The Digital Divide:
Implications For African Business Development

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Introduction

The world is getting smaller as a result of an increasing number of people having access to the Internet. Although the technology revolution and the Internet have become central features of modern global society, Africa lags in comparison with other world regions in the development and application of information communication technology (IT). Even though Africa has more than 10 percent of the world's population, it has less than one percent of the world's Internet users (The Associated Press 2000). It is estimated by the United States Internet Council's "State of Internet Report 2000" that there are 2.5 million Africans using the Internet, compared with 136 million in North America, 83 million in Europe and 679 million in Asia (The Associated Press 2000). As a result, a significant gap exists between Africa and the developed world in terms of Internet connectivity. This gap is expected to widen by the year 2002 (Bases 2000, Anonymous[1] 2000, Tran 2000).

One implication of being on the losing side of the digital divide is that there are potentially fewer employment opportunities as technology-based employment becomes more important in the future. It also means that there is less opportunity to participate in the myriad of online activities including education, training, shopping, entertainment, research and communications.

As people use the Internet to conduct daily activities, those who lack access to those tools are at a growing disadvantage. Therefore, raising the level of digital inclusion by increasing the number of users is a vitally important goal. Being digitally connected has become critical to economic and educational advancement (Anonymous[3] 2000).

As a result, the presence of the digital divide may serve to widen the economic divide between developed and developing countries. This could have repercussions on the future stability of the international community.

Connectivity and African Business

While many developing countries such as Korea, Taiwan, Malaysia, Thailand, Indonesia, the coastal provinces of China, India and Costa Rica have made strides toward bridging the digital divide, there still remains a significant lack of IT infrastructure and implementation in Africa (Chepesiuk 1998, Time International 2000, United Nations 2000). Although a number of activities are beginning to be implemented, Africa is still considered the world's largest untapped market for new communications services (Time International 2000). The challenge to bridge the digital gap is enormous. Everything that is necessary to nurture the IT revolution is in pitifully short supply including telephone lines, electricity, affordable computers, education and an overall literacy rate that can support IT technology transfer and adoption. In Ethiopia, for example, a personal computer costs 15 times the average annual income. In addition to cost, overriding technical problems involve infrastructure, politics and lack of trained personnel (Chepesiuk 1998, Time International 2000).

The number of web sites in all African countries except South Africa is extraordinarily low. This is due to the lack of appropriate equipment and infrastructure, the lack of regulation surrounding copyright and security issues and low level of awareness of the benefits of the Internet (Tran 2000). According to a report compiled by African Portal, woyaa.com and UNESCO, in all of Africa, South Africa has the highest diversity of World Wide Web Internet sites and the most up-to-date content. In this regard, South Africa is followed by Egypt, Morocco and Tunisia (Tran 2000).

Web sites in sub-Saharan Africa account for only 0.3 percent of users on the continent (Tran 2000).   Significant digital divide components exist between this region and the rest of Africa in many areas including:

- ?? IT-related investment and capital
- ?? IT infrastructure and the systems and know-how to build it
- ?? IT experts
- ?? Necessary equipment
- ?? Infrastructure and know-how for using the Internet. (Anonymous[2] 2000).

In addition to a lack of participation in personal-oriented Internet activities, business-to-consumer electronic commerce is severely limited because it involves transactions conducted using credit facilities over the Internet. Moreover, credit cards are rare and upfront cash payments are the norm even with large-scale enterprises. Another limitation is cultural in nature. Face-to-face relations and bargaining are essential to doing business, and the local language is rarely found and difficult to use on the Internet.

Problems that Foster the Digital Divide in Africa

Communication Systems

 Communication infrastructure is a major limitation to technology development in Africa. For example it is difficult, if not impossible, to establish a direct connection between many African capital cities (Anonymous[1] 2000). Governments have generally monopolized the communications industry and prices are at an all time high with little room for innovation, expansion and competition. Telephone systems are generally unreliable and inadequate. It is reported that there are fewer telephone lines on the entire African continent than there are in either Tokyo or Manhattan, and that a large part of Africa may never have seen personal computers, let alone surf the World Wide Web (Time International 2000).

Costs

The use of the Internet is relatively high in many African countries because telephone call charges are high. Presently, in addition to fees being charged by Internet service providers, telecommunication providers also charge by the minute for using the Internet, based on international rates. This makes Internet use prohibitively costly to the average African.

A typical example is in Ghana where an Internet service provider charges a flat monthly rate of about U.S.$35, while the telecommunication services also charges for the use of the telephone lines based on international long distance rates. In Cameroon, an equivalent of $5 an hour is charged for the use of the Internet. This is an enormous amount for a country whose annual per capita income is only U.S.$620. Also in Kenya, Internet users pay 413 times more than those in the U. S. (Time International 2000). These costs are relatively huge and unaffordable to the average African, who is thus rendered incapable of taking advantage of existing facilities. It is anticipated that competition will bring the prices down. However, this can only have an impact if government monopolies are eliminated.

Another dimension of cost is in hardware. Hardware, in and of itself, is no longer an inhibiting factor to connectivity. Intellectual capital is, however, and this has to do with software. Thus, with the shift from hardware to expensive software applications, a major

impediment in development, the shortage of financing, will be needed to overcome and improve a poor country's chances to participate in IT development (United Nations 2000).

Business Growth Potential from Being Digitally Connected

Even though Africa lags behind the rest of the world in its access to information tools, it has tremendous opportunity for growth in the use of the Internet.   In the last half of 1998, the number of African Internet hosts grew by 38 percent, compared with global average of 18 percent (Time International 2000).

Though the gap is widening for many countries, others are adopting a competitive attitude with the understanding that, " when the rules of the game change, the one who figures out the new rules wins" (Chepesiuk 1998). Innovations, such as mobile phones that provide Internet access where wired services are not available, are helping to overcome technological obstacles. However, there are political, business, cultural and legal obstacles to be surmounted.

According to Chepesiuk (1998), the government of Mali recognized that providing free and easy access to information is the key to economic development and hence acknowledges connectivity to the Internet as a real opportunity to capitalize on. This is an action worthy of emulation by other African countries.

Several African countries are privatizing their telecommunications sectors in the hope that this will help overcome the lack of facilities that stands in the way of increased Internet access (Bases 2000).

Ghana became the first West African nation to connect to the Internet in 1994. Several cellular telephone operators are in place, and Internet providers are trying to develop increased connections to the World Wide Web (The Associated Press 2000).

One of South Africa's oldest indigenous communities, the San (located in Northern Cape Province), is bridging the digital divide by selling their ancient crafts on the Internet.   Some of their products can be seen at http://eventmanage.co.za/xuart/ (Stoppard 2000).

Though the price of personal computers limits the use of the Internet to only the privileged few in many African countries, more and more businesses are getting people online. Some examples include the Cyber post offices in Ghana, which offer e-mail service for the price of a letter, the cybercafe in Senegal, which provides 24-hour Internet links for online search and sending of e-mails. Others include the "Cyberbao" in Douala, Cameroon, which provides an avenue for young women to search for European husbands on the net (Time International 2000). The Internet makes online books available for students to read as well as provides an avenue for local entrepreneurs to seek potential business partners. All these indicate the enormous opportunities and potential for use that exist for Africa as it strives to bridge the connectivity gap.

Benefits of Digital Participation

Though many developing countries may be lagging behind in IT, they also have the advantage of leapfrogging several generations of technology into the 21st century (Rogers 1997).

The digital revolution has created a brand new economic sector that simply did not exist before. As the countries at the forefront devote even larger shares of their own economies to this sector, a high-value space is opened for others to occupy (United Nation 2000).

Computers, modern telecommunications and the Internet all reduce communications costs and break down geographical borders. By so doing, they are bound to speed up global diffusion of knowledge (Anonymous[4] 2000). Furthermore, by bringing down the cost of

communicating with someone on the other side of the world, IT makes it easier for multinational firms to move production to emerging economies to take advantage of low labor costs, but ensure close contact with the head office. This should help poorer countries attract more foreign direct investment. It also allows some previously traded services to be traded just like physical goods. Any activity that can be conducted via a screen and telephone can be can be carried anywhere in the world. Computer programming, airline revenue accounting, insurance claims and call centers have all been outsourced to developing economies.

The Internet offers access to a huge amount of information and expert advice on various subjects. A single connection can be shared by many, thus, providing businesses with the many tools for survival (Anonymous[4] 2000). The World Wide Web creates an opportunity for organizations from the smallest company in the remotest part of the world to the largest manufacturing firm in a major metropolitan area to access the global marketplace. It allows for mass customization, the building of stronger business relationships, a greater degree of channel coordination, improved communication with stakeholders and enhanced customer service. Other benefits include increases in sales and enrich long-term corporate value and competitiveness as part of a firm's overall strategic plan.

Information and communication technologies serve as powerful tools for international marketing as their application allows users direct access to a number of trade information sources that are useful in doing market research and preparing for trade promotions. These technologies can also be used as a means of establishing trade contacts and a way to show the international market of upcoming products (Ancel and Borgeon 1997). The new technology will influence all countries' economic growth, employment and wages in three principal ways: it will change the conditions of industrial development; it will change the structure of the demand skills; and by rapidly improving information flow, it will accelerate the integration of national economies into world economies (Rogers 1997).

Information technology has changed the global economic landscape, shifted the competitive advantage of nations, linked distant organizations, globalized financial services and opened new opportunities for development and growth of the third world.

In addition, IT can be an important driver in poverty reduction and human empowerment. IT technologies can potentially serve rural areas and increase the capacity to acquire and communicate knowledge, the foundation of development that empowers people and communities. Participation in the information economy and the development of e-Business itself offers many possibilities for wealth creation, particularly for small and micro enterprises.

Capacity Building- Stakeholder Partnership

Given the need for co-operation among all stakeholders, including governments, the business community, non-governmental organizations (NGOs) and international organizations in addressing the challenges associated with the digital divide, it is recommended that importance will have to be placed on areas such as:

a) Strengthening the policy environment for disseminating IT;
b) Developing IT infrastructure;
c) Developing human resources to underpin the dissemination of IT;
d) Active utilization of IT in the area of development assistance.

The diverse conditions and needs of Africa should not also be forgotten.

Some international efforts are being put in place to help Africa get their acts together. Notable among them include:

?? The International Telecommunications Union, a specialized agency for telecommunications seeks to develop e-commerce for developing countries (Tran 2000).

?? The United Nations Economic and Social Council recognizes information technology as being perhaps the central development issue at the dawn of the 21st century. The Council sees new technologies as not only to lock economic growth, but also to impinge on and impact virtually all of the most pressing global issues such as health, education, the advancement of women, cross-border and cross-cultural understanding, and tolerance (Anonymous[5] 2000).

?? An Indian company is producing a sub-computer worth U.S.$200. This is aimed at cracking the hardware price entry barrier that exists for most African (Anonymous[1] 2000).

?? In response to the Secretary General of the United Nations' call for leaders of the world's riches nations to bridge the digital divide and spread information technology to the world's poor nations, Japan promised to commit U.S.$12 billion in loans and U.S.$3 billion in grants over five years to information-technology initiatives in the developing world (Anonymous[1] 2000).

?? The Geekcorps, a non-profit organization which sends technology workers to developing countries to build e-commerce systems, teach java to coders who work in Cobol and deliver technological know-how, has establish a base in Ghana.

?? In Egypt, the United Nations Development Program has helped to create technology access community centers in order to bring Internet and fax services to poor and rural areas (United Nations 2000).

?? The U. S. Agency for International Development (U.S.AID) has a five-year, U.S.$15 million effort, to provide 21 African countries with training and equipment for establishing satellite links and to help resolve any policy issues that might restrict IT Internet growth. Mali was the first African country to benefit from this assistance.

What Should be Done?

The extension of IT to Africa also provides an extension of its benefits. It is, therefore, important to disseminate and utilize IT over the widest possible area, taking a holistic approach to blend access to communication technologies on one hand with food, shelter and education on another. This comprehensive manner of introduction will support sustainable investments in the communities in order that marginalized communities can benefit from if it (Time International 2000).

To take advantage of the numerous opportunities offered by IT, African countries need to develop public policies and infrastructures that accelerate the broader and more effective use of

IT. It requires careful planning based on identified communication needs of sectors, institutions and potential users (Hanna 1991).

A proactive, multi-faceted approach to advertising their web sites, which should be updated frequently, must be adopted coupled with improved training schemes and awareness campaigns as well as higher visibility for African sites through listings on international search engines.

An e-commerce strategy to enhance services to customers as an investment should be looked at as a way of generating commitment (Tran 2000).

For African countries to reap the economic benefits of IT investment, they need to put in place the policy of leapfrogging technologies, identifying and applying new technologies that are developed in rich economies and not trying to invent.   Africa will have to just open their economies to ideas from the rich countries, identify the best practices in IT within these countries, and adapt them to their needs.

In order for the digital divide to be closed in Africa, importance of the Internet and why it is needed has to win the hearts and minds of Africans.   Local governments must support the pursuit of bridging the digital divide by adopting supportive regulatory policies, eliminating telecommunications monopolies and lowering tariffs on computer equipment. In addition, the private sector, that is championing the advancement of new technologies to developing world, must look beyond the profit motive to realize that it is in their interest, and the world's, to heal the divides that destabilize the planet and diminish our common humanity.

Conclusion

As information and communication technology extends throughout the world, its benefits also expand. It is, therefore, vital to disseminate and utilize IT over the widest possible area, including Africa so that the benefits of IT can be maximized on a global scale. There is the need for a multi-stakeholder process and team effort among all stakeholders, including governments, the business communities, non-governmental organizations (NGOs) and international organizations to provide a coordinated approach to address IT capacity building challenges. This approach needs to accommodate the diverse needs of developing countries focusing on strengthening the policy environment for developing an IT infrastructure, developing human resources to underpin the dissemination of IT and providing applications of IT in the area of development assistance.

There is no doubt that IT will revolutionalize how the global community learns, interacts, conducts business and seeks and exchanges information. The challenge is how to ensure that all countries, industrialized and developing, rich and poor, benefit from this exciting technology. Africa should be able to turn the digital divide into digital opportunities to maintain economic growth.

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