

LEGAL IMPLICATIONS OF TECHNOLOGY TRANSFER TO NIGERIA

DR. C.C. OJIMBA*

Abstract

Legal implication of technology transfer is fraught with several controversies. Given the unique advantage of technology in the advancement of mankind in general vis-à-vis its destructive negative imperatives, opponents of its ideal usages argued that, in asserting its inherent advantages, its destructive disadvantages is not worth it. Citing cases of Hiroshima and Nagasaki in Japan in resolving the impasses of the Second World War, they argued that no sane nation would want to go that way again. The star wars with its attendant control leading to the strategic arms limitation treaty (salt) between the United States and the defunct Soviet Union was fraught with the quietest vigour. But then one cannot underestimate the unprecedented improvement in the living standard of man in all spheres of life, occasioned by advancement to technology. This paper examined most of the noble advantages of technology and its transfer in Nigeria with its unprecedented advancement, in the field of medicine, engineering, biomedics, agriculture, aviation, rocket science, production of weapons of mass destruction, etc. at the same time, looks at its limitations as a stop-gap to prevent what happened in history when its destructive operatives and the rat-race between the two super power, almost led to a third world war more than the water argued that technology transfer does not amount to mankind assembling plants to bring together party that were already manufactured in the countries of origin. The position is that technology transfer must translate into engaging the socio-cultural imperatives of a country to source for social raw materials and manufacturing goods and materials that are of immediate need and relevant to the country in question. The final position of this paper is that while its acquisition is central to the advancement of mankind, countries should be the watchword in its acquisition regardless of its inherent advantages.

Introduction

Intellectual finesse demands that this paper should of necessity start by taking a look at the meaning of Technology Transfer: many writers, have at one time or the other either attempted to define or describe what Technology Transfer is. Be that as it may, this paper shall adopt the definition as proffered by the United Nations Conference on Trade and Development (UNCTAD). In that paper, technology transfer was defined as:

The transfer of systematic knowledge for the manufacturing of a product for the application of a process or for the rendering of a service and does not extend to the transactions involving the mere sale or mere lease of goods.¹

*Dr. C.C. Ojimba, Senior Lecturer, Faculty of Law, Chukwuemeka Odumegwu Ojukwu University, Igbariam Campus.

¹ UNCTAD UN Agency in the field of trade and development which was first convened at the General

Though this definition excludes the sale or lease of goods as a means of technological transfer, it is undeniable that it is a plausible model or technology transfer given the availability of the requisite institutional and manpower base in a given country. The process could however be daunting due to the inaccessibility of technical know-how which is either coded or completely absent.²

According to O.A. Odiase Alegiemenien, Licensing is an important source of technology transfer/acquisition. In this type of transaction, the technology is the bare essential of the transaction and the technological innovation is the rationale of the contract to be signed. The rapid development of new technologies means that the new products and processes are constantly being put on the market. The older processes can then be licensed, so that the full economic reward of the technology innovation can be enjoyed by the inventor. Technology licensing he said, implies that the product has become outdated. The focus on the transfer aspect of licensing is due to the fact that the developing nations require technology which needs not be very advanced. In this case, licensing, he further posited could mean that both parties are aware that the technology is not cutting edge technology. Thus the transaction should be of mutual benefit to both parties. Accordingly, the original owner sells off older technology which is perceived to be appropriate for its stage of development. The practice of licensing applies basically to industrial and intellectual property – patents, know-how agreements are usually the main vehicle of transfer³.

According to Ayo Oriola⁴, technology is the scientific study and practice of mechanical arts and applied sciences that have practical value or industrial application. Since the outbreak of industrial revolution, and now, in the twilight of the twentieth century the indispensability of technology to the socio-economic, cultural and political developments of mankind is both transcendental and immanent in the continuing process of ultimate globalisation of the New World socio-economic and political order. Perhaps, more than any other factors, it will dominate the scene in the japing of the future of mankind in the twenty-first century and beyond.

Technology comes in differing forms and nuances. It ranges from biotechnology, plant varieties, automobiles, telecommunications, computers, designs trademarks to electronics. Essentially, technology is the practical manifestation of man's creative genius. A fortiori, a lot of energy expenses, labour and skill are invariably invested in technological processes by governments, individuals and transnational corporations.

Invariably, transient monopoly and exclusive right to the exploitation of inventions, is vested by law, in the inventor, to sustain the impetus for further invention and facilitate the recouping of

Assembly in Dev. 1964. There were subsequent session in 1968 (New Delhi) 1972 (Santago) 1976 (Nairobi), 1976 (Manila), 1963 (Bigrade), 1992 (Cargena), 1985 Chapter 1, para 1-2.

² Ayo Otiola – Transfer of Tech and Intellectual Property Rights in Nigeria: A Discourse – *Modern Practice Journal of Finance and Investment Law Nigeria and International Quarterly Comparative Review of Law and Practice*, April, 1999, Vol. 3,2.

³ O.A. Odiase – Alegiemenie Technology Licensing Agreement and Tech-Transfer MPTFIL, Vol. 2, No. 4, p. 56.

⁴ Ayo Oriola – Transfer of Tech and Intellectual Property Rights in Nigeria: A Discourse MPTFIL, Vol. 3, No. 2 1999, p. 361.

the inventor's expenses with reasonable profits. The temporary monopoly is exercisable by way of sale, assignment, licensing or outright transfer. The right thus created on intellectual creations which are recognizable at law, is in legal parlance, couched as intellectual property right. Intellectual property is a generic term denoting patents, registered designs, plants varieties, copyright, trademarks, technical know-how, trade secrets et al. however, the term may be injudicious and arbitrary since it is often used to the exclusion of patents and industrial designs, which some scholars label on industrial property⁵. But the intellectual property as a term, has acquired a considerable degree of universal acceptance as a nomenclature for patents, designs, trademarks and copyrights. This is exemplified by the United Nation's adoption of same in describing its agency, World Intellectual Property Organisation (WIPO) which headquarter is in Geneva⁶

In the words of Ayo Oriola, the international legal regimes on transfer of technology are ambivalent. The theoretical avowal to affecting a genuine transfer of technology is matched by practical difficulties due to the certain inherent defects in this legal regime. The concessions granted to the developing countries under the various revisions, to the Berne Copyright Convention, the 1883 Paris Industrial Property Convention, the 1952 Geneva Universal Copyright Convention, the 1984 General Agreement on Tariffs and Trade (GATT), the World Trade Organisation (WTO), the TRIPS Agreement, et al, are no less mythical than they are illusory. They strengthen and reinforce the projectionist stance of developed countries over their technologies⁷. Thus, with the seeming hopelessness of the various international legal regimes, to real technology transfer, Nigeria charts a local route via a series of municipal legislations, and foreign investment legislations. Whilst the former harbor such ambitious provisions as compulsory licensing (which border on expropriation of property) political climate in the country in recent times ensures its ineffectiveness.

New technologies and products are currently being developed in many areas of industrial and manufacturing concern in Nigeria. Both the hardware and software aspect of technology are receiving animated attention. This trend which emphasises the uses of local manpower, services and material inputs has been extolled by many, while others have scathingly criticised it. Some people have spoken and written optimistically that the future progress and development of Nigeria depends to a large extent upon how much the country is able to derive from looking inwards for local services and products⁸.

On a similar note, some other people are of the view that the socio-economic emancipation of this country rests upon how successfully the indigenes explore and exploit local raw materials. The range of technologies being developed stretch from the highly sophisticated capital intensive type through several intermediaries to the traditional ones. Similarly, their products skilled manpower requirements, maintenance cost, raw materials, efficiency and net benefit vary widely.

⁵ Ibid.

⁶ Carnish Intellectual Property: Patents, Copyrights, Trademarks and Allied Rights (London: Sweet and Maxwell) 1980, Vol 5, p. 3.

⁷ Ibid.

⁸ O.S. Oriafu – Technology, Impact and Economics of Local Science Equipment workshop: A study of Educational Scientific Equipment Centres in Nigeria. 1985/86 Seminar Papers, Uniben – Benin.

Foreign Investment: A Means to Technology Transfer

It is in this respect that foreign investments is yet to hold out its greatest attraction to Nigeria managerial, technical and technological know-how and are a *sine-qua-non* in the economic growth process of any developing country. As Nigeria stands today, the basic technologies are still non-existent and any project that involves any form of complicated technology becomes a difficult one to undertake. There is a very little manufacturing going on, and even those that are, mostly remain a foreign concern. Notes one author, “the lack of technical expertise and advices perhaps the most keenly felt⁹:

The effect of such lack of a viable technological base, has been a continuous inability to operate highly mechanical business with required technology input. Even obtaining a simple technical information that will enable the entrepreneur select appropriate equipments and supervise operations a difficult task¹⁰.

Thus, over 50 years after independence, the country has hardly shown signs of any worthy take off in developing technologies more suited to its environment. Agriculture continues to utilize primitive and unproductive equipment and physical labour continues to be tormented even when it is obvious that its level of productivity is now getting to point of diminishing returns. Most goods produced in Nigeria are still done at assembly stage. And the country is paying dearly for the absence or lack of vital technology. The major programmes of its national development plans, e.i.e, the setting up of an iron and steel complex, oil refineries. Liquidified Natural Gas (LNG) plants are solely dependent on foreign expertise for any take off. Accordingly, some have had to be delayed for up to a decade, because of the country’s inability to meet the sometimes exorbitant demand of “today’s owners of technology”.

It is in this respect that foreign investment should hold out its greatest contributive potentials to Nigeria. The assumption is inherent in many works in this area, that foreign investors do transfer technology to developing countries, the process or mechanism for such technology transfer varies depending on the type of business or project involved, the nature of relationship existing between the parties. It may be by exporting already manufactured products incorporating such technology or by exporting its patents and technology through licensing or technical assistance contracts or through direct investments.

The thinking in this area follows this pattern of logic. That the multinational corporation or foreign investors, because of the superior management and technology in their possession would, by investing in Nigeria, transfer to the country at comparatively cheaper costs the fruits and substances of such technologies¹¹. In the process, foreign concern not only aids, in the creation of

⁹ Kachukwu E.I., (ed.) Nigeria – Foreign Investment Laws and Policy: Lagos: Mikzek Law Publications, 1988.

¹⁰ Schalts, Idem reported the cases of Nigerian businessman, producers of simple science equipments for schools, who cited examples in which local costs were literally fifty times greater than these in advanced countries.

¹¹ Paul S., “New Approaches to Private Overseas Countries” p, 39: London New York: Macmillan, 1977.

a preliminary technology base, but also helps it with that which otherwise it would not have had¹².

There is some truth about the assumption. Foreign technology has been helpful in different respects to the Nigerian development programme and still can be more helpful. Nevertheless for technology to have been really transferred, a couple of things much have happened. First, that technology must have been exported into the country by the investor. Second, a reasonable degree of diffusion into the local environment needs to have taken place enough to enable the local personnel master the rudiments of that technology and be able thereafter on their own to create and develop its equivalent¹³.

A difficult task may be, but what is technology transfer if all that is done is the transfer of an almost fully assembled television or video equipment into the country, assembled in its final stages by Nigerian Labour, and thereafter the assemblers are not skilled enough, to produce or manufacture such equipments with locally adapted domestic inputs? All that has taken place is the transfer of product and not technology. That is, exactly the problem in Nigeria, there is very little manufacturing going on in the country and foreign investors have not shown any real interest so far involving themselves in complex technology transfer projects. Apart from the oil industry, levels of investment in the manufacturing and technology-oriented projects by the foreign investors are still very low. A 1971 survey by the Nigerian Council for Science and Technology (NCST) covering all manufacturing establishments in Nigeria about (800 of them)¹⁴ and of which only 300 of such establishments furnished reliable returns¹⁵, showed only 40 companies reporting some form of annual expenditure on R and D (Research and Development) in Nigeria. One conclusion that has been drawn from that survey is that for most foreign¹⁶ companies in Nigeria R and D is performed in the parent Company abroad and then possibly sold back to the subsidiary at exorbitant prices

In addition, there exists counting evidence that most of the imported foreign technology have been designed in ways that do not make room for the utilisation of local input. A lot of the foreign companies have accordingly come under the attack of the government for not creating or designing manufactured packages that allow for at least minimum value added¹⁷.

Criticism of the so-called “Technology Transfer” concepts, abound in modern literature. Some are against the investors for operating under a shroud of secrecy, making it impossible to transfer in real sense the so-called technology¹⁸, for the exorbitant costs coupled with the artificial nature

¹² Ve3mom, R., “U.S Enterprises in Less Developed Countries” contained in Ranis, G. ed. Gap between Rich and Poor Nationals.

¹³ Mira, W., “Multinational Companies and the Diffusion of Technology to Africa: A Historical Perspective, contained in D.B. Thomas, Importing Technology into Africa, p. 25.

¹⁴ Thomas D., Capital Accumulation and Technology Transfer, p. 40.

¹⁵ Ibe, I., Nigerian Foreign Investment Law and Policy, p. 61.

¹⁶ Dale R. Weigel, Host Countries and Multinational Corporations Development Digest, July 1976, Vol. 14, p. 89.

¹⁷ Adamu C., “Industries in Nigeria at a launching of Nigeria’s Industrial Policy and Strategy Guidelines to Investors, Oct., 1980.

¹⁸ Deane R., Foreign Investment in New Zealand Manufacturing (NZ), 1970, p. 26.

of the technology transferred which increase rather than reduce the often mentioned unemployment problems¹⁹, also for being biased in favour of the capital goods industry rather than attempting to meet the real needs of the large local populace²⁰, and for the capital intensive nature of the technology transferred which increase rather than reduce the often mentioned unemployment problems²¹.

Of course, there is no iota of truth in these criticisms, but one must be cautious not to underplay the possible contributory effect of such technology. If the problems of adaptation which can be solved through a careful selection process while diffusion which can be solved, through establishment of an integration model allowing for training of local personnel, are taken care of, foreign technology would be a very viable base upon which the develop local technology.

The problem is not all to be heaped on the investor/owner of technology. Nigeria has also been contributorily responsible for her own catastrophe. She has failed to date to give enough incentive to enable the harnessing of local manpower potentials to develop locally appropriate technologies, and has until recently²² failed to strictly monitor its incentive policies to ensure that foreign companies really transfer the technology, adapt same to local requirement, and through regulatory timing ensure the usage of local inputs. Foreign technology will continue to be useful if most of the projects envisage by yearly development plans are to materialize. But that foreign technology must be foreign technology adapted to the needs of Nigeria and must seen to be so transferred.

In recent years, the Nigerian Government has attempted to put in place investment laws that will bring increased participation of both foreign and any local law that has proved obsolete for the regulation of investments, domestic or foreign, and was unable to contribute towards the kind of objectives that will accelerate industrial development must be jettisoned; consequent upon which individuals and professional bodies made various representations to the then Federal Government of a review of the Companies Act. Such a revision was clearly long overdue considering that the UK on which its laws were based has since undergone four major amendments and consolidation in 1985²³.

As a starting point towards the right direction, in February 1972, the then Federal Military Government promulgated the Enterprises Promotion Decree No. 4 of that year. The aim was to secure for Nigerians a fairer share in the ownership of enterprises which were almost completely in foreign hands.

The Nigerian Enterprises Promotion Act (NEP ACT) is commonly referred to as the "Indigenisation Act". According to Professor O. Osunbor, this is a misnomer: in view of the fact that Indigenisation consists of 4 distinct components. These are:

1. Indigenisation of ownership of capital

¹⁹ Barnett R. and Muller P., p. 165.

²⁰ Harris, *The Political Economy of Africa*; Harris Richard (New York Press), p. 55, 1975.

²¹ Mehmet O. *Economic Planning and Social Justice and Developing Countries*, p. 83: London Groom Helm, 1978.

²² *Ibid.*

²³ Oserheimien A., *Osumber Nigeria's Investments Laws and the State's Control of Multinationals*, p. 50.

2. Indigenisation of the board of directors or control
3. Indigenisation of manpower and personnel; and
4. Indigenisation of technology – the selection and absorption to technology and to direct foreign investment from distributive trade, road transportation and so on into sectors in which they could contribute to the gross domestic product.

The Decree started by drawing up list of business enterprises into two schedules: for exclusive ownership by Nigerians (section 4) those in schedule 2 were barred to aliens unless:

- (a) the paid up capital exceeded ₦400,000.00
- (b) the annual turnover exceeded ₦1,000,000 and
- (c) at least 40% of the enterprise was reserved for Nigerians. By implication, enterprises that are not covered by either schedule permitted 100% ownership by foreigners.

It is imperative at this juncture and within the limits of this paper to examine some recent laws in Nigeria dealing essentially on the all time needed technology transfer. Chief among the various legislation relations to the subject matter of this paper is the National Office of Industrial Property Act²⁴. It was later changed to the National Office of Technology Acquisition and Promotion Act (NOTAP)²⁵. The National Office of Industrial Property Act was promulgated in September 24, 1979. The body (NOIP) was charged with the responsibility of monitoring on a continuous basis the transfer of foreign technology to Nigerian users. In the discharge of its functions, the National Office is subject to the overall governance of the General Council of the NOIP which is responsible for formulating policy for the National Office and discharging other functions conferred on it by the Act.

The general functions of the National Office are spelt out in Section 4 as:

- (a) the encouragement of a more efficient process for the identification and selection of foreign technology
- (b) the development of the negotiations of Nigerians with a view to ensuring the requirement 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 crag having effect in Nigeria on date of the coming into force of this Act 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 of such contract or agreement as 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.
- (e) the use of trademarks
- (f) the right to use patent inventions
- (g) 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
- (h) the supply of basic and detailed engineering

²⁴ Chapter 268 Laws of the Federation of Nigeria, 1990.

²⁵ Federation of Nigeria Law Decree No. 28, 1992.

- (i) the supply of machinery and plant
- (j) the provision of operating staff or managerial assistance and the training of personnel;
and
- (k) the monitoring on a continuous basis of the execution of any contract or agreement registered pursuant to the Act.

Other Relevant Laws

Some of the international legal regimes pertaining to technology ownership and transfer and the Paris Industrial Property Convention (1883), the same Copyright Convention (1866), the Universal Copyright Convention (1952), the United Nations Conference on Trade and Development (1964). The General Agreement on Tariffs and Trade (1948) as modified in the Uruguay Round which ended in December 14, 1993 in Geneva, precipitating the principles in World Trade Organisation (WTO) the 1994 Marrakesh TRIPS Agreement, et al.

By stinking towards the adoption and absorption of foreign technology and the eventual evolvement of indigenous technology through a sustained policy of Nigerianisation, the NGIP Act serves the objective of Indigenisation which is to achieve economic and technological self-sufficiency. Fundamental Objectives and Directive Principles of State Policy as contained in Chapter 2, Section 16 of the 1999 Constitution also provided for possibilities of technology transfer, Section 16(a) and (b) – 162(a-d) particularly 163(a and b).

The Legal Implication(s) of technology transfer can be found or examined from some decided authorities like *Beecham Group Ltd. v. Essdae Food Products (Nig.) Ltd.*²⁶, where it was held that:

1. Non-registration of a contract registrable under Section 4(d) of the National Office of Individual Property Decree No. 70 of 1979 does not render such contract invalid or unenforceable. The penalty for non-registration of such contracts is as provided under Section 7 of the Decree that foreign exchange will not be released in respect of such contract.
2. The law of Trade Marks is aimed at the subtle as well as to the obvious infraction of law and both the ears and the eyes must be together involved in the exercise of comparison: *Bell Sons and Co. v. Godwin Alco & Others*²⁷.
3. The criterion for determining whether or not there is an infringement of a Trade Mark is that the mark complained of must not when compared with what is already registered, deceive the public or cause confusion: *Alban Pharmacy Ltd. v. Sterling Products Int'l Inc.*²⁸
4. In the instant case Glucos-Aid in sound, is confusing to “Lucozade” and it will undoubtedly mislead the public.
5. General damages are such damages as the law will presume to be the natural or probable consequence of the act complained of: *Mobil Oil (Nig.) Ltd. v. Akinfosile*²⁹.
6. A successful litigant in an action for infringement of Trade Mark is entitled to damages.

²⁶ 1985 nwlr (Pt. II), p. 112-119.

²⁷ 1972, 1 SC 215.

²⁸ 1968, 1 All nlr, p. 300.

²⁹ 1969, nmlr, p. 112-119.

7. The Court of Appeal will not entertain a point which ought to have been raised at the lower court but was not so raised: *Samuel Fadiora & Anor v. Festus Gbadegbo & Anor*³⁰.

In addition to the Judicial Position above, the legal implication of technology transfer in the commercial world can be summed up in the words of a reckoned Jurist as follows:

We think we should say one word about the use of modern technology such as by faxing, to transmit document. It seems to us that time has what helps to speed up communication and, in our view, justice. There is need to recognise and incorporate in our laws the use which modern technology can be employed in the interest of justice³¹.

In the same vein, Michael M. Sherry is of the view that we are in electronic technology. Nations all over the world, have co-experienced and are still experiencing development in technology, technology has been embraced by banks, financial institutions, private and public enterprises in the conduct of their businesses, teletype machine, tele-facsimiles and computers have not only replaced traditional record keeping, they are the basic requirements of modern office³².

Electronic Fund Transfer facilities, Automated Teller Machine (ATM) and Magnetic Ink Character Recognition (MICR) are examples of electronic technologies embraced by Banks and Financial Institutions, Telexes and Telegraphic Transfers have also become regular devices for International Transfer of Funds by Financial Institutions Budnitz, captures the pervasive impact of electronic technology on Financial Institutions thus:

Financial Institutions have applied technology to their payment services in a variety of ways. Automated data processing, computers and telecommunication system have made Electronic Banking a reality. Banks use automated equipment to process billions of cheques. Telex, Machines are used to wire money in commercial transactions from Banks in one country to those in another³³.

Electronic technology also seriously challenges our evidentiary rules. These challenges are surely some of the legal implications associated with modern day technology transfer. The relationship between electronic-generated evidence and our evidentiary rules, no doubt, is/are part of the implications of modern day technology.

Access to Evidence in Technology-Related Crimes

The upsurge in technology-related crimes and the steady numerical growth rate of technology is definitely a major source of worry to users of electronic technology. It is evident, that perpetrators of technology-related crimes inflict financial hardships on their numerous victims.

³⁰ 1978, 3 SC, p. 219.

³¹ Nzeako J, in *Federal Republic of Nigeria v. Odaro* 1998, 1 F.B.T.L.R., p. 160.

³² Michael M. Sherry, "How to find the fax that fic the firm – A modern necessity", 1998 NATL L.J. at p. 19.

³³ Mark: The Finicky Computer, the papers Telex and the Fallible Swiss Bank Technology and the Law, 1984, vol. 25, No. 2, Boston College.

The computer has been identified as a major vehicle for the perpetration of technology-related crimes. It has been observed that “crimes which a person can direct at or commit in conjunction with the computer are limitless³⁴”. The commissions of computer-related crimes are aided by the fact that... “A skilled programmer who understands a given computer and has direct access to the system can alter the data within the system leaving no trace of alteration³⁵”.

Computer-related crimes have been successfully perpetrated through various devices such as introduction of “viruses, logic bombs and trojans³⁶”. Caught in the web of Computer-related crimes, Britain³⁷ and the United States of America³⁸ promptly enacted statutes aimed at addressing the menace of computer criminals. Nevertheless, these legislative efforts have been severely criticised³⁹ for failing to tackle the various International Law problem generated by computer fraudsters.

Problems of Proof Technology-Related Offences

A major relic of imperialism is our adoption of the accusatorial criminal process and the presumption of innocence⁴⁰. Our criminal process, presumes an accused person innocent until his guilt has been proved beyond reasonable doubt⁴¹ by the prosecution. The presumption of innocence enables the accused person to remain silent, right from the time of arrest and throughout the duration of prosecution, notwithstanding that his silence is inconsistent with innocence.

In view of its colonial origin the presumption of innocence naturally finds its root in the Privy Council’s decision in *Woolmington v. D.P.P.*⁴². In holding that it is not the duty of the accused to prove the defence of accident, in a criminal case the Privy Council said:

While the prosecution must prove the guilt of the prisoner, there is no burden on the prisoner to prove his innocence and it is sufficient for him to raise a doubt as to his guilt.

The presumption of innocence has been justified on the ground of protecting the accused against the oppressive state prosecuting machinery, consequently, the need to guard against conviction of innocent person. It is also said, that it is better to allow ten guilty persons escape punishment than to convict an innocent person. In the United States, the presumption of innocence reflects in

³⁴ Ajomale: “Computerised Banking Transaction: A case for Legislative Control,” in *Banking and other Financial Malpractices in Nigeria*, cit at p. 82.

³⁵ James Sprowl: *Evaluating the Credibility of Computer-Generated Evidence*, 1976, 52 Chi. Kent L. Rev., 547 at 560.

³⁶ Shackelford, “Computer-Related Crime: An International Problem in need of International Solution”, 1992, vol. 27, no. 2, *Texas Int’l Law Journal*, p. 483.

³⁷ Computer Misuse Act of 1990.

³⁸ Counterfeit Access Device and Computer Fraud and Abuse Act of 1964.

³⁹ Op. Cit. at p. 504.

⁴⁰ Section 325 of 1979 Constitution, *Akinfe v. The State* 1988, 3 nwlr (pt. 84) 554; *Nwankwo v. The State* 1990, nwlr (Pt. 134), p. 627.

⁴¹ Section 138(1) Evidence Act.

⁴² 1935 Ac, 462 of 481.

the need for fairplay, which dictates a fair state – individual balance by requiring the government to leave the individual alone until good cause is shown for disturbing him and requiring the government in its contest with individual to shoulder the entire load⁴³.

In practice, investigators and prosecutor of technology related crimes are more disadvantaged than perpetrators of technology related crimes. As earlier stated, while investigators and prosecutors have little or no knowledge of electronic technology, technology criminals are technology literate. And because of the level of literacy, they are ahead of investigators with respect to the *modus operandi* for the commission of these crimes. It follows, that there is no viable justification for the use of the presumption of innocence in technology related offences.

However, it is the view of O.A. Odiase – Alegimenien that an accused who stands trial for technology-related offence and who is technology literate should not be presumed innocent. He further suggested that where, the evidence adduced by the prosecution shows that such accused owns assets, in excess of his known income, he should be presumed to have acquired the excess assets with the proceeds of technology related crimes. The presumption suggested here is a rebuttable one. Consequently, where the accuser is able to adduce credible evidence of lawful acquisition of the assets, he would have discharged the evidential burden of his non-commission of the technology related crimes.

The above suggestion, turns at the introduction accountability on the part of technology criminals. It also curtails the practice of allowing them to remain silent, even where silence is evidently consistent with guilt. An identical approach exists under the Recovery of Public Property (Special Military Tribunals) Decree⁴⁴ 43 Section 6(3) of the Decree provides:

The onus of proving at any trial there is no enrichment to any of the provisions of section 1 of this Decree shall lie upon the public officer or any person concerned.

Conclusion

Naturally, every good thing properly examined is expected to have its bad side so to speak. Consequent upon that, it is not surprising therefore, that technological advancement vis-a-vis technology transfer has brought with it some rather very uncomfortable developments as dismissed above. Be that as it may, it will not be correct or reasonable so to say again, for anyone to downplay on the need for technology transfer. The relevance of technology in today's world needs not be and cannot be overemphasized. Against this backdrop, it is absolutely imperative that the problem identified above and other problems must legislatively be tackled. The law makers must however balance the benefits of technology against the burden. We cannot take the benefit and development in technology and jettison the burden. The point must also be borne in mind that the courts are obliged to promote and refund rather than scuttle the use of technology in banking and commercial transaction since interest within the society are not identical, it is impossible to have an ideal relationship between law and technology vis-à-vis the needs of all interest groups. Without knowing that it's intrinsic value must always be reckoned with against the backdrop of its destructive, consequence if not handled with caution.

⁴³ *Murphy v. Water Front Company* of New York 378 U.S. 52, 1864.

⁴⁴ Decree No. 3 of 1964.

All that said, it is necessary to put on records that technological advancement has on the average done more good to mankind than the otherwise and has indeed come to stay. We should be prepared to contend with its possible incidental negative effects which in any case, is not directly a problem of technology development in itself, but manmade problems which could be contributed to the nature of man.