licensees to purchase from the licensor unpatented raw materials which are available elsewhere and at a cheaper price, for example in the agreement above, the licensee is restricted to use figs, assembly equipment, fixtures and parts exclusively

from the licensor. The licensee cannot procure the materials from other sources even if they were to be offered at reduced costs. Other practices which should be prohibited are where the licensor requires the licensee to use its trademarks under conditions that do not enhance the licensee's chances of succeeding in the local market.

It is further proposed that Government should acquire technology on behalf of the individual firms and make it available to those who are interested because individual entrepreneurs or firms are in a poor position to negotiate the acquisition of technology from a developed country since they are unable to offer sufficient business to the seller of the technology for him to be interested. Secondly the single firm may not have the necessary technical capability to evaluate properly the technology offered. The Government should establish one or two agencies charged with the responsibility of acquiring technology on behalf of private firms or entrepreneurs.

The advantage of such a move will be that the Agency in collaboration with the users of technology in the country can from the beginning associate itself with research and development institutions to obtain the necessary technological help for the individual entrepreneurs and to do additional research and development and thus become increasingly self-reliant over a period of time. If technology is bought on an individual basis such an arrangement would be very difficult to bring about.

We recommend that technology provided should be appropriate to conditions in Zambia. This would mean that the latest and most enhanced version should be provided in some developing countries and the simpler versions in others.

We also propose that the proprietors from Developed countries should be obliged and capable of providing the needed training of key personnel in Zambia. The greater part of this training should be done here (in Zambia) so that the developed countries can see at first hand the best way in which the licensed technology can be adapted to local conditions and part of the training in the developed country so that the trainee can best appreciate what is involved. Zambia should make it a basic point that clauses on training are included in the agreement. The provisions on training should be thorough

and further it is proposed that there must be support from the developed country to maintain the venture for a substantial period to solve problems that may arise during the early phases of operation. The period may be determined depending on the nature of the agreement in some cases it may be two years, others one year or even six months. That these should be procedures for thorough and perhaps extended training, that is to say, training might be given first to supervisors, then extended to include all other key elements of the workforce.

It is further proposed that licensed technology should utilise as much as possible local resources including raw materials, labour skills and supervisory personnel and that parties should be clear about information to which the recipient is entitled. The agreement should indicate whether everything the proprietor owns in a specific field is included or only certain versions or embodiments thereof and also what rights if any the recipient may have to improvements or additions to the technology that become available to the proprietor in future and that ~~that~~ <sup>Zambian</sup> enterprises should insist on the general clauses being included in the agreements. These clauses are to the advantage of Zambia since for instance Hardship clauses will allow the parties to renegotiate the agreement even where restrictive clauses are used which are prohibited by ~~example~~, the patents Act, the parties from developing countries can propose for renegotiation relying on these clauses. For Arbitration clauses in case of disputes, Zambia should insist that the governing laws should be of Zambia.

Further, that there should be lawyers who are trained in the field of industrial property specifically to help advise on terms to be included in the agreement and how to bring about actions against infringers and also there should be well trained international Lawyers to advise on international law matters since transfer of technology agreements are between nations.

In chapter 3, we saw after review of the investments Act of 1993 that there is no provision on transfer of technology and that since this is a recent legislation, this is indicative of the fact that Government is not interested in the process of transfer of technology, we propose that Government should get involved and interested in the process since its role is very crucial and of vital significance. According to UNIDO.....

"Governments in developing countries should formulate a programme for the growth of technological capability of effective utilization and developments of industrial technologies suitable to their effective industrial sectors."

That this requires a national technology plan which should facilitate the evaluation and upgrading of traditional technologies, the effective acquisition, absorption and adaption of foreign owned technology and the development of innovative process and techniques. The essential ingredients of such a plan could comprise.

1. identification of technological needs in critical and priority sectors in each economy.
2. The development of an effective technological information and dissemination system for identification and evaluation of technology alternatives and diffusion of innovations and adaptations.
3. The development of national technological service capacity including design and engineering prototype testing and quality certification. We recommend that the Zambian Government should formulate such a programme which is proposed by UNIDO.

It is also proposed that the lines of communication between the parties should be strong and open for best results. Further that there should be developed international mechanisms designed to enjoin owners of technology to find a market in their home markets for the products of their partners in developing countries.

All in All, there's need to have a clear policy regarding technological transfer in developing countries,, once this is established these countries would establish clear guidelines for negotiating technology transfer guidelines could assist in procuring information on alternative techniques, sources of procurement and product pacification. in addition countries should establish domestic technological infrastructures for evaluating and assimilating knowledge. developing countries especially in Africa should b take positive steps towards technological policy clarification. There's need to have well trained international lawyers particularly in the enae of transnational law and technological transfer to advise the developing countries and local companies in the negotiation and contractual process for the transfer of technology.

#### 4.3 CONCLUSION

This is a study of the problems of transfer of technology from developed countries to developing countries, a case study of Zambia.

The concept of technology has been defined differently by many people and in this paper and in this paper, the concept technology constitutes a special form of human resources which can be defined as the body knowledge that is used in the production of goods and provision of services. in a wider sense, technology is a commodity because it is marketable it can be hired, bought or sold.

The concept of transfer of technology like that of technology has been defined by so many people and in this paper its been defined as the acquisition by the people in one country of economical useful knowledge from the people in another country.

The transfer of technology enables the developing countries to utilize the science, technology engineering and know-how available in the developed countries. They acquire technology developed and already used successfully elsewhere in Zambia, most of the methods through which technology transfer takes place depend upon legal relations that is, consensual legal arrangements between the parties to the transfer, the terms agreed upon by the parties are incorporated in a legal instrument called licence contract or agreement.

The transfer of technology raise four major issues; those of the costs of the transfer, the appropriateness of the products and technologies transferred, the effects of the transfer on learning and technological development in less developed countries.

In Zambia, transfer of technology is effected through licencing of industrial property rights and the supply of know-how.

#### FOOTNOTE

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