

An Analysis of the use of Information and Communication Technologies (ICTs) in  
the Sub-Saharan African region.

Tokunbo Bamidele Ojo

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-Tokunbo Bamidele Ojo

## Table of Contents

|   |    |
|---|----|
| <i>List of Tables</i> .....   | v  |
| <i>List of Figures</i> .....  | vi |
| <b>Chapter 1: Introduction</b> .....  | 1  |
| Terminology.....  | 3  |
| Relevance of the study.....   | 4  |
| Chapter Presentations .....   | 5  |
| <b>Chapter 2: Modernization as Context</b> .....  | 8  |
| Mass Media and Development.....   | 9  |
| Communication Technology Development and Debts.....   | 13 |
| ICTs and ‘New Modernization’ Approach.....  | 16 |
| Communication Technology Development and Dependency.....  | 21 |
| Summary and Conclusion.....   | 24 |
| <b>Chapter 3: ICTs for Development in the Sub-Saharan African Region:<br/>Historical, Economical and Political Contexts</b> ..... | 25 |
| Introduction.....   | 25 |
| Background of Telecommunication Development in Sub-Saharan<br>Africa.....   | 27 |
| International Communication and the NWICO Debate.....   | 32 |
| ICTs and the ‘New World Order’.....   | 34 |
| NEPAD, DOT Force and the ‘New Modernization Paradigm’ ...   | 38 |
| Conclusion.....   | 41 |
| <b>Chapter 4: Wiring Sub-Saharan African for Development</b> .....  | 43 |
| Access.....   | 46 |
| Digital Divide.....   | 47 |
| IDRC’s Acacia Programme and Telecentre Initiatives.....   | 50 |
| <b>Chapter 5: General Conclusion and the Way Forward for the Sub-Saharan<br/>Africa Region</b> .....                              | 65 |
| Conclusion.....   | 72 |

## **List of Tables**

|  |    |
|--|----|
| Table 1: Information Technology Resources .....        | 31 |
| Table 2: Uganda: selected indicators .....             | 58 |
| Table 3: Equipment available in the Nakaseke MCT ..... | 59 |
| Table 4: User groups of the Nakaseke MCT .....         | 61 |

## **List of Figures**

|  |    |
|--|----|
| Figure 1: Sample of a micro-telecentre in Lagos, Nigeria ..... | 53 |
|--|----|

## Chapter 1: Introduction

With the significant proliferation of information and communication technologies (ICTs) in developing countries, ICTs are being touted as the leapfrogging technologies that will allow “the least developed countries (LDC) to skip the industrial phase and move directly to the post-industrial one” (Wong, 2000: 170). How true is this statement? Can the mere introduction of information and communication technologies into a country bring national development?

Writing during the Cold War era, Daniel Lerner (1958) and Wilbur Schramm (1964) argued that the exposure of the developing countries to Western mass media would bring development to these countries. Through mass media, people in the developing countries would be exposed to the ‘modernized’ world and culture of the West; and then learn new lifestyles, behaviour and culture. In short, from Lerner and Schramm’s perspectives, “mass media had the potential of blowing the winds of modernization into isolated traditional communities and replacing the structure of life, value, and behaviour there with ones seen in the Western society”(Melkote & Steevens, 2001: 116). In the words of Schramm (1964):

The task of the mass media of information and the “new media” of education is to speed and ease the long, slow social transformation required for economic development, and, in particular, to speed and smooth the task of mobilizing human resources behind the national effort (27).

There is a close tie between the modernization paradigm and current activities surrounding the use of ICTs for development. Over 40 years after Lerner and Schramm’s groundbreaking work on mass media and the modernization approach, it is still “assumed



that African and other developing countries cannot develop unless they are part of the new global economy, at the center of which is information and communication technology” (Mwesige, 2004: 89). However, unlike three to four decades ago when the United Nations Educational, Scientific and Cultural Organization (UNESCO) spearheaded “communication for development,” the World Trade Organization (WTO), the United Nations Development Programme (UNDP), the International Monetary Fund (IMF) and the World Bank “are now at the forefront of projects aimed at getting Africa connected” (Mwesige, 2004: 89). In getting Africa “connected,” these international agencies and organizations are working in partnership with business entities (such as Microsoft and CISCO) and non-governmental organizations.

From a political economy standpoint, this thesis will provide a critical analysis of ICTs for development in the Sub-Saharan African region<sup>1</sup>. In particular, I will argue that the current attempts by international business entities and international organizations (such as the IMF and the World Bank) to wire the continent might create “a new and dangerous form of techno-dependency” (Sonaike, 2004: 41). In addition, I will argue that the current ICTs for development initiatives are not significantly different from the modernization paradigm, which was put forward by Lerner and Schramm in the 1950s and in the 1960s.

Vincent Mosco’s “commodification” in the political economy of communication will be my analytical framework. Mosco defines commodification as “the process of

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<sup>1</sup> The Sub-Saharan African region is a geopolitical region that is in the south of the Sahara desert. The region, which spans three linguistic zones (Anglophone, Francophone and Lusophone), has a population of about half a billion. The region is “occupied by 41 independent states that, with the exception of Ethiopia and Liberia, emerged from a long period of colonial administration only in the late 1950s and the 1960s” (Boafo, 1991: 103).

turning use values into exchange values, of transforming products whose value is determined by their ability to meet individual and social needs into products whose value is set by what they can bring in the marketplace” (Mosco, 1996:143-144). By situating this study in a political economic analysis, I will map out the context of ICTs for development and illuminate the contested terrain in which communication development is taking place in the Sub-Saharan African region. This is necessary in the light of the fact that “commodification processes at work in the society as a whole penetrate communication processes and institutions, so that improvements and contradictions in the societal commodification process influence communication as a social practice” (Mosco, 1996: 142). With the on-going privatization and liberalization of telecommunications in the Sub-Saharan Africa region, one can see the commodification processes at work. The missionary zeal in which transnational companies are working with developmental agencies to build telecommunications infrastructure in Sub-Saharan Africa and the pressure of the Washington Consensus on these governments to privatize their telecommunications industry influences communication as a social practice in the region, as well as the whole continent.

## **Terminology**

Bear in mind that the terms “telecommunications” and “ICTs” are often used interchangeably in the telecommunications industry as well as in most communication studies literature. Both terms have different meanings. “Telecommunications involves all types of communication systems in which electronic or electromagnetic signals are used to transmit information between or among points” (Buskard, 1999: 3). Cable, fibre-optic, satellite, radio, microwave, telex, telegraph, and television are some of the examples of

the transmitting media. The telecommunication services include broadcasting, fax, telex and telephone. On the other hand, ICTs can be defined as the gathering, processing, transferring or storing of information through technologies such as computer, digital camera, video, and disc machines (Hanna, 1981; ITU, 1984, Hanson and Narula, 1990; Buskard, 1999). Basically, “the development and operation of ICTs are dependent largely on the availability of reliable and sound telecommunication infrastructures” (Buskard, 1999:2). In other words, the telecommunications sector evolves into a broader ICT sector that includes elements of telecommunications, broadcasting and computing (ITU, 2002: 1).

However, the distinction between these two terms-telecommunications and ICTs- does not matter in this thesis because the same socio-economic and historical contexts are applicable to these terms in the African situation. Hence, in this thesis, both ICTs and telecommunications will be used or referred to technically within the same context.

### **Relevance of the study**

Previous research on Africa and communication development has looked at mass media and democracy in Africa; press freedom and professionalism in African media; orality and African media, and Africa in the global information grid. For instance, Kwane Boafo (1991) looked at the technology transfer to the Sub-Saharan African region. Frank Ugboajah (1996) analyzed communication as technology in African rural development. Nancy George & Kwane Boafo (1992) examined issues and perspectives in communication research in Africa. Sydney Head (1974) studied the broadcasting system in selected Africa countries. These works were written with the intent to constitute an

intellectual interest and concern in media and communication studies in Africa as well as in the international community.

With the increase in ICTs, the research terrain is now being shifted. Whereas prior studies in this area tracked the phenomenal growth of the Internet in Africa and its potential to bridge the developmental gaps within Africa and the rest of the world (Littenberg, 1997; Jensen, 2000; Hilliard, 2000), current research is empirically assessing how Africa is faring in this age of Internet and ICTs (Sonaike, 2004; Franda, 2002; Robins, 2002; Fursich & Robins, 2002). Research is also analyzing the impact of liberalization and privatization of the African telecommunications sector (Opoku-Mensah, 1995; M'bayo, 1997; Hills, 1998; Nulens & Audenhove, 1999). From the political economy perspective, this study will also contribute to this growing body of scholarship on communication development in Africa and international communication; serving as a window to my future research on ICTs for development, telecommunications policy, and technological diffusion and transfer in Africa.

## **Chapter Presentations**

Chapter two provides the theoretical framework for the conceptualization of ICTs for development in the African context. In this section, I will draw on the work of theorists such as Wilbur Schramm (1964) and Daniel Lerner (1958). This chapter shows the close similarities between the modernization paradigm of Lerner and Schramm and the current ICT for development agenda, promoted by the Washington Consensus group, transnational companies and advocates of the 'freedom of information' doctrine. It questions the use of indicators such as the gross domestic product (GDP) in measuring

national development and access to communication technologies. The chapter also points to the blurring line between development agendas and commercial interests.

Chapter three looks at the historical, political and economical background conceptualizing ICT for development in the Sub-Saharan African region. Through a critical analysis and review of the NWICO debate and issues around imbalances in international communication resources and infrastructures, ICTs for development in the Sub-Saharan African region is situated within the contemporary global discourse of telecommunications reforms (such as privatization and liberalization of the telecommunications sector), globalization and trade. The chapter also explains that the market-based approach of the ICTs for development agenda further consolidates the dependency of the developing countries on Western countries.

Chapter four discusses the uses of ICTs, the dimensions of access and the digital divide, and the development of telecentres in the Sub-Saharan African region. Finally, it discusses experiences at one of the telecentres, the Nakaseke Multipurpose Telecentre in Uganda, by drawing on data from the evaluative report of the IDRC-sponsored telecentres in Africa. It illustrates that the development initiatives perceived technical access to computers and other ICTs as the only prerequisite to economic and social development when in actual fact extremely important social access to literacy, content, housing and health is not given much consideration in the development agenda.

Chapter five considers the challenges and options for the African continent in the global telecommunications and international communication sector. I suggest some ways that the continent could follow in transforming its communication sector, and conclude by summarizing my critical analysis of the ICT for development agenda in the Sub-Saharan African region.

## Chapter 2: Modernization as Context

*“... the urge to develop economically and socially usually comes from seeing how the well-developed countries or the most fortunate people live”- Wilbur Schramm (1964:42).*

This chapter explores the theoretical framework for the conceptualization of ICTs for development in the African context. It looks at the modernization theory and contemporary debates about ICTs for development. In this chapter, my primary focus will be on the earlier modernization theorists (Daniel Lerner and Wilbur Schramm), whose works, sometimes referred to as the dominant paradigm, are central to the modernization theory. Attention will be drawn to the similarities between the modernization paradigm and current ICTs for development initiatives.

The conceptualization of mass media as both an index of development and an agent of modernization dates back to over four decades ago when the groundbreaking work of Daniel Lerner (1958) and Wilbur Schramm (1964) on mass media was released, following the United Nations' 1958 clarion call for “a program of concrete action to build up press, radio broadcasting, film, and television facilities in countries in process of economic and social development” (UNESCO, 1964 quoted in Schramm, 1964: vii).

Both Lerner (1958) and Schramm (1964) believed that mass media would bring development<sup>2</sup> to developing countries if people in these countries were exposed to the ‘modernized’ world and culture of the West; and in turn learn new lifestyles, behaviour and culture of the West.

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<sup>2</sup> The development in the context that Lerner, Schramm and et.al perceived it was “a fateful procedure whereby poor nations should imitate the social, political, and economic steps of their wealthier counterparts (Huesca, 2003:52).

Modernization theory presumed that the transfer of capital goods, technologies, industries and Western norms to the developing countries would bring rapid economic productivity and social development in the developing countries, which were considered to be ancient and primitive. This position was well-articulated in Lerner's *The Passing of the Traditional Society* (1958). Through exposure to Western values, Lerner argued that people in the traditional societies<sup>3</sup> would become civilized and active participants (like people in modern Western society). They would also develop a psychological pattern, which he called empathy.

Empathy, as Fjes (1976) defined it, "allows the individual to internalize the process of modernization by not only being able to cope with change, but expecting and demanding it...It is the psychic nexus of all the attitudes and behaviour necessary in a modern society" (as cited in Melkote & Steeves, 2001: 115). With higher empathy, people would be able to move out of their traditional setting and expand their horizon. They would be able to adapt to Western ways of life and culture faster, especially with the continuous spread of ideas of social mobility and changes such as urbanization, literacy, and other Western belief system in the mass media. Once this happened, "Lerner believed that these institutional developments (which had already occurred in Western nations) would lead to a take-off toward modernization" (Melkote & Steeves, 2001: 85). In other words, modernization is westernization. A nation is developed and modernized when it perfectly resembles industrialized Western countries in economic structures, socio-political institutions, cultural behaviour and social-cultural attitudes to science and technology. As Schramm clearly stated in the book that he co-edited with Lerner in 1976,

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<sup>3</sup> From the standpoint of Lerner, traditional societies are the developing countries, which sometimes are also referred to as third-world countries. The modernized world or societies are the industrialized Western countries.



“the essential point was that growth in one of these spheres stimulates growth in others, and all spheres of society moved forward together toward modernization” (Schramm, 1976: 45-46 as cited in Melkote & Steeves, 2001)

## **Mass Media and Development**

Given the high expectation placed on mass media to bring social and economic development, the United Nations (UN) mandated one of its agencies, the United Nations Educational, Scientific and Cultural Organization (UNESCO), to supervise its program of concrete action that was aimed at building communication facilities in developing countries. UNESCO convened a series of meetings with media experts, country representatives, communication organizations and academics. These meetings, which were intended to draw developmental programs for each region of the world, started in Bangkok in 1960 for the Asian communities. Two other subsequent meetings were held in Chile and Paris for Latin America and Africa, respectively (Schramm, 1964).

Based on the inputs gathered from these meetings, UNESCO submitted a survey report to the UN. In December 1962, the UN General Assembly adopted a resolution “expressing its concern that the survey discloses 70 percent of the population of the world lack adequate information facilities and are thus denied effective enjoyment of the right to information.” The resolution further went on to say: “Information media have an important part to play in education and in economic and social progress generally” (UNESCO, 1964 as cited in Schramm, 1964).

In the light of this, UN and UNESCO urged every country, especially African countries, to include communication development plans in their national development and policy agenda. Much as advocates of the ICTs for development trajectory do today

with enumerating the penetration of ICTs (such as the numbers of telephone per 100 people or a unit area), UNESCO introduced a metric system to track each country's communication development. UNESCO expected each country to have a minimum of 10 copies of newspapers, 5 radio receivers, 2 cinema seats, and 2 television receivers for every 100 people. This minimum requirement was set with due regard to the United Nations' yardstick for measuring national development in the 1960s and 1970s. The UN considered a country "underdeveloped if the average per capita income is less than \$300 annually" (UNESCO, 1961 cited in Schramm, 1964:95). Until this moment, numerous Sub-Saharan African countries still have an annual average per capital income that is lower than \$300. According to the 2003 Human Development Report from the United Nations Development Program (UNDP), almost all of the low human development countries are in the Sub-Saharan Africa region; thirty out of the total of 34 bottom countries in the UNDP's human development index are in the Sub-Saharan African region (UNDP, 2003: 1). The measuring index for development has not changed much from what was used in the 1960s and 1970s. The UNDP still uses indicators such as per capita income and gross domestic product (GDP) to measure national development.

However, the use of quantitative measures for national development and access to communication technologies is flawed. Although there is a large influx of television sets and radios to many African countries, the use and access of these older communication technologies (radio and television) have relatively little significant impact on the social and economic well-being of the users. More so, high per capita income and high gross domestic product do not necessarily mean that there is an improvement in the lives of every citizen in a given country. For instance, in the 1980s, there was a vast growth in the

US economy. But this economic growth did not trickle down to the people at the bottom. Rather it was the rich ones that benefited from the growth. The incomes of those at the bottom drastically fell, as there was a widening gap between the poor and the rich in the country.

Although renowned economist and Nobel Prize winner Arthur Lewis argued that this inequality was good for development because the rich save more than the poor and thus increase capital accumulation, Joseph Stiglitz, the former World Bank's chief economist and senior vice president, saw it differently. In his book, *Globalization and Its Discontents*, Stiglitz pointed out that the Washington Consensus' trickle-down economic policy, which African countries and other developing countries are being pressurized to adopt, is nothing more than just "a belief, an article of faith" (2003:78). He likens the condition that the trickle-down economic policy cum developmental agenda of the Washington Consensus could create in a country, especially in a developing country, to pauperism in the 19<sup>th</sup>-century England. Despite 19<sup>th</sup> century England's economic prosperity and growth, pauperism also simultaneously grew in high proportion to their prosperity. The gap between the rich and the poor was extensively widened as well. In other words, the insistence on quantitative measures for national development and for access to communication technologies does not equate to 'development.'

Schramm worked for UNESCO as an independent expert on the UN/UNESCO's program of concrete action. The ultimate aim of Schramm's work was to provide scholarly interpretation and understanding on the role of the mass media in economic and social progress. His mandate was also to "help the developing countries in the practical application of this knowledge for the welfare of their peoples" (UNESCO, 1964 as cited

in Schramm, 1964 viii). Just like Lerner, he believed “greater accessibility, exposure, and the use of mass media correlated positively with literacy, economic well-being and political participation” (Huesca, 2003: 52).

## **Communication Technology Development and Debts**

Hence, with the pressure from UNESCO and its team of experts, the governments of many developing countries started to build communication facilities to speed up “modernization”. At the expense of other sectors of the economy such as health care, transportation and education, many African governments, with loans and bilateral aid from Western donors and UNESCO, “embarked upon a program of expanding communication facilities already available in the region, while introducing color broadcasting, telecommunications, microwave, satellites, computers and other new communication technologies” (Boafo, 1991: 106) from the 1960s to the 1980s. This step was taken in anticipation that information and communication media would bring socio-economic development. But sadly enough, these programs of expanding communication facilities ended up being wasteful and abandoned projects. In the end, some of these countries became seriously indebted after investing a significant amount of national capital and funds on these communication technologies, which were not useful to them. For instance, in the late 1970s and the 1980s, Ghana spent \$14 million USD on the earth station project, which was intended to improve its telecommunications system and enhance the nation’s contact with the rest of the world. The anticipated telecommunications improvements and socio-economic benefits did not materialize because Spar Aerospace of Canada, the main contractor, that worked on the project “supplied an international telephone switch that was obsolete, ill designed and

incompatible with the specifications of the satellite earth station” (Boafo, 1991: 113).

Ghana spent \$14 million USD on the project. Of the \$14 million USD that Ghana spent on the project, \$5.7 million USD came in the form of loans from Canada, which is the home country of Spar Aerospace.

Another case in point is the Aerostat Balloon System project in Nigeria. The country spent over \$200 million USD on this project, which was meant to improve the country’s communication infrastructure. Having spent millions of dollars on the project that was handled by an American company, the project was called off “on the grounds that the balloons would be a risk to aviation and that, in any case, the idea was obsolete” (Sonaïke, 1989: 5). This meant that Nigeria spent \$200 million USD, which could have been spent in other sectors (such as tourism, health care, education and agriculture) of the economy, on a project that never materialized in any economic advantage or social benefit.

In August 2004, Senator Baba Tela, chairman of the Nigerian Senate Committee on Communications, told reporters and the public in the nation’s capital city, Abuja, that a British company named Rural Radio System (RRS) absconded with \$3.2 million USD without delivering rural telephony services in 125 municipal areas in Nigeria. In 2001, under the national rural telephony programme, the Federal Government awarded RRS a contract worth \$3.8 million USD. Eighty percent of the total contract worth was paid upfront to RRS, which was to provide rural telephony services to a total of 125 municipalities in Nigeria. Since 2001, RRS has not fulfilled its obligation of the business contract. Nigeria’s national rural telephony programme is being funded with a \$200 million loan facility from the Government of China.

It is important to note that many of these multinational companies assisted Nigeria, Ghana and several Sub-Saharan African countries in arranging and getting huge loans from the Paris Club, the London Club, the World Bank and other international lending institutions for these “over-ambitious projects, which they executed, thereby drawing these countries into the so-called ‘debt trap’” (Sonaïke, 1989:5). These countries still have huge loans to pay back to some Western countries and lending institutions such as the Paris Club. For instance, Nigeria has a debt of \$30 billion USD. These debts are not sustainable. “Even our development partners are aware that we cannot meet up with the challenges of development, with the present high debt burden,” said the President of Nigeria, Olusegun Obasanjo on May 29, 2004 at the fifth year anniversary of Nigeria’s return to democracy (Punch Newspaper, 2004).

According to Jubilee 2000, an international pressure group that is advocating for debt cancellation for the less developed countries, 33 of the 41 heavily indebted countries in the world are in Africa. Although it is imperative to mention that communication technologies might have accounted for the smaller portion of these debts when one looks at the amount of dollars being spent in purchasing military arms, the huge debt of these countries still has a profoundly negative impact on genuine communication development.

As a result of the magnitude of these countries’ debt, the *Media Development* journal in 1989 maintained that it would take “a long time before the majority of Africans -more than 70% - have good reading lights, access to television or perhaps worst of all, access to telephone” (Media Development, 1989:1). The primary reason cited for this is that developmental initiatives such as rural and semi-rural electrification programmes

were being scrapped in order to service the huge debts to the foreign lenders and creditors. In some cases, countries spent over half of their annual budgets to service debt. Now, Sub-Saharan Africa is three times more indebted that it was in 1980. At the end of the 1990s, Sub-Saharan African countries have a debt of over 235.4 billion USD. Although the World Bank, in its 1986 World Development Report, predicted that in the worst case the debt of the developing countries would be \$864 billion USD and that of Sub-Saharan Africa would be \$29 billion USD in the mid-1990s, this was not the case (Charlton, 1999). "By 1994, according to the World Bank's own figures, the external debt of all developing countries stood at nearly \$2 trillion USD, while the debt of Sub-Saharan African countries was \$210 billion USD" (George, 1996 cited in Charlton, 1999: 381). This debt burden is bondage on these countries, and does have an adverse effect on their sustainable social development and economic growth.

### **ICTs and 'New Modernization' Approach**

With the significant advancement in communication technologies in the last two decades, there has been a renewed interest in information and communication technologies (ICTs) as "an icon for modern development" (Heeks, 1999:15). It is driven by corporate ICT vendors such as Microsoft, international organisations such as the World Bank and the International Monetary Fund, academic scholars and civil society groups. Since the mid-1980s and increasingly in the 1990s, the World Bank and the International Monetary Fund (IMF) have also strategically positioned telecommunication networks as a key paradigm for development of countries. In one of the earlier World Bank discussion papers on communication technologies and economic development in the Sub-Saharan African region written in 1977, communication infrastructure is

regarded as “the nervous system of both the economy and society” (Dickenson, 1977 as cited in Riverson, 1993). This notion is still upheld in most policy papers and discussion papers emanating from “Washington Consensus” group<sup>4</sup> – the World Bank and the IMF. Examples of the World Bank’s policy papers that affirmed this belief include its 1994 World Development Report, “Infrastructure for Development,” and its 1997 World Development Report, “The State in a Changing World.”

In most of the documentation and policy reports from the Washington Consensus group, there is a strong belief in the potential of ICTs to bring social and economic development to developing countries. The World Bank clearly states in one of its report that “if African countries cannot take advantage of the information revolution and surf this great wave of technological change, they may be crushed by it. In that case, they are likely to be even more marginalized and economically stagnant in the future than they are today” (cited in M’Bayo, 1997: 351). This similar view was reiterated in both the UN Millennium Report of 2000 and the UNDP Human Development Report for 2001.

Between the 1960s and now, the involvement of the World Bank in the telecommunications sector has changed greatly. From being a mere financial adviser and loan provider in telecommunications in the 1960s, the World Bank (alongside others in the Washington Consensus group) has moved to being involved in the reforms of the telecommunications sector. Wellenius and et.al (1992) summarize the World Bank’s involvement in the telecommunication since 1960s as follows:

Initially, the Bank focused on financing investments to modernize and expand physical plant. . . . In the 1970s, broader efforts were made to

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<sup>4</sup> ‘Washington Consensus’ group denotes the IMF, the World Bank, and the U.S. Treasury. They are tagged ‘Washington Consensus’ group because of the usual “consensus between the IMF, the World Bank, and the U.S. Treasury about the “right” policies for developing countries” (See Joseph E. Stiglitz’s *Globalization and its Discontents*. Norton: New York, 2003, page 16).



strengthen the telecommunications enterprises' organization and management. In the mid-1980s the Bank further expanded the scope of its support for telecommunications, emphasizing sectoral reforms including, where appropriate, the privatization of state telecommunications enterprises (cited in Wallsten, 1999: 3).

As expressed in the earlier modernization literature, the role of state governments remains a blind spot in the literature from the Washington Consensus group, reflecting the beliefs of experts in the free-market ideology. The viewpoints of the current Washington Consensus group and the previous modernization paradigm view on communication and development are similar because both views are rooted in neoclassical economic theory, which uses indicators such as per capita income and gross national product (GDP) to measure economic growth and social development. In the modernization paradigm of Schramm and Lerner and in current ICT for development discourse (from the Washington Consensus group, the ITU, academic experts and civil society groups with related views to the Washington Consensus group), "development is simplified to quantitative variables" (Nulens & Audenhove, 1999: 461). Both perspectives see ICTs (in the current age) or mass media (in the 1950s and 1960s) as a great multiplier of economic and social development. However, the conceptualization of the multiplier in both perspectives is slightly different as "the conceptualization of new technologies (telecommunications, satellites) were limited to economic and sociological features as opposed to the psychological reconditioning of people's daily lives planned in the mass media era" (Singh, 2002: 480). Apart from this slight difference in the conceptualization, the principles behind these perspectives are still basically the same.

In the 1960s and the 1970s, the emphasis was on the penetration of mass media, that is, in "sending radio and TV transmitters, cinema projectors and newspaper printing

systems to Africa” (Alhassan, 2004: 97). Now, the new mission is digitization and ‘computerization’ of Africa. Computers, cellular phones and the Internet are being promoted under the doctrine of the free market as the inroad for African development. “Benefits for telecommunications such as diversifying the rural and urban economic bases, reducing business and administrative costs, and for delivering social services such as health, education, and emergency services” are greatly emphasized (Singh, 2002:487).

Underlying these market-oriented initiatives around communication technologies is the transformation of communication activities into commercial commodities (D. Schiller, 2003). Mosco (1996) explained that the enlargement of the market deepened market penetration for the distribution and the use of ICTs. It would be naïve to say that millions of potential customers in the Sub-Saharan Africa region do not appeal to the transnational companies and their home government, especially in light of the fact that few Africans with access to the telephone make international calls that is approximately three times the world average of 200 minutes per year (Winseck, 1997; Tarjanne, 1994). Since the 1960s and in particularly the 1980s and the 1990s, “major transnational manufacturers of computers – IBM, NCR, ICL, Wang, Amstrad, Apple, and Olivetti – have established distribution networks throughout black Africa to sell and service their hardware and software products” (Boafo, 1991: 107). Likewise, in the 2000s, there is a strong presence of transnational telecommunication companies such as Alcatel, Philips, Nokia and Ericsson on the continent.

From the business standpoint, Africa is a lucrative market if it is opened up to Western companies. The US Clinton Administration acknowledged this when it launched the Africa Growth and Opportunity Act (AGOA), part of its Trade and Development Act,

in 2000. The US, which is home base to many transnational communication companies, passed AGOA “to advance US economic and security interests by creating incentives to fuel the continuing liberalization of economies in Sub-Saharan Africa and the Caribbean Basin (Robins, 2002:240).

Given that communication is treated as a product and at the same time as the multiplier of economic growth within the two paradigms, Norton (1992) calculated the economic significance for nation-states by “using data from 47 countries for the period 1947 to 1977 and controlling for the initial stage of the level of telecom development and a number of macroeconomic variables” (Gebreab, 2002:5). From his calculation, Norton discovered that telecommunications has a positive impact on economic growth. However, this positive impact of telecommunications on economic development is only evident in the developed countries such as Japan that already possess both a good telecommunications infrastructure and a proper regulatory framework. This is because transaction costs are lower and the output is on the rise when there is a well-structured and properly maintained infrastructure in place. A similar conclusion to Norton’s was also reached by Roller and Waverman (2001) who examined the relationship between telecommunications infrastructure and aggregate output using Organization of Economic Cooperation and Development (OECD) data for the period 1970 to 1990 (Gebreab, 2002).

While there is an important link between ICTs and economic growth, there is still a complex set of questions in the literature on the actual role of ICTs for social and economic development. Does the mere introduction of ICTs into an economy bring development and growth? Should market forces be the primary determinant of the

operative regulatory framework for the telecommunication sector? Without political and cultural forces, can these ICTs truly bring both economical and social development in Africa? As Melkote & Steeves (2001) ask: "Are ICTs a boon or bane for development?" (262).

### **Communication Technology Development and Dependency?**

From the critical school of thought in the political economy of communication, these emerging ICT and telecommunications systems are examples of what Herbert Schiller called "all-service-supplying cultural media-environment" (Schiller, 1993:100). These technologies, in Schiller's view, are vehicles of cultural imperialism (Nulens & Audenhove, 1999: 456) because they are "expression of the capitalist structures and the striving from which it [they] emerged" (Schiller, 1976 as cited in Hamelink, 1986). The trend in the global ICT market reforms since the early 1990s shows an increasing privatization of the telecommunications industry and the transnational companies' dominant take-over of telecommunications services in the market structure. In 1995, the worldwide investment in the telecommunications market was \$152, 000 billion USD. In 1998, revenue of over one trillion dollars came from the communication sector that included telecommunication services, broadcasting services and communications equipment (Thussu, 2000; OECD, 1999). This sector has gradually become the economic engine as well as an enabler of social, educational and medical progress (ITU, 2002). In spite of the huge investment return from the telecommunication and the missionary-like-zeal that some transnational companies and the international development agencies have taken in designing and funding ICT initiatives and the construction of telecommunication networks in the developing countries, the benefits of telecommunication have not started

to flow to the hardy peasants toiling in the Himalayan ranges of Nepal, the tribes of Papua New Guinea, the Indians of Brazil and the people of Africa (ITU, 2002; Robins, 2002; Panos Institute, 2002).

Scholars such as Oliveira (1992) from Latin America, which is one of the primary targets of Western developmental projects, have shown in their research that development projects have done relatively little to improve the social-economic conditions of the people in Latin America. "In their studies of literacy, mass culture, journalism and television, they showed how Western media companies were the chief beneficiaries of modernization programs (Mosco, 1996:123). The common theme in the work of the Latin scholars is that Western designed developmental programmes actually further create underdevelopment in the region and make Latin America more dependent on Western countries. In the 1960s, the annual growth rate in this region was 5.4 percent. But in the 1990s, the annual growth rate of this region has plummeted. It is "at 2.9 percent [in the 1990s] after the reform, was just more than half that in the 1960s" (Stiglitz, 2003: 86).

The result of these development attempts in Latin America is also akin to the outcomes of the development initiatives in Sub-Saharan Africa since the 1960s. As it is the case in Latin America, many of these development initiatives, carried out under the influence and pressure of the Washington Consensus, transnational companies and their home governments, have "spawned such social pathologies as massive rural-urban migration, widened gaps between the few rich and the many poor, increased distance between the political leadership and the populace, and marginalized roles of the people in establishing development goals, policies, and strategies (Boafo, 1991: 104). Sussman and Lent (1991) have argued that these developmental initiatives have failed to yield

positive benefits in the developing countries because the design and the implementation of most of these Western sponsored initiatives are misguided. Often, they obfuscate “the historical and political economic bases of increasing inequality, global dependency, and social dislocation, while protecting exotic and deprecating colonial folklore about Third World peoples and poverty” (Sussman & Lent, 1991: 2).

Schramm, one of the key architects of the modernization paradigm, eventually criticized his own work (1964) and the modernization approach. Schramm (1979) argued that the failure of the development initiatives in the developing countries was due to the total applicability of the Western-model of development in these countries. He suggested, however, that the design and the implementation of the development projects should be revised to integrate the cultural and community needs of the developing countries.

However, it is still believed that ICTs have the potential to accelerate development<sup>5</sup> in developing countries if there are “drastic changes in international and national economic, social, political and legal structures” (Melkote & Steeves, 2001:266). As it is presently constituted within the international economic, social, political and legal regimes, African countries are at a disadvantage because of their inability to “influence the global communication agenda, which continues to be set and implemented by the world’s most powerful nations” (Thussu, 2000: 6). Likewise, at the national level, the local elites control and set the pace of the communication agenda.

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<sup>5</sup> Development as used here refers to improvements in living conditions.

## **Summary and Conclusion**

This chapter has drawn information from the modernization paradigm, the current ICTs for development discourse, and critics of both the modernization paradigm and the current ICTs for development agenda to show the close similarities between the modernization paradigm (derived from Lerner and Schramm) and the current ICTs for development agenda (from the Washington Consensus). The chapter also showed “the blurred line between the development planning and foreign government and commercial interests” (Robins, 2002: 246). The next chapter of this thesis will look at the historical, political and economical background conceptualizing ICT for development in the Sub-Saharan African region. The chapter will problematize the conceptualization of ICTs for development in the Sub-Saharan African region within the global discourse of telecommunication reform, globalization and trade. It will also review some global debates and international agreements - the New World Information Communication Order (NWICO) debate, the Digital Opportunities Task Force (DOT Force), and the New Partnership for Africa’s Development (NEPAD), which have had impacts on the current state of international communication and communication development in the Sub-Saharan African region.

## Chapter 3: ICTs for Development in the Sub-Saharan African Region: Historical, Economical and Political Contexts

*In Africa, in the communication field more perhaps than in any other, the prevailing situation is the direct result of the heritage of colonization. Political independence has not always been followed by a decolonization of cultural life or by the elimination of many alienating factors imposed by the colonial system. Communication structures often still conform to the old colonial patterns and not to the needs and aspirations of the African peoples. We are resolved to decolonize them in their turn. We are also determined to extend the opportunities for social communication to the various social, cultural, political and economic groups that currently make up African societies—Yaoundé Declaration, adopted at the African Intergovernmental Conference on “Communication Policies in Africa,” July 1980.*

### Introduction

In the last two decades, information and communication technologies (ICTs) have been positioned as a panacea of development, especially in the developing countries. The advocates of ICTs for development strongly believe that ICTs will help developing countries ‘leapfrog’ to the industrial age and thus become active participants in the global economy. The International Monetary Fund (IMF), the World Bank, the International Telecommunication Union (ITU), the World Trade Organization (WTO) and transnational companies are the entities promoting and pushing this discourse. The influences of these international organizations and industry stem “from programmes in policy assistance, institutions building, private sector support and involvement in a multitude of ICT-related projects (InfoDev, Africa Information Society Initiative [AISII], World Links for Development, etc). Furthermore, the institution influences policy and scholarly debate through the production of a high amount of ICT-related literature” (Nulens & Audenhove, 1999: 457). The 2001 United Nations Development Programmes



(UNDP) *Human Development Report* noted that ICTs are not just a mere reward of growth and development, but tools for development (UNDP, 2001:27).

Critics of the ICTs for development agenda have argued that ICTs only create (or will create) economic, social and political divisions between the 'haves' and the 'have nots' and between the North and the South. One of the reasons for the potential failure of the ICTs for development agenda is that the discourse surrounding the ICTs for development is not asking some basic questions on the social, cultural, economic, and political contexts for this development. As Einsiedel and Innes (2000) point out, "the current discussions are concerned with the how and when to connect communities in the South instead of with the why, who, under what conditions, and with what implications" (2000:263).

In this chapter, I will look at the historical, political and economic background conceptualizing ICTs for development in the Sub-Saharan African region. Through a review of some significant global debates and agreements that have had important impacts on the current state of international communications in the last few decades, this chapter will problematize the conceptualization of ICTs for development in the Sub-Saharan African region within the global discourse of telecommunication reform, globalization and trade. The global debate and international agreements that this chapter will review are the New World Information and Communication Order (NWICO) debate, the Digital Opportunities Task Force (DOT Force), and the New Partnership for Africa's Development (NEPAD). I have chosen these events/agreements to provide a meaningful context for the 'new modernization paradigm.' That is to say, despite decades of discussions and actions to address the imbalance in the world information order, the

imbalance has not disappeared in part because the economic structures of capitalist exploitation are complemented by the current communication structures and cultural industries (Roach, 1990).

## **Background of Telecommunication Development in Sub-Saharan Africa**

The advent of the electric telegraph in the 19<sup>th</sup> century<sup>6</sup> changed the landscape of international communication in a similar way that the printing press<sup>7</sup> changed the world of literacy and communication in the 15<sup>th</sup> century. The electric telegraph stimulated the internationalization of communication and the growth of international trade and investment (Thussu, 2000). Based on data derived from the International Telecommunication Union<sup>8</sup> (ITU), which was founded in 1865 to regulate the sphere of telegraphic communication, the number of global telegraphic transmissions grew from 29 million in 1868 to 329 million in 1900 (Mattelart, 1994; Thussu, 2000). It was not a surprise that:

The decade from 1870 to 1880 saw the successive inaugurations of communication links between the English coast and the Dutch East Indies (Batavia), the Caribbean network, the line from the British West Indies to Australia and China, the networks in the China and Japanese seas, the cable from Suez to Aden, communication between Aden and British India, the New Zealand cables, communication between the east and south coasts

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<sup>6</sup> The telegraph was invented in 1837 by Samuel Morse.

<sup>7</sup> Johann Gutenberg invented the printing press in the 15<sup>th</sup> century. The printing press radically changed the means of communication in Europe with the massive of books and translation of Bible in different languages. Prior to the invention, books and the Bible have also been in the domains of elites and priests. But things changed radically when books in millions from the printing presses in major European cities. As a result of this development, the average citizen could have access to the Bible and read on his/her own without having under the authority and discretion of the priests.

<sup>8</sup> The ITU, which has over 100 members now, started with just 22 members in 1865. With the exception of Persia, these 22 members were all European countries. As Mattelart noted the ITU is “the first international institution of the modern era and the first organisation for the international regulation of a technical network” (1994: 9).

of Africa, and the cable from Hong Kong to Manila (Read, 1992 as cited in Thussu, 2000: 16).

The building of these telecommunication networks and undersea communication cables came at the height of colonialization. Arguably, it was “an essential part of the new imperialism” (Headrick, 1981: 163) and the then emergent global economic order of the era. Britain, France and European colonialists introduced telecommunications to Africa and other countries that they colonized during the 19<sup>th</sup> century.

When telecommunications was introduced to Sub-Saharan Africa, it was meant to advance the economic interests and political hegemony of the western nations, “especially the European colonialists (who) were bent on exploiting the peoples and resources of the African continent” (M’bayo, 1997:350). Colonial governments built telecommunication infrastructures in the selected capital cities and urban cities in the colonized nations in order to facilitate communication with the colonial government home offices in Europe. The consequences of this are that “the external telecommunications in almost all of Africa are better developed than [local] telecommunications infrastructures” (M’bayo, 1997:350). It is therefore easier, cheaper and faster to make a phone call to Britain or France than to a neighbouring Sub-Saharan African country. Over four decades after Sub-Saharan African countries got their independence from their colonial masters (Britain, France, Portugal, and Belgium), it is still extremely difficult to make local calls within the borders of many countries because the information flows still follow old “patterns of communication laid down by the railways and telegraphs of the 19<sup>th</sup> century, as almost all (94%) of inter-African

telecommunications traffic transits through metropolitan centers outside the continent, such as London or Paris” (Winseck, 1997: 353; Cf. Turan, 1989).

The postcolonial governments of many Sub-Saharan African countries have done very little to improve the systems that they inherited from the colonial masters. The postcolonial governments have failed to improve upon the inherited system due to reasons, which include: (1) lack of investment, (2) investment inefficiencies, (3) inadequate private sector involvement, (4) foreign exchange scarcity, (5) poor management incentives, (6) insufficient regional development, and (7) political instability (ITU 1994; Gebreab, 2002). The International Telecommunications Union (ITU) estimated in 1996 that it would cost about US\$28 billion for the Sub-Saharan African teledensity level to have an average of one line per 100 people (Iridium, 1997:8). Pekka Tarjanne, former ITU secretary-general, did note that the “unit line costs are higher in Africa than the rest of the world” (Tarjanne, 1996). Given that most exchange trunks and hubs are located in the metropolitan cities and capital cities in virtually all African countries, such a huge investment in the wire line or fixed line services is not considered cost-effective because it might not increase the accessibility to all and sundry in urban and rural areas. It is, therefore, believed that the continent will be better served now and in the future if the investment is greatly diverted to the wireless system (Teledesic, 1996). Nonetheless, the Sub-Saharan African region still has a long way to go in terms of the improvement of necessary communication infrastructure, and development of adequate communication policies and regulatory framework.

There are many homes in Africa today that are without telephone lines, let alone an Internet connection. In 2000, New York City alone had more computers connected to the

Internet than the whole African continent. The annual price of Internet access in most African countries ranges from \$150 USD (in Botswana) to \$1700 USD in Angola and Kenya (Winseck, 2002: 400; UNCTAD, 2000: 94-103; ITU, 1999b:6). As shown in Table 1 below, the number of Internet users per 10,000 inhabitants in Africa in 2002 is still relatively low compared to the world average. There are approximately 111 users per 10,000 inhabitants in Africa compared to the world average of 9,291. Overall teledensity for fixed telephone lines in the continent is still less than 3 per 100 inhabitants. “In addition, much of the telecommunication network is analogue and many sections are operating at saturated capacity or are highly unreliable, especially in the rainy season” (Jensen, 1999:184).

Table 1: Information Technology Resources

|                        | Information technology |                      |                |                      | World                |                |
|------------------------|------------------------|----------------------|----------------|----------------------|----------------------|----------------|
|                        | <i>Internet</i>        |                      |                |                      | <i>Estimated PCs</i> |                |
|                        | <i>Hosts</i>           | <i>Hosts per</i>     | <i>Users</i>   | <i>Users per</i>     | <i>Total</i>         | <i>Per 100</i> |
|                        | <i>Total</i>           | <i>10'000 inhab.</i> | <i>in</i>      | <i>10'000 inhab.</i> | <i>(b)</i>           | <i>inhab.</i>  |
|                        | <i>2002</i>            | <i>2002</i>          | <i>2002</i>    | <i>2002</i>          | <i>2002</i>          | <i>2002</i>    |
| 1 Algeria              | 821                    | 0.26                 | 500.0          | 159.78               | 242                  | 0.77           |
| 2 Angola               | 7                      | 0.01                 | 41.0           | 29.42                | 27                   | 0.19           |
| 3 Benin                | 574                    | 0.87                 | 25.0 [01]      | 38.78                | 12                   | 0.18           |
| 4 Botswana             | 1'617                  | 9.40                 | 50.0 [01]      | 297.47               | 70                   | 4.07           |
| 5 Burkina Faso         | 409                    | 0.34                 | 25.0           | 20.90                | 19                   | 0.16           |
| 6 Burundi              | 3                      | -                    | 8.4            | 12.02                | 5                    | 0.07           |
| 7 Cameroon             | 439                    | 0.28                 | 45.0 [01]      | 29.19                | 72                   | 0.46           |
| 8 Cape Verde           | 48                     | 1.09                 | 16.0           | 364.46               | 35                   | 7.97           |
| 9 Central African Rep. | 6                      | 0.02                 | 3.0 [01]       | 7.93                 | 8                    | 0.20           |
| 10 Chad                | 11                     | 0.01                 | 15.0           | 19.06                | 13                   | 0.17           |
| 11 Comoros             | 12                     | 0.16                 | 3.2            | 41.99                | 4                    | 0.55           |
| 12 Congo               | 36                     | 0.11                 | 5.0            | 15.20                | 13                   | 0.40           |
| 13 Côte d'Ivoire       | 4'397                  | 2.67                 | 90.0           | 54.58                | 154                  | 0.93           |
| 14 D.R. Congo          | 134                    | 0.03                 | 20.0           | 3.80                 | ...                  | ...            |
| 15 Djibouti            | 498                    | 7.59                 | 4.5            | 68.60                | 10                   | 1.52           |
| 16 Egypt               | 3'061                  | 0.47                 | 1'500.0        | 228.51               | 1'120                | 1.71           |
| 17 Equatorial Guinea   | 3                      | 0.06                 | 1.7            | 34.84                | 4                    | 0.72           |
| 18 Eritrea             | 859                    | 2.16                 | 9.0            | 22.61                | 10                   | 0.25           |
| 19 Ethiopia            | 41                     | 0.01                 | 50.0           | 7.42                 | 100                  | 0.15           |
| 20 Gabon               | 70                     | 0.61                 | 25.0           | 192.46               | 25                   | 1.92           |
| 21 Gambia              | 568                    | 4.14                 | 18.0 [01]      | 134.63               | 19                   | 1.38           |
| 22 Ghana               | 313                    | 0.14                 | 50.0           | 23.07                | 82                   | 0.38           |
| 23 Guinea              | 251                    | 0.33                 | 35.0           | 45.66                | 42                   | 0.55           |
| 24 Guinea-Bissau       | 20                     | 0.16                 | 5.0            | 39.90                | ...                  | ...            |
| 25 Kenya               | 2'963                  | 0.93                 | 400.0          | 125.27               | 204                  | 0.64           |
| 26 Lesotho             | 45                     | 0.21                 | 21.0           | 96.91                | ...                  | ...            |
| 27 Libya               | 83                     | 0.15                 | 125.0          | 225.02               | 130                  | 2.34           |
| 28 Madagascar          | 509                    | 0.32                 | 45.0           | 28.28                | 46                   | 0.29           |
| 29 Malawi              | 17                     | 0.02                 | 27.0           | 25.87                | 14                   | 0.13           |
| 30 Mali                | 158                    | 0.15                 | 32.0           | 30.11                | 15                   | 0.14           |
| 31 Mauritania          | 79                     | 0.29                 | 10.0           | 37.28                | 29                   | 1.08           |
| 32 Mauritius           | 3'462                  | 28.60                | 180.0          | 1'487.00             | 141                  | 11.65          |
| 33 Mayotte             | -                      | -                    | ...            | ...                  | ...                  | ...            |
| 34 Morocco             | 2'680                  | 0.90                 | 500.0          | 168.67               | 457                  | 1.54           |
| 35 Mozambique          | 1'925                  | 1.06                 | 30.0 [01]      | 16.99                | 82                   | 0.45           |
| 36 Namibia             | 3'709                  | 19.78                | 50.0           | 266.67               | 133                  | 7.09           |
| 37 Niger               | 119                    | 0.10                 | 12.0 [01]      | 10.69                | 7                    | 0.06           |
| 38 Nigeria             | 1'030                  | 0.09                 | 200.0          | 16.66                | 853                  | 0.71           |
| 39 Rwanda              | 1'233                  | 1.51                 | 20.0 [01]      | 25.16                | ...                  | ...            |
| 40 S. Tomé & Príncipe  | 1'060                  | 70.79                | 11.0           | 728.48               | ...                  | ...            |
| 41 Senegal             | 761                    | 0.78                 | 105.0          | 107.12               | 200                  | 2.04           |
| 42 Seychelles          | 266                    | 32.05                | 9.0 [01]       | 1'098.90             | 13                   | 15.66          |
| 43 Sierra Leone        | 277                    | 0.56                 | 8.0            | 16.16                | ...                  | ...            |
| 44 South Africa        | 198'853                | 43.75                | 3'100.0        | 682.01               | 3'300                | 7.26           |
| 45 Sudan               | -                      | -                    | 84.0           | 25.82                | 200                  | 0.61           |
| 46 Swaziland           | 1'329                  | 12.88                | 20.0           | 193.80               | 25                   | 2.42           |
| 47 Tanzania            | 1'731                  | 0.50                 | 80.0           | 23.14                | 144                  | 0.42           |
| 48 Togo                | 80                     | 0.16                 | 200.0          | 398.64               | 150                  | 2.99           |
| 49 Tunisia             | 341                    | 0.35                 | 505.5          | 515.03               | 300                  | 3.06           |
| 50 Uganda              | 2'242                  | 0.91                 | 70.0           | 28.34                | 82                   | 0.33           |
| 51 Zambia              | 1'621                  | 1.52                 | 52.4           | 49.01                | 80                   | 0.75           |
| 52 Zimbabwe            | 2'382                  | 2.05                 | 500.0          | 429.75               | 600                  | 5.16           |
| <b>Africa</b>          | <b>243'171</b>         | <b>3.02</b>          | <b>8'941.7</b> | <b>111.25</b>        | <b>9'291</b>         | <b>1.26</b>    |

Source: ITU, 2003.

## International Communication and the NWICO Debate

These gross inequalities and imbalance in communication resources that we see today were prevalent in the 1970s, which forced the developing countries to call for the New World Information and Communication Order (NWICO). The movement for the Non-Aligned countries<sup>9</sup>, a group of 77 countries from Asia and Africa, initiated the NWICO. Their demands for NWICO were part of their overall mission to change their continued economic and political dependency on the developed countries, especially their former colonial rulers, years after the imperial rule was over. They tabled their concerns at the UN and through UNESCO. The major concerns, as extracted from the lengthy submission made to the UNESCO by Tunisian/African born Mustapha Masmoudi on behalf of the Non-Aligned countries, were:

- An unequal distribution of information: owing to the socio-technological imbalance there was a one-way flow of information from the 'centre' to the 'periphery', which created a wide gap between the 'haves' and 'have nots';
- An unequal power in production: the information rich were in a position to dictate terms to the information poor, thus creating a structure of dependency with widespread economic, political and social ramifications for the poor societies;
- The dominance of Western media: this vertical flow (as opposed to a desirable horizontal flow of global information) was dominated by the Western-based transnational corporations;
- The commercialization of media: information was treated by the transnational media as a 'commodity' and subjected to the rules of the market;

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<sup>9</sup> The Non-Aligned countries are primarily the formerly colonialized countries in Asia and Africa. These countries refused to align use another word with the two superpowers (the US and the USSR) in the Cold War era. They officially came together under one umbrella in 1964 to demand equity in the distribution of global resources, and favourable terms and treatment in international economic activities and political affairs. But the launching pad for the movement for the Non-Aligned countries was the 1955 Bandung, a meeting of 25 African and Asian countries that condemned colonialism. The 77 countries that formed the movement for the Non-Aligned countries were members of the UN at the time.

- An extension of the global economic and social inequality: the entire information and communication order was a part of international inequalities that created and sustained by mechanisms of neo-colonialism (Masmoudi, 1979: 172-173 as cited Thussu, 2000).

In response to the concerns raised by the Non-Aligned countries, UNESCO set up a 16-member panel, popularly known as the MacBride Commission, named for the leadership of Sean MacBride, to examine the case and provide recommendations on how to tackle the communication problems on the global scene. In its final report, "Many Voices, One World," the MacBride Commission validated the position of the developing countries and called for concrete actions to deal with the imbalance in the world communication structures: "It is for the international community to take the appropriate steps to replace dependence, dominance and inequality by more fruitful and more open relations of inter-dependence and complementarity, based on mutual interest and the equal dignity of nations and peoples" (MB Commission, 1980: 268).

In total, 82 recommendations were made by the MacBride Commission. These recommendations included democratization of communications, reduction in the commercialization of communication, respecting national sovereignty over information, strengthening collective self-reliance at the national and inter-regional level, partnership and international cooperation in communication development, and introduction of professional ethical standards for journalists. But, the NWICO and MacBride Commission's recommendations never went unchallenged. In fact, the US and Britain led a campaign against NWICO and UNESCO itself. They argued that UNESCO had lost its focus as an international body by providing a forum for the developing countries to curtail a free flow of information through state regulations (Thussu, 2000).



The ethical standard for journalists and media accountability clauses in the MacBride Commission's recommendations were also seen as a barrier to the free flow of information. The then President of the US, Ronald Reagan, was quoted in the *New York Times* of September 22, 1987 as saying: "We cannot permit attempts to control the media and promote censorship under the ruse of a so-called 'New World Information Order'" (cited in Roach, 1990). This, amongst others, was a perfect excuse for the US and Britain that were afraid that their "hegemonic and monopolistic ownership and control of international communication systems and patterns of information" might be "destabilized and disestablished" with the NWICO (Uche, 1996: 2) to revoke their membership in UNESCO and thus get out of the NWICO debate. Since both countries were the largest financiers of UNESCO, the withdrawal weakened the political and financial strength of the organization<sup>10</sup>.

### **ICTs and the 'New World Order'**

Arguably, this imbalance in international communication is primarily an economic and political issue, which undermines the essence of international communications. Rather than having or building a democratic communication system both at the international and national level that is inclusive of all, what we are seeing is a communication system in which citizens, nation-states, organizations (including NGOs and international organizations) and transnational corporations are included and excluded

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<sup>10</sup> Therefore, the NWICO debate suffered a big blow. While Britain rejoined the organization about four years ago, the US rejoined UNESCO in October 2003. See <http://usinfo.state.gov/products/pubs/unesco/>. Many, of course, saw this as a cynical ploy for the US to gain support for their militaristic actions in Empire Building.

along the lines of commerce and hegemonic power according to their geographic locations. In the end, it creates a new space of centrality. As Saskia Sassen observes:

The most powerful of these new geographies of centrality at the inter-urban level binds the major international financial and business centres: New York, London, Tokyo, Paris, Frankfurt, Zurich, Amsterdam, Los Angeles, Sydney, and Hong Kong, among others. But this geography now also includes cities such as Sao Paulo and Mexico City. But also within global cities, we see a geography of centrality and one of marginality. For instance, New York City has the largest concentration of fiber optic cable-served buildings in the world, but they are mostly in the center of the city, while Harlem, a low-income African-American community a mere two miles north of Manhattan's center, has one such building. This does not *have* to be so (1999:181-2).

Dwayne Winseck (2002) reiterates these disparities in his discussions of the differences that mapped the boundaries of cyberspace. He argues that:

The boundaries of cyberspace are mapped by differences between those using available technologies to produce and receive flows of communication, and the rest of populations cut off from such means and thus rooted in more local forms of culture. In the nascent transnational communication system there is simultaneously a homogenization of a deterritorialized core of wired places and affluent users and a heterogeneity of cultural experience in the dispersed peripheries (2002: 401).

This trend is exacerbated by the World Trade Organization's 1997 Basic Telecommunications Agreement. Jill Hills argues that the agreement has "created the opportunity for the worldwide integration of domestic and international communication networks under a US-led oligopoly" (Hills, 2002: 1). The primary tenet of this 1997 WTO agreement is the liberalization, privatization and deregulation of the telecommunications sector and services. Signed by 69 countries that actually accounted for over 93 percent of world telecommunication revenues, the agreement directly or indirectly has a binding effect on the rest of the world and international communication

because it radically changes the operative and regulatory framework of telecommunication. Through the backing of the US, which spearheaded this WTO agreement, and the multinational companies that are operating in the telecommunications sector, the WTO, the World Bank, the UNDP and the IMF are strongly promoting the privatization and institutional reforms in the telecommunications sector. They perceived the privatization and deregulation of the telecommunications sector, which in most countries is actually public and government controlled, as “a precondition to the foreign direct investment (FDI), economic growth” and an avenue for a political integration in the globalized world economy (Hills, 1998: 459).

This new wave of liberalization and privatization is rooted in the economic assumption that opening up the market to the private sector will bring efficiency, faster service and competition. This is called neoliberalism. Propelled by the Washington Consensus, it is “a resuscitation of the laissez-faire policies that were popular in some circles in the nineteenth century” (Stiglitz, 2003: 74). Essentially, the distribution and allocation of communication resources are left to the means of the market. As it was the case when the telegraph was introduced in the 19<sup>th</sup> century, the information is commodified, and the ‘opening up markets and free flow of information’ doctrines suddenly became a dominant discourse.

Although the neoliberal model has been widely rejected in many advanced countries after the Great Depression in the 1930s, the Washington Consensus group is still pressurizing many poor nations in Africa and in the southern hemisphere to adopt this model. In the light of these poor countries’ heavy dependence on foreign investors and significant reductions in bilateral aid from Western donors that include many of the

signatories of the WTO agreement, the privatization, liberalization and institutional reforms as wholly designed by the Washington Consensus become the last resorts for them to survive or be part of the global economy. It is part of the structural adjustment programme.

After 1997, many Sub-Saharan African countries privatized their telecommunications or are currently in the process of privatization and liberalization. For instance, Angola relaxed its foreign ownership rule in 2001 by allowing 50 percent ownership in all telecommunication services (ITU, 2002). Zambia passed the British 1984 Telecommunications Act without any amendment to create room for the entry of private competitors (Opoku-Mensah, 1995; Hills, 1998). As noted in the World Bank Policy Research Working Paper 2863:

By 2001, about 17 African countries had already privatized their incumbent fixed-line operator and more were in the process of doing so, two countries had allowed competition in basic services, and more than 36 countries had created a separate regulatory body for the telecommunications sector. Moreover, about 45 countries have licensed private cellular operators and effective cellular competition has now emerged in many countries in the region. Almost all African countries have now introduced some kind of reforms in their telecommunications sector, and are at different stages of the reform process (Gebreab, 2002).

But the hard reality is that several of these Sub-Saharan Africa countries are undertaking “regulatory reform in a relative policy vacuum and in advance of substantive restructuring of operations; in consequence, the reforms seem overcomplicated and are likely to prove ineffective in promoting improvements in sector performance”(Mustafa et al., 1997:xi). In this situation, Robins (2002:239) sees a brighter future only for international business interests, not for the people of Africa, especially women and people outside the business core areas.

## **NEPAD, DOT Force and the 'New' Modernization Paradigm**

The New Partnerships for Africa's Development (NEPAD) initiative was born out of the continued marginalization of Africa in all spheres of the global economic activities and international communication system. Engineered by Senegalese President Abdoulaye Wade, South African President Thabo Mbeki, Algerian President Abdelaziz Bouteflika and Nigerian President Olusegun Obasanjo at the 2002 G8-submit in Canada, the NEPAD Initiative is a socio-economic plan that is geared towards moving Africa out of the marginalized zone in the global trade arena and making it an active participant in world affairs. The immediate priorities of NEPAD are human and infrastructural development, poverty reduction, good governance and leadership on the continent, favourable market conditions for importation and exportation of African goods, and developing partnerships with public and private sectors in the developed countries for trade and commerce.

To achieve "e-readiness" for all African countries, "NEPAD plans to double telephone penetration to two lines per 100 people by 2005, lower the cost and improve reliability of telephone services" (Bidoli, 2002: 9). Having the governments of Nigeria, Zambia, Senegal, South Africa and Algeria as the driving forces behind it, NEPAD is working towards realization of this goal in partnership with the G8 industrialized countries' Digital Opportunity Task (DOT) Force group and the regional agencies such as the African Telecommunications Union and Africa Connection. DOT Force group is heavily depended on for financial assistance in getting Africa 'e-ready.'

The DOT Force group is being looked onto for financial assistance because of the commitment by G8 industrialized countries towards building a global information

society. At their meeting in Okinawa in 2000, the G8 leaders formed the DOT Force group as part of the G8 'Okinawa Charter on the Global Information Society', "which was endorsed by a broad cross-section of the US private sector (including Anderson Consulting and the Markle Foundation), the United Nations Development Program (UNDP), and the G8 government themselves" (Shade, 2003:106). The primary objectives of the Okinawa Charter include: implementing universal access mechanisms; enhancing human capacity and resources in knowledge creation and e-learning; promoting economic and business activities for sustainable development; encouraging competitive and open markets for trade; and establishing and supporting 'e-strategies' and ICT based projects in developing countries (DOT Force, 2001; Shade, 2003).

The DOT Force agenda, which accentuates the development of the market-based telecommunication and information system in the developing countries, could be seen as an annex of harmonization clauses that are usually central to international trade agreements between developed countries and developing countries. Through the harmonization of telecommunications markets, Mosco (1996) argues that ICTs become "central to the hemispheric integration of the business activities as well as to the production of commercial culture. ... This is because telecommunication provides all businesses with the essential means to integrate their operations internally and externally" (126).

Taking a critical look at both the DOT Force and the NEPAD initiatives, it is also self-evident that both initiatives are extensions of the neoliberalism and modernization paradigms. First, neither of the initiatives gives considerable attention to equity issues in terms of removing barriers amongst countries, and redistributing wealth and basic

resources. Rather, it is access to ICTs that are being emphasized, as if child poverty would be eradicated once a computer is connected to the Internet. As will be discussed in the next chapter, these initiatives essentially consider access as being simply access to the technological infrastructure alone. Social infrastructures, such as access to education, housing, food and content, which are paramount to development, are often ignored.

The DOT Force agenda and the NEPAD were conceived without proper open public consultation with many Sub-Saharan African countries and civil society groups. As a result of the high-level approach that was taken in putting together both the NEPAD and the DOT Force, the respect for national sovereignty might become an issue later on in the course of implementation of these agendas. As Ewan McPhie, policy director of a South Africa based non-government organization, Bridges.org, succinctly observes:

Countries don't like to be told what to do by big brother. There may come a time when countries will have to cede some of their power- be it economic or political-for greater good, and they may not be comfortable with that. What concerns me more is that there is a danger of NEPAD becoming an exclusive club. The first five countries are all way ahead of the rest – what happens to the other 49? Will they be allowed to participate as full partners? Will they benefit? (as cited in Bidoli, 2002:11).

In both initiatives, the private sector is positioned as the catalyst for sustainable development. But, there is a blurring line between these developmental initiatives and business interests. An example of this new corporate scheme could be seen in the case “of the Public Health Channel for medical professionals in Africa launched in 2000 by World Space Foundation and SATELLIFE, an international humanitarian organization. The foundation is an offshoot of the WorldSpace Corporation, which owns the AfriStar satellite, and is an outlet for Hitachi, JVC, Panasonic and Sanyo products” (Robins, 2002: 240). Given that communication resources and ICTs are “embedded in the institutional

arrangements of a corporate-capitalist market economy, the equal entitlement to information and communication resources will remain a normative standard only” (Hamelink, 2000: 93).

## **Conclusion**

In a report prepared for the United Nations Commission on Science and Technology, Robin Mansell and Uta Wehn (1998) advocate a developmental approach in which the partnership between government and businesses not only leads to an expansion of markets but also “enhance[s] the kinds of capabilities that are necessary to take advantages of ICTs” (Singh, 2003: 2002). It is, therefore, necessary that conscious planning and modes of intervention be made by the public sector, the private sector and civil society groups to make these technologies applicable and useful to these countries.

Considerable attention should be paid to the cultural, political and economic context of communication structures in the process of reforms. This is absolutely necessary with the convergence of ICTs and telecommunications, for it is an important way to tackle and address the complexities of convergence as well as meeting the growing needs and demands in the sector. Garth Graham (2001) observes that “countries need effective capacity to understand the culture of the Net on their own terms, not those imposed by external intervention. Development questions are not merely economic. They are also socio-cultural and political” (as quoted in Shade, 2003: 114).

Market forces should not be the primary determinant in the restructuring process of the regulatory framework and in communication development. The political culture, comprised of various institutions and markets, is a more influential institutional force in the formation of the regulatory framework and development in a given socio-political



environment. It is the interaction between the contextual institutional forces<sup>11</sup> that determines the performance of the telecommunications sector and the applicable regulatory approach within the boundary of a nation-state (North, 1990; Dugger, 1992; Campbell, 2002). By ignoring these influential institutional forces, the on-going privatization and reforms in the telecommunications sector in Africa might further consolidate structures of the continent's dependency within the global communication sector. In retrospect, the present market-based approach being adopted might make these countries more dependent on "foreign capital, technology and expertise" (Nulens and Audenhove, 1999: 454).

However, the Sub-Saharan African region will greatly benefit from this global information expansion if there is a grass-roots development of technical capability, local expertise and human resources. If well-initiated, projects such as IDRC's Acacia project, which is aimed to wire the continent and develop local expertise, is one such initiative that could be of great benefit to the people of Sub-Saharan African region. The next chapter will provide a brief overview of some of the on-going projects to wire the Sub-Saharan African region. It will also discuss some of the potential benefits of ICTs to the region. Finally the chapter will discuss the dimension of access, digital divide and the telecentre 'movement' in the region.

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<sup>11</sup> The contextual institutional forces include the socio-political system, cultural tradition, human resources, technical expertise, and state of economy.

## Chapter 4: Wiring Sub-Saharan Africa for Development

*"The information revolution provides an invaluable new set of tools for all partners striving to achieve sustainable development. It makes empowerment both meaningful and effective and opens up for developing countries the prospect of leapfrogging over earlier communication technologies to become real participants in the global economy."* - Maurice F. Strong, former Secretary-General, the Rio Earth Summit

International developmental agencies such as Canada's International Development Research Centre (IDRC) and the UNDP are working in partnership with the governments of Sub-Saharan African countries, civil society groups and transnational corporations such as CISCO, Alcatel, and Microsoft to wire up the continent. Some of the projects that are being undertaken include:

- African ONE<sup>12</sup> (African Optical Network) that is geared towards building a fibre optic ring around Africa (see: <http://www.lucent.com/press/0699/990604.coa.html> )
- The sub-marine optic fibre cable SAT-3/WASC/SAFE (South African Telecom 3-West African Submarine Cable-South Africa – Far-East) project that is aiming to link Africa with Asia and Europe.
- The Regional African Satellite Communications Organisation (RASCOM) project that aims to provide satellite communication,

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<sup>12</sup> There is a big question on the continued viability of the African ONE project. In 2002, the American multinational company, Global Crossing, which is one of the leading partners in the project, filed for bankruptcy as a result of an accounting scandal. See this BBC report for more details: <http://news.bbc.co.uk/1/hi/business/1870129.stm> . Lucent Technologies, which is also involved in the project, is currently on the verge of bankruptcy as a result of a market slump in the telecommunications industry since 2001.

and effective linkage between Sub-Saharan Africa

telecommunication networks with those of the other continents.

Governments of several Sub-Saharan African countries are also introducing institutional reforms such as “divestitures of public enterprises and commercialization, liberalization and privatization” of the countries’ telecommunication industry” to speed up the region’s integration to the global information exchange system (M’bayo, 1997:351).

With the free flow of information, privatization and liberalization doctrine at the heart of the ‘new’ development paradigm, concerns surrounding equity issues such as access, ownership and allocation of resources are becoming important. It is within this context of globalization<sup>13</sup> and the continued marginalization of Sub-Saharan Africa that this chapter will discuss the uses of ICTs, the dimensions of access and the digital divide and the development of telecentres in Sub-Saharan African region. Finally, it will discuss experiences at one of the telecentres, the Nakaseke Multipurpose Telecentre in Uganda, by drawing on data from the evaluative report of the IDRC-sponsored telecentres in Africa.

Although there is no consensual methodological approach to assess or measure the actual social and economic impact of ICTs on Sub-Saharan African development, the potential benefits and contributions of ICTs to sustainable development in Sub-Saharan

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<sup>13</sup> Given that globalization means different things to different people, I am using globalization in the way that Joseph Stiglitz used it in his book, *Globalization and its Discontents*. Stiglitz defines globalization as “the closer integration of the countries and peoples of the world which has been brought about by the enormous reduction of costs of transportation and communication, and the breaking down of artificial barriers to the flows of goods, services, capital, knowledge, and (to a lesser extent) people across borders”(2003:9). As he clearly explained in his book, globalization is driven by international corporations. The international institutions such as the IMF, the World Bank and the WTO oversee (“govern” in Stiglitz’s word) globalization.

Africa are never disputed by both critics and advocates of ICTs for development

(ICT4D). Some of the potential contributions or benefits of ICTs include:

1. Using ICTs for community development. For instance, the Internet could be used in developing “locally appropriate applications and services; ...enable efficient regional, national and global organization efforts; ... and enable rural young people to learn about computers and to have access to technologies and information available to their urban peers” (Richardson, 1998:174 as cited in Melkote & Steeves, 2001).
2. Accessing market information and prices on locally produced goods or farm products. For instance, Sub-Saharan African farmers and even government owned agricultural institutes might be able “to get real-time access to market data, information on standards and rules, prices and potential customers” (World Bank 2000:9 as cited in Polikanov & Abramova, 2003) for their products at both regional and global markets.
3. Stabilizing the financial markets and banking systems. With advanced technologies, cash and financial transactions could be processed faster and more securely. In addition, instead of time-consuming paper based book-keeping methods and manual approaches of counting money, computers and accounting software could be used to speed up transactions. For instance, Mauritius introduced electronic payment systems to modernize its service sector. Nigeria, and Cote d’Ivoire and some other Sub-Saharan African countries developed satellite information networks and computerized trade complexes in order to

update information on their stock and commodity exchanges (Polikanov & Abramova, 2003: 47).

4. Using ICTs for educational purposes. Students and lecturers could access a variety of academic journals and papers via the Internet as well as through electronic databases. Also, multimedia materials could also be used for teaching purposes.

From the critics' standpoint, all these potential benefits are attainable if ICTs are considered as a means (not as the end). That is, we need to be able to separate ICTs from the information that they produce "and examine peoples' capacities to receive, process, use, and transmit information" (Melkote & Steeves, 2001: 263).

## **Access**

Having technologies is one thing, but whether or not people can use them effectively is another thing entirely. If there are ICTs in place and people are unable to use them for their collective good due to constraints such as an absence of expertise and infrastructures to support the application of the technologies, these technologies are apparently useless. In other words, "mere exposure to a technology does not guarantee usage, and, as such, the existence of information in society does not assure the use and concomitant acquisition of knowledge" (Oyelaran-Oyeyinka & Adeya, 2004: 68). ICTs will support the learning and acquisition of knowledge processes, but not replace the learning and acquisition of knowledge (Mansell & Wehn, 1998; Alhassan, 2004). This means "a learning process must precede the application of ICTs" (Patterson & Wilson, 2000 cited in Alhassan 2004, 100).

Therefore, in order to make ICTs applicable and useful to the people, it is important that we extend access to ICTs beyond the technical level - provision of new infrastructure or access points (such as telecentres). As will be discussed later in this chapter in an analysis of the experiences at the Nakaseke Multipurpose Telecentre in Uganda, providing technical access (such as telecentres) does not necessarily facilitate effective uses of ICTs for social and economic benefits. Social factors such as literacy levels and poverty are important in the use of ICTs, and should be given important consideration in the planning and designing of ICTs initiatives.

As Michael Gurstein (2003) has explained, access to either infrastructure or computer terminals is not the most significant thing. "Rather what is significant is having access and then with that access having the knowledge, skills, and supportive organizational and social structures to make effective use of that access and that e-technology to enable social and community objectives" (10). For instance, it is self-evident that an illiterate person who does not have "the usage skills and knowledge of English or the language in which the Internet messages are encoded" will not be able to access information on the Internet even if he/she has Internet access (Melkote & Steeves, 2001: 264). Likewise, an individual who can barely afford two meals per day might not have money to buy or access ICTs (Heeks, 1999). These social factors as well as other institutional structures, such as political regimes and economic systems, contribute to the social exclusion of a significant number of people, especially in Africa, from access to ICTs and the uses of ICTs. And as Alhassan (2004) suggests, these social factors should not be ignored when we talk about the digital divide.

## Digital Divide

The digital divide is a term that is often used in describing “disparities in access to, and usage of, the telephone, personal computers and the Internet across demographic groups, within the same country, or between countries” (Sonaïke, 2004: 42). The International Telecommunications Union (ITU) defined the digital divide as “the division between countries and people within countries who have real access to ICTs and are using it effectively, and those who don’t” (as cited in Gurstein, 2003). Of course, the continent of Africa provides ample evidence of the digital divide within the same country and between countries. It is not unheard of that in most African countries significant numbers of people living outside the capital cities or metropolitan cities have not made a phone call in their entire lives (UNDP, 2001). It is more than 50 times likely that people in the rural areas will be without a telephone, let alone an access to the Internet that can be prohibitively expensive. It costs at least \$65 per month for Internet access in most parts of Africa, and this cost of Internet access “could exceed \$100 per month when the cost of telephone calls is added” (Panos 1998 cited in Melkote & Steeves, 2001). As of 2000, 38 of 54 countries in Africa have less than 250,000 fixed telephone lines. Only Algeria, Egypt, Morocco and South Africa have more than 1 million fixed lines. For instance, “in East Africa in 2000, where 49 percent of the population was below the poverty line established by the United Nations, there was one telephone line for every 1,000 persons” (Franda, 2002:12). In fact, there are some cities within countries in Africa where telephones and other forms of ICTs are “simply non existent let alone making it work for human development” (Sonaïke, 2004:51).

It is obvious that Africa has poor Internet connectivity and it is at the periphery of ICT development. But the digital divide, as it is currently conceptualized in most discourses on ICT for development, has trivialized global imbalances in access to ICTs. It has limited the global imbalance in the access to ICTs, which I contend should be seen within the overall context of socio-economic imbalances, to technical access (that is physical access to computers, Internet connectivity, and telecommunication infrastructure and services). As Henry Jenkins put it: "The rhetoric of the digital divide holds open this division between civilized tool-users and uncivilized nonusers. As well meaning as it is as a policy initiative, it can be marginalizing and patronizing in its own terms" (cited in Warschauer, 2002).

As a result of these flaws in the conceptualization of the digital divide, social dimensions such as access to education and content are often ignored or given less attention in most ICT initiatives that are aimed to bridge the digital divide. Hence, the complex problem of access to ICTs is simplified and thus the provision of computers and access points such as telecentres are prescribed as solutions. The digital divide is more than just technical access. It should also include social access, which includes literacy. Before the arrival of digital technologies, there have been various forms of 'divides' such as literacy (Alhassan, 2004). In addition to the digital divide, these earlier 'divides' still exist in one way or the other in our various geopolitical locations. This is why it is so important to emphasize that global imbalances in access to ICTs should be viewed within the overall context of global socio-economic imbalances. Thus, to address the problem of imbalance in access to ICTs, Mansell (2001) and Shade (2003) suggest adopting a social capabilities approach. "These capabilities include general education and technical



competencies, the institutions that influence abilities to finance and operate modern organizations, and the political and social factors that influence risks, incentives, and personal rewards including social esteem” (Mansell, 2001:56).

## **IDRC’s Acacia Programme and Telecentre Initiatives**

International developmental agencies such as Canada’s International Development Research Centre (IDRC) have been working with partners in African countries to undertake innovative projects to connect the continent to the global communication backbone. In response to the Economic Commission for Africa (ECA) sponsored 1996 conference on the “Information Society for the African Society,” IDRC initiated the “Communities and Information Society in Africa” (Acacia) programme in 1997. The primary goals of this four-year programme, as outlined in the official public document from IDRC, are:

- To demonstrate that the benefits of ICTs can reach disadvantaged sub-Saharan communities, and the women and youth within these communities can amplify their inherent innovativeness and enterprise to help these communities solve their development problems.  
([www.idrc.ca/acacia](http://www.idrc.ca/acacia))
- To learn from Acacia’s community-based research and experimentation and to disseminate this knowledge widely.  
([www.idrc.ca/acacia](http://www.idrc.ca/acacia))
- To build international momentum and buy-in [in] order to continue expansion of access to ICTs by rural and disadvantaged groups.  
([www.idrc.ca/acacia](http://www.idrc.ca/acacia))

The Acacia programme is designed to “empower sub-Saharan African communities with the ability to apply information and communication technologies [for] their own

social and economic development” (Hudson, 2001:159). The Acacia programme is now in its second phase<sup>14</sup> with the following objectives:

- To enhance understanding and knowledge of the effects of ICTs on poverty reduction and human development in Africa; ([www.idrc.ca/acacia](http://www.idrc.ca/acacia))
- To improve African countries’ capacities to formulate and implement national policies that promote equitable access to ICTs and information for socioeconomic development; ([www.idrc.ca/acacia](http://www.idrc.ca/acacia))
- To contribute to research that supports the development and adoption of affordable and functional technologies for Africa; ([www.idrc.ca/acacia](http://www.idrc.ca/acacia))
- To support research that increases African content available through ICTs; and
- To learn from Acacia’s community-based research and experimentation and to widely disseminate this knowledge. ([www.idrc.ca/acacia](http://www.idrc.ca/acacia))

The first phase from 1997 to 2000 focused exclusively on four countries:

Mozambique, Senegal, South Africa and Uganda. Some of the IDRC initiated projects in Phase One included the establishment of community telecentres, school networking activities, and the forum for ICT policy development initiatives. For the purpose of this thesis, attention will be paid only to the telecentre projects because they have been hailed by the World Bank, some non-governmental organizations (NGOs) and developmental agencies such as IDRC as having a considerable potential for narrowing the “digital divide” in remote, rural and otherwise disadvantaged communities” (Oestmann & Dymond, 2001: 1). Hence, the rest of this chapter will be devoted to analyzing the telecentre experience in one of the IDRC established telecentres in Africa, the Nakaseke

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<sup>14</sup> Fourteen countries are involved in the second phase of the Acacia, which will run from 2001- 2005. These countries are: Tanzania, Kenya, Uganda, Rwanda Benin, Ghana, Senegal Angola, Namibia, Mozambique, Egypt, Tunisia, Morocco and South Africa

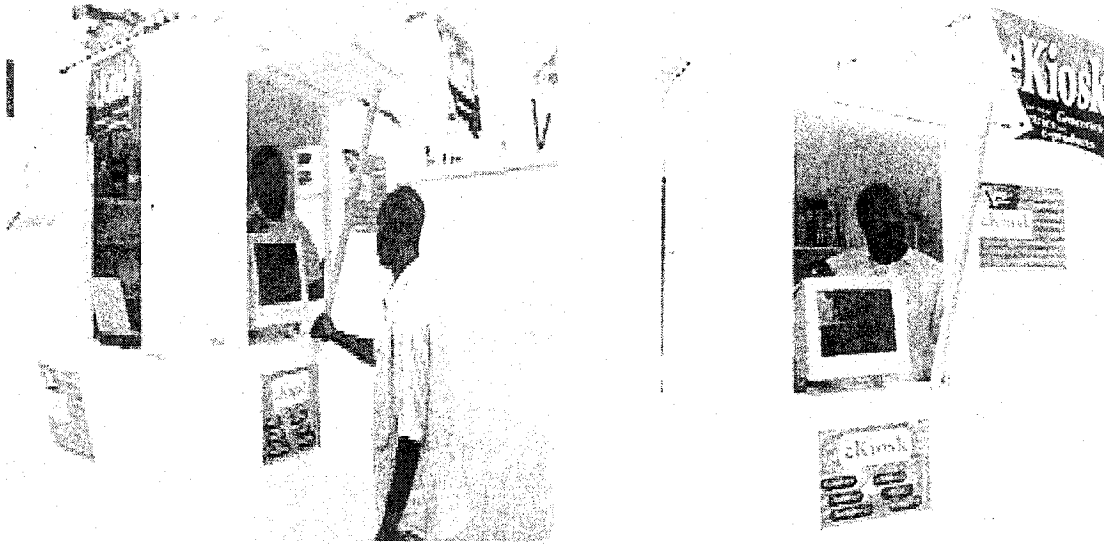
Multipurpose and Community and Telecentre. I have chosen the Nakaseke Multipurpose Community Telecentre, which is located in Uganda in East Africa, because it is “reputed to be the first such facility in Africa” (Etta & Parvyn-Wamahiu, 2002: 71) and it is located in a rural area. Being a pilot project, it ought to serve as a model for subsequent ones to follow. That being said, the IDRC designed Nakaseke Multipurpose Community Telecentre was conceived with the intention to be differentiated from the private-run cybercafes that have dotted virtually every major city in Africa. The data that I use in the analysis is primarily taken from IDRC’s evaluative report of its telecentre initiative in the Sub-Saharan African region. Before I proceed with the experience at the Nakaseke Multipurpose Community Telecentre, a brief introduction about telecentres and their common varieties in Africa will be provided.

Telecentres are usually “strategically located facilities” for public access to ICT-based services and applications (Oestmann & Dymond, 2001). Telecentres come in different sizes and offer various services depending on the location and availability of resources. Jensen & Esterhuysen (2001) classified various types of telecentres that are popularly found in Africa into four groups: micro-telecentres, mini-telecentres, basic telecentres and multi-purpose community telecentres. The first three- micro, mini and basic telecentres-are primarily an extension or an offshoot of the public call offices (PCOs), which normally provide payphone services, fax and photocopying services. The only major difference between these telecentres and the PCOs is that telecentres have computers that are connected to the Internet for the e-mail and web-browsing purposes.

Micro-telecentres are usually built-in public payphones with Internet access and possibly smart-card readers or compartments for coin and bill operation. They are often

found in public spaces such as airports and train stations (Jensen, 2001). Sometimes, a micro-telecentre can also be found in a small kiosk with a computer with an Internet access. The owner of this kiosk usually sells calling-cards and air-time for mobile phones. Figure 1 shows a micro-telecentre in a small kiosk in Lagos, Nigeria. Mini-telecentres offer a single phone line, calling cards, printer, a computer with Internet access and sometimes a fax machine. Basic telecentres offer all the services of the first two, but with multiple access points (Alhassan, 2004:193). Multi-Purpose Community Telecentres, on other hand, are the most advanced telecentres and often promoted by the International Telecommunication Union (ITU) and development agencies such as IDRC. Multi-Purpose Community Telecentres provide all the services that are available in the first three telecentres as well as providing information technology training and videoconferencing. In particular, they “function as community information centres, providing access to databases and receiving and posting information of general interest to local people (e.g., government notices, information on the spread of diseases, weather information, prices of farm products, educational opportunities)” (Oestmann & Dymond, 2001: 4).

**Figure 1: Sample of a micro-telecentre in Lagos, Nigeria**



*Source: Punch Newspaper, March 27, 2004.*

Given that African communities have thrived on shared access practices in previous technological usages<sup>15</sup>, the communalization of ICT access and usage in the form of telecentres is not a new phenomenon for most African communities and cities. In fact, having a communal telecentre, which houses technological facilities such as fax machines, photocopiers, telephones and computers, “helps to split costs among the large number of users, thus diminishing individual expenditures” (Polikanov & Abramova, 2003: 46). In most African countries, it will cost billions of dollars to install basic infrastructures for the functionality of telephone, Internet and electricity in each house in every locality. As an example, for Nigeria to have one telephone line per 100 people, it would cost the country about \$2-3 billion USD according to the World Bank (World Bank, 1997). Nigeria, which is one of the most populous countries in the world, has a population of over 120 million. Nigeria is not the only country in Africa with such a

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<sup>15</sup> When radio sets and television sets were initially introduced, it was not uncommon to find a whole hamlet sharing one radio set or television set. Often, people gathered at one location and watched the television programs together.

daunting challenge to achieve connectivity for the vast majority of its population. Since governments have to decide on whether to spend billions of dollar on technological infrastructures or on the more important social programmes such as health care and education, communalization of ICT access and usage in the form of telecentres could be a short-term approach to facilitate people's accessibility to ICTs, especially those in the rural environs.

IDRC's Acacia programme particularly targeted people in the rural areas. The model of telecentres envisioned in this context is a synchronized version of the various models that have been adopted in Scandinavian countries, Australia, North America and Western European countries, especially Britain and France. For instance, in Scandinavian countries, telecentres were established to stop the massive migration of people from rural areas to urban areas as well as to build local IT expertise. In some other European countries and in the US, telecentres are designed for creating new job-opportunities and supporting workforce. "In the UK and in France most centres function as telework centres providing facilities for teleworkers. This concept is also widely used in North America" (Falch, 2004: 103). These telecentres are meant to enhance community development as well as to develop local expertise.

IDRC, in partnership with other funding agencies such as UNESCO and the ITU, emphasized the creation and funding of multipurpose community telecentres. Robins describes these as:

modeled on western projects to bridge the digital divide between haves and have-nots. The African Information Society Initiative of the UN Economic Commission on Africa touts the community telecentres as an alternative to the western infrastructure model of wiring every family home. The telecentres provide telephone, fax, email and Internet access as well as training to use them. The goal is to promote economic

development, but also for political growth, social communication and education (Robins, 2002: 238).

Between 1997 and 2000, IDRC's Acacia programme established a total number of 35 telecentres in Benin, Tanzania, Mali, Uganda, Mozambique, Senegal and South Africa. With the exception of five that were jointly funded with UNESCO and the ITU, the rest were funded by the IDRC in partnership with businesses such as Nortel Networks, Canada's telecommunication giant (Robins, 2002).

IDRC and its partners created telecentres in the belief that they would bring ICTs closer to people in the rural and urban cities of these selected African countries. It is imperative to note that there were also hundreds of telecentres set-up by private local entrepreneurs and local elites in these countries for commercial purposes. In South Africa, however, the government initiated telecentres, and by the end of 2000, the South African government had set up 65 telecentres in the marginalized rural communities in nine provinces (Benjamin, 2001; Alhassan, 2004). These government initiated telecentres are part of the country's 1996 Telecommunication Act whose objectives are "to promote the goals of universal access to ICTs" (Alhassan, 2004: 194).

The Nakaseke Multipurpose Community Telecentre in Uganda is one of the Multipurpose Community Telecentres (MCT) established under the Acacia programme. This multipurpose telecentre aims to serve Nakaseke and its neighboring sub-county, Kasangombe. Its establishment was "facilitated by the enactment of the 1997 Ugandan Communication Act, which among other issues provided for the liberalization of the communications sector" (Mayanja, 2001:108). It was developed with the purpose

of promoting universal access to ICTs and empowering<sup>16</sup> the Nakaseke sub-county, which is about 60 kilometres from Uganda's national capital city, Kampala. Nakaseke, which has a population of about 18, 000 – 21,000, is made up of 24 villages. Farming is the major economic activity in this area. Also within Nakaseke and its neighboring sub-county, Kasangombe, there are 23 primary schools, six secondary schools, a university and a regional primary teacher's training college (Mayanja, 2001: 109)

At the time the Nakaseke MCT became operational in March 1999, there was only one fixed telephone line in the area. In 2001, alongside with the telecentre, there were about 250 fixed lines and two public payphones in Nakaseke. In spite of this significant improvement, the telecommunication infrastructure in both Nakaseke and Kasangombe are still relatively low. Seventy-three percent of about 90,000 fixed telephone lines in Uganda are located in the nation's capital, Kampala. On the average, users in the rural areas have to travel about 24 km to reach the nearest telephone (Uganda Bureau of Statistics, 2001 as cited in Etta & Parvyn-Wamahiu, 2002).

Since its independence from Britain in 1962, Uganda has been through economic turmoil, political instability and civil unrest including guerrilla war. Postcolonial Uganda has been described as a story of "unfilled promises" (Mutijbwa, 1992 as cited in Mwesige, 2004). While about 43 percent of the approximately 24 million population lives below the poverty level, the telephone lines per 100 inhabitants are 0.28. Table 1 provides more statistical data on Uganda's infrastructure, economy and population.

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<sup>16</sup> Empowering here refers to social transformation and economic growth.



**Table 2<sup>17</sup>: Uganda: selected indicators**

|   |                   |
|---|-------------------|
| Population (millions)                           | 23.9              |
| Life expectancy at birth (years)                | 43.3              |
| Literacy rate (%)                               | 67                |
| Official language                               | English           |
| Government type                                 | “No-Party” system |
| GDP (US \$)                                     | 26.2 billion      |
| GDP per capita: purchasing power parity (US \$) | 320               |
| Population below poverty line (%)               | 43                |
| Main phone lines per 100 inhabitants            | 0.28              |
| Fixed telephone subscribers                     | 61,000            |
| Mobile telephone subscribers                    | 210,000           |
| Radio broadcast stations                        | AM 4; FM 22       |
| Radio sets per 1000 people                      | 123               |
| Television broadcast stations                   | 06                |
| Television sets per 1000 people                 | 26                |
| Average daily newspaper circulation             | 90,000            |
| Internet penetration hosts                      | 293               |
| Internet hosts per 10,000 inhabitants           | 0.13              |
| Internet users                                  | 60,000            |
| Internet users per 10,000 inhabitants           | 26.64             |
| Estimated PCs per 100 inhabitants               | 0.31              |

*Source: CIA World Fact book, 2001; World Development Report, 1999/2000 ITU Statistics, 2002.*

IDRC alongside with its partners – the ITU, the UNESCO and the Ugandan government – put down 60 percent of the operating costs for the Nakaseke Multipurpose Community Telecentre. In total, IDRC and its international partners budgeted \$396,425 USD for this project. Its national and local partners were committed to invest “about US\$124,000 over the three years of the project, including about US\$68,000 from Uganda Telecom for the telecommunications infrastructure” (Mayanja, 2001:111). The remaining 40 percent came from the local community, which also provided the building

<sup>17</sup> This table is culled from (Mwesige, 2004).

and security guards for the telecentre. This building is valued at \$25,000 USD. The building maintenance as well as the salaries of the telecentre's staff are also taken care of by the community (Mayanja, 2001).

Operating in an office space of about 178 metre square (m<sup>2</sup>), Nakaseke MCT has four staff and a management committee primarily made up of the high-ranking representatives of the stakeholders in the project. The stakeholders are UNESCO, IDRC and the Uganda Telecom Limited (UTL). The management committee is responsible for the management and policy matters of the telecentre. There is also a local steering committee, which is made up of the Uganda based representatives of UNESCO, IDRC and the UTL. The responsibility of the local steering committee is not defined. A core-user group, which is made up of the users of the telecentre, is also set up to get feedback from the users on the services at the telecentre. Table 2 shows available equipment in the Nakaseke MCT

**Table 3: Equipment available in the Nakaseke MCT**

|                 | Number Available | In Use |
|-----------------|------------------|--------|
| Computers       | 7                | 5      |
| Printers        | 2                | 2      |
| Photocopiers    | 1                | —      |
| Telephone Lines | 2                | 2      |
| Facsimile       | 1                | 1      |
| UPS             | 2                | 2      |
| Speakers        | 3                | 3      |
| Projectors      | 1                | 1      |
| Television Set  | 1                | 1      |
| Radio           | 1                | 1      |
| VCR             | 1                | 1      |
| Scanner         | 1                | 1      |
| Inverters       | 2                | 2      |

*Source: Etta & Parvyn-Wamahiu, 2002*

The Nakaseke MCT offers library services, IT skills training, typesetting, word processing, video services, telephone services, faxing, photocopying, telemedicine services and Internet access for e-mail and web browsing. At their first visit, some personal information is gathered on the users before they are given registration numbers and cards for use in their subsequent visits. This information, which includes users' name, address, age, gender and occupation are stored in the database. The stored information is later used in evaluating the services offered at the telecentre, customizing services to the users' needs and for decision making purpose (Mayanja, 2001). Privacy protection measures are rarely in place at the telecentre.

While democratizing access to ICTs and communalizing ICTs through MCT might help in creating an information society in Africa, the statistical breakdown of gender, age and occupation of user groups of the Nakaseke MCT raises some concerns about the kind of information society that might be created. It is observed that over 65 percent of the telecentres are students. Also, 74 percent of the telecentre's users are male. Over 80 percent of the users are less than 35 years old. Table 3 provides a statistical breakdown of the gender and age of users from 1999 to 2001.

**Table 4: User groups of the Nakaseke MCT**

**GENDER:**

|        |       |
|--------|-------|
| Female | 25.8% |
| Male   | 74.2% |

**AGE:**

|             |        |
|-------------|--------|
| < 15 years  | 4.88%  |
| 15-20 years | 54.47% |
| 20-30 years | 22.76% |
| > 30 years  | 17.89% |

*Source: Mayanja, 2001*

With over 70 percent of the users being male and over 50 percent of the users being between the age group of 15 and 20, it is still evident there are significant inequalities in information access and usage of ICTs in this telecentre along social categories such as age, gender and occupation (Sonaike, 2004). These inequalities do have negative implications on the telecentre as a 'development' project because it is reproducing societal inequalities in terms of age, gender and socio-economic. Rather than closing the digital gap, the experiences at these telecentres show that they are actually consolidating the problem they ought to solve.

There are gendered divisions in access: female access to ICTs is still remarkably low in comparison to male access because the gendered nature of the social, economic, policy and technological systems that frame opportunities for women is not being taken into consideration in most ICT initiatives (Robins, 2002). As Fontaine (2000) aptly put it:

The familiar and still formidable constraints are again rearing their ugly heads – poverty and illiteracy, lack of time, insufficient skills – with male-

dominated, corporate control of the technology added to the list. This is the boy's party of the century, girls, and we are not invited (2000:32 as cited in Robins, 2002).

It is the educated young male that monopolized the use of Internet and ICT-based services in the Nakaseke MCT. The profile of users in the Nakaseke MCT is similar to the profile of Internet users or ICT consumers in most parts of Africa (and some Western countries). For instance, based on the survey done by the UN Economic Commission for Africa (ECA) in 2000, it was also discovered that:

the largest number of Africa's 1.5 million Internet users were young (25-35 was the majority age), were predominantly male, were well-educated (e.g., 87 percent in Zambia and 98 percent in Ethiopia had university degrees), had above-average income, were English-speaking, and belonged to nongovernmental organizations, news media, private companies (especially IT and computer businesses), and universities (Franda, 2002: 18).

Likewise, the result of the ECA's survey and findings at the Nakaseke are consistent with the findings at other IDRC's sponsored telecentres and private-run cyber cafés. According to the evaluation report authored by Etta & Parvyn-Wamahiu for IDRC in 2002, fewer women use telecentre services in practically all of the countries and facilities. The report indicated that, in Mali, 77 percent of the users are men. In Mozambique, 63 percent of the users are men and 70 percent of the users in Senegal are men.

Another worrisome thing about data from Nakaseke and other telecentres is that the main activity of users is primarily e-mail – both sending and receiving e-mail from relatives and friends abroad. It is also to maintain ties with diasporic communities. Sometimes, the e-mail activity is also to apply for university admission in the US and other Western nations (Franda, 2002). Only a handful of the users actually use the

telecentre resources for business or commercial purposes. "Between 1.0 and 20.0% of users visited the TCs (telecentres) for business or commercial reasons. Over 50% visited the TCs for entertainment" (Etta & Parvyn-Wamahiu, 2002:84). The findings in this IDRC report show that the telecentres and ICTs are used primarily for "social activities"<sup>18</sup> than development-oriented action" (Etta & Parvyn-Wamahiu, 2002:84). These activities are being performed at the expense of other ICT-based services and activities such as e-commerce (such as African entrepreneurial activities online) and academic research. If the ICT activities primarily comprise e-mail activity and online chatting, then can telecentres narrow the digital divide and empower communities, socially and economically? What is then going to happen to the multipurpose community telecentre if the majority of the users are only engaged in e-mail activities and clerical work?

There are no tentative answers to these questions at present. But, nonetheless, these questions do reflect the skepticism around ICTs for development in Africa, and practically indicate some of the challenges for Africa in getting 'connected'. Furthermore, the demographic figures from all these telecentres question the assumption that public Internet access is in "the realm of the educationally and economically disadvantaged" (Lee, 1999 as cited in Mwesige, 2004:98). And if care is not taken, the optimism of the World Bank and the IDRC that telecentres (and ICTs in general) might narrow "the digital divide may appear far fetched" (Sonaike, 2004:44).

Overall, this chapter has shown that the applicability of the Western-model of development programmes and technology transfer without adequate consideration of the cultural needs and local socio-political institutions of the developing countries will not

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<sup>18</sup> The report considered social activities as consisting of sending and receiving e-mail, making and receiving phone calls, sending and receiving of faxes, and chatting online.

yield positive results. For the collective good of the Sub-Saharan African region, it will be better “to turn away from the dominant path and take off the Western ideological straitjacket” ( Nulens & Audenhove, 1999: 469). The next chapter will look at the challenges the region faces and suggest the path the region should take.

## Chapter 5: General Conclusion and the Way Forward for the Sub-Saharan African Region

*To move into the Information Society, Africa must be clear on what it wants and make its desires clear to others. If we are clear, if we have a compelling vision for ourselves, then it is likely that our choices will turn into our reality. If we are not then, we will either be perpetual observers of the information highway or find ourselves on a road not fit for our needs. -----K.Y. Amoako<sup>19</sup>, from "Information and Communications for Development – Keynote Address before the Luncheon Forum, Conference on the Information Society and Development," Midrand, South Africa, 14 May 1996.*

In the first four chapters of this thesis, I have looked at issues surrounding the ICTs for development agenda in Africa and how those issues are linked to political, economic and cultural aspects of globalization. I also outlined a number of the ICT developmental projects in Africa and showed “the interconnectedness of governmental and non-governmental initiatives with private capital interests” in these projects (Robins, 2002).

As a way of concluding this thesis, this chapter will consider the challenges and options for the African continent in the global telecommunication and international communication sector. It will also suggest some ways that the continent could follow in transforming its communication sector. I will conclude this chapter by summarizing the findings of this research work on ICT for development in the Sub-Saharan African regions.

There are enormous obstacles confronting Africa in its attempt to get ‘connected.’ Some of these obstacles are high levels of illiteracy, political corruption and instability, widespread abject poverty, poor leadership and management, absence of basic telecommunications facilities, and a frayed social infrastructure. For instance, how can a

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<sup>19</sup> Amoako is the executive secretary of the United Nations Economic Commission for Africa.



computer be connected to the Internet in the absence of basic infrastructure such as a telephone line and electricity? These barriers make the adoption and diffusion of information and communication technologies (ICTs) a Herculean task.

As a response to the inevitable challenges facing Africa in getting 'wired up', African ministers of economic planning and social development adopted the "Africa Information Society Initiative (AISI): An action framework to build ICT infrastructure in Africa" in May 1996. The AISI, which was agreed to at the United Nations Economic Commission for Africa's Conference for African Ministers in Addis Ababa, is the primary framework upon which most of the current ICT activities in Africa are based. The adoption of the AISI is widely "supported by several African governments and international donors (among others, the World Bank, the ITU, the IDRC and the UNESCO)" (Nulens & Audenhove, 1999: 457).

The primary aim of the AISI is to develop a sustainable information society in Africa by the year 2010; an information society in which every nook and cranny of Africa will be connected to Internet and have necessary telecommunication infrastructure. The AISI clearly stipulates that everybody (irrespective of age, gender, and social and economic status) in Africa will have access to information and knowledge resources that reflect (and meet) the needs of the continent and its citizens/residents in all frontiers—education, culture, business, politics, health and economy (ECA, 1996). But how feasible is this 'utopian' goal of the AISI?

Nulens & Audenhove (1999) summarize the AISI's strategic ways to achieve this result as follows:

- (1) rolling out a continent-wide information and telecommunication network

- (2) ensuring regional and international flows of information
- (3) supporting initiatives to improve and create services in different sectors of society, and
- (4) supporting human resources development in the field of ICT (464).

In my opinion, the AISI seems unrealistic in its target date to e-link every village and provide access to every citizen. But in spite of my reservations about the AISI, I will still not completely discard it. The principle behind the AISI is well-intentioned, but the implementation process of the AISI might be enormous and could possibly be compromised if care is not taken. Nonetheless, it is still partially a move in the right direction, especially in the area of human resources development in the field of ICT. For instance, according to UNESCO figures for 2000, only 60 percent of African populations are literate, in comparison to 97.5 percent for the industrialized countries (UNESCO, 2000 cited in Sonaiké, 2004). With human development in terms of ICT skill training and improvement of local expertise, more Africans will be able to utilize a new generation of ICTs and advance the development goals (Adeya & Cogburn, 2001).

More so, given that about 45 percent of the Africans are under the age of 15, early computer training and literacy could be beneficial to the continent's future. This is so because if the younger generation is well-trained and are provided with the basic resources at an early age, they could improve the quality of life on the continent. It is high-time that the leaders of African countries become more pro-active in instituting universal access to education for their citizens, especially for females. As it is now, women have the lowest literacy rate in the continent. Like some of their colleagues in the Western world, they are still second-rate citizens in many socio-economic related affairs. The data from Africa on ICT initiatives and the use of ICTs clearly indicate that African

women are deeply marginalized. To avoid the further marginalization of African women, it is important that the issue of literacy and education for young girls becomes integrated into the developmental agenda. Any developmental initiatives that fail to take into consideration literacy and education of young boys and girls in Africa is bound to fail. Young people are the leaders of tomorrow and the future of Africa. As Sonaike (2004) observes, "Africa's youthfulness can become a plus if it is seen as a potential, a pointer to a long-term solution to the ICT problem" (57).

Africa needs to strengthen its participation in international ICT decision-making fora. Just as was the case in the 1970s in UNESCO, African countries need to be more active in these international forums and gatherings where decisions that have impact upon their national affairs and economies are being taken. Being active participants in these forums, they can agitate for their own national interests and also propose alternative strategies and measures on important global issues such as the allocation of radio frequency and trade agreements in the telecommunication industry. Primarily, within the global context, national needs may relate to how "to establish international trade rules that create spaces in which citizens are able to express themselves, safeguard, create and promote their cultural goods and choose the ones they prefer within a broad, diverse cultural offer" (Milagos del Corral 2001:104, as cited in Egbokhare, 2003).

Without being proactive in international ICT policy-making processes, Africa will not be able to have its needs on the agenda when the decisions are being taken. As it is now, African countries "have very little presence or influence in the many voluntary, private, and not-for-profit decision fora that have been set up in recent years to standardize and manage the Internet and other new ICTs. They have none at all in areas

where standards are determined by de facto by market power” (Panos Institute, 2002:4). This is why it is extremely important for African countries to polish up or build their technical and policy capabilities at both the international arena and national level.

African’s representatives in international forums such as the ITU and the WTO, where its voice has been muted due to either passive participation of African leaders or inadequate representation of African countries, should include representatives from governments, community groups and civil society groups.

At the national level, the governments must create an enabling environment that facilitates the development of telecommunication infrastructure, and equal access to ICT services and facilities. A non-partisan independent body must be mandated to oversee the policy and regulatory framework in the telecommunication sector. This body will coordinate ICT policy processes by involving all stakeholders (government departments and agencies with ICT responsibilities, business groups in technology, non-governmental organizations and people) in open consultation and informed public discussion (Panos Institute, 2002). Through a broad national participation, and regional/international consultation, clear-cut policies that are “specifically tailored to meet clearly defined national objectives, based upon local realities, constraints and needs” (Adeya & Cogburn, 2001: 105) may be developed and also be implemented effectively. When there is a well-structured policy and regulatory framework in place, there will be an effective coordination of national ICT strategies as well as an effective use of limited human, financial and technical resources. Ypsilanti (1994) put it as follows: “an efficient policy and regulatory framework, which is transparent and which minimizes instability and

uncertainty, is a prerequisite for rapid development in the telecommunication sector” (49).

Rapid development in the African telecommunication sector has also been hampered by poor technical and social infrastructures. As a result, effective use of ICTs in Africa is also hindered. To roll out more telecommunication networks and infrastructure at the envisioned accelerated pace, African governments must devise a mechanism in its policy guidelines. For instance, “a growing number of countries, such as Mauritius, South Africa, and Uganda, have adopted a mechanism known as a ‘Universal Service Fund’ to which telecom operators contribute a small percentage of their revenues (0.16% in South Africa). The fund is then used to finance rural network infrastructure development” (Jensen, 2001: 124). So far, this mechanism has worked effectively in those countries. But, on the other hand, this approach could have an adverse effect on the cost of services to ICT customers in terms of increasing the price of services.

Botswana and Morocco also provide another way in which affordable telecommunication infrastructure can be built and maintained, especially in rural areas where a significant African population resides. While the government of Botswana takes upon itself to roll out infrastructure in rural areas by giving contracts to telecommunication operators to build networks, the Moroccan government uses license fees that are collected from private enterprises entering its telecommunication sector for infrastructure rollout in rural areas (Jensen, 2001).

Provision of adequate training, sufficient infrastructure, access, and affordable ICT services for the populace is a huge investment. In most cases, governments might not be able to shoulder all the costs because of other priorities such as health, education and

transportation. Governments must therefore develop partnerships with the international developmental agencies and civil society groups to work on ICT projects. This should be done without abandoning the immediate needs of the countries such as agriculture, education, energy and healthcare. Therefore, e-strategies in Africa should:

combine the satisfaction of basic needs and the development of ICT. This would involve investing simultaneously in the immediate needs of a country, such as agriculture, education and healthcare, and in the long-term needs of providing infrastructures for wider information access (Sonaike, 2004: 51-52).

At present, Africa produces neither software nor hardware for the majority of ICTs being deployed or used in the continent. Therefore, it is imperative for the African countries to invest in research and development (R&D) in science and technology. The R&D programs will allow African engineers, technicians, scientists, technologists and researchers to design and manage telecommunication systems without relying on “the foreign experts to set up and systems” (Robins, 2002: 239). Jensen (2001) observes that in Africa “the cost of access is seen as a primary problem associated with the lack of ICT infrastructure” (116). However, once the costs are lower, then “there is increased demand for infrastructure and greater traffic, which in turn would lower the unit cost of delivering the service through the increased economies of scale” (Jensen, 2001: 116). With a well-managed innovative R& D program, a pervasive low-cost telecommunication system with linked infrastructures in the rural areas can be designed and installed to facilitate more accessibility to ICTs services and applications at relatively no cost.

Africa could also alter its current state of communication dependency by becoming self-reliant as well as delinking itself from the institutional capitalism of the

West and national elite culture. Cees Hamelink (1983) and Samir Amin (1987) have consistently argued this point. Hamelink (1983) suggests:

With self-reliance as the objective, dissociation means the conscious choice against the delusory offer of integration in an international order which appears to respond to all the interests of the developing countries, but which, in fact, represents almost exclusively the interests of the powerful .....that cultural emancipation of satellite countries will be possible only through dissociation from the existing metropolis-dominated relations. Without cultural dissociation, all proposals of cultural emancipation are bound to remain new wine in old vessels (Hamelink, 1983: 97-98).

For Amin, delinkage and dissociation from capitalism and national elites could not happen without developing countries' willingness to develop "a national development that it is a truly popular force. In short, self-reliance is necessarily that of the people" (Amin, 1987: 1130-1 as cited in Roach, 1990: 301). This, therefore, means that people will determine their own fate within their own socio-cultural needs and context. When the aspirations of people are incorporated into the designs of ICT initiatives and programs, it does mean that the local realities and needs will be reflected or catered to.

## **Conclusion**

As Robins (2002) advised, it is unwise to either naively celebrate the potential or quickly condemn the ICTs for development agenda as a new form of digital colonialism. The reason for this advice is that the "impact of the communication technologies in Africa is one of ambiguity and contingency" (246). In an attempt to understand the ICTs for development agenda on the continent, this thesis has been positioned as a political economic analysis. At the core of this political economic analysis is the analysis of the specific historical circumstances under which new technologies and communications products and services are produced under capitalism and are pushed into the development

agenda (Mansell, 2004). At present, there is a strong conviction, especially by the Washington Consensus group and many transnational companies, that the market-driven approach is the most suitable way to achieve the ultimate goal of development in the Sub-Saharan African region, and also make the region a part of the global information economy (Nulens & Audenhove, 1999). Hence, there is a strong push for the liberalization and privatization of the region's telecommunication sector. So, drawing upon various literature on ICT for development in Sub-Saharan Africa, I offered a critical analysis of the development agenda, arguing that current attempts by international business entities and international organizations (such as the IMF and the World Bank) to wire the continent are based on the dominant paradigm, which views ICTs as the index of modernization, and the only means for Africa to 'leapfrog' to the industrial stage.

As shown in chapter 2 and 3, the current ICTs for development agenda is not significantly different from the modernization paradigm, which was put forward by Lerner and Schramm in the 1950s and in the 1960s. As Nulens & Audenhove (1999) aptly put it, "the discourse still is largely characterized by dichotomic thinking, as can be concluded from the enormous belief in the capabilities of ICT for Africa" (468). It is still about 'modernizing' Sub-Saharan Africa by transferring the Western-model technologies to the region without seriously taking into consideration the interests and the immediate needs of the region. Using Mosco's notion of commodification as an entry point, I described how the neoliberal economic logic of market fundamentalism is driving the current ICTs for development agenda. Chapter 4 argued that ICTs, which in actual fact emerge from a social process, are given a life of their own and appear as more powerful over people; that is "as the force that shapes, determines, constrains, or otherwise



controls social development” and economic growth (Mosco, 1996:143). I also demonstrated in chapter 4 that ICT projects such as telecentres, which are meant to close the inequality gap, are also legitimatizing the inequalities in the status quo in terms of age, gender, educational qualification and socio-economic status. While it is true that telecentres have increased access to ICTs in the region, the ‘development divide’ between the region and the industrialized countries has not changed. However, this does not necessarily mean that all hope is lost.

There is hope when we realize that the problem is not ‘digital divide’, but ‘development divide.’ The ICTs for development agenda will be meaningful when the aspirations of people and cultural values are integrated into the design and implementation of ICT initiatives. When the ICTs for development agenda is driven by people’s aspirations, needs and cultural values, a considerable attention will be paid to the long-lasting ‘divides’ such as literacy and economy. This will in turn shift the focus of the agenda from being mainly about technical access and infrastructure to the simultaneous provision of both technical access/infrastructure and social infrastructure/access. Essentially, ICTs should not be treated as a panacea of Sub-Saharan African countries’ problems. Rather, ICTs should be treated as a means. Therefore, to have effective use of ICTs, it is extremely important to also incorporate a social capabilities approach into the development agenda. Such an approach can facilitate an environment for “local innovation to respond to local circumstances as a means for local communities to economically advance. For example, a community e-health application would be designed with the active participation of the local community including the local health care professionals and paraprofessionals” (Gurstein, 2003:19). This measure

fosters means of investing in people and developing their skill sets. The skills developed might be vital to social, political and economic activities of the local community. The social capabilities approach, which favours effective use of ICTs, enhances development from the grassroots level by allowing active participatory roles for people in the design and implementation of ICT initiatives that best suits their needs, aspirations and interest.

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