The Republic of South Africa: The Slow Growth of a Promising Future

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Abstract

Creating an efficient telecommunications infrastructure is the first step in South Africa’s journey to creating a successful e-commerce market. However, barriers still exist which have prevented South Africa from making this step. Factors like the high levels of government control, lack of usability of existing networks, high transaction fees, a lack of true online payment options, high overall telecommunications costs, and serious bandwidth issues have prevented South Africa’s e-commerce market from becoming a viable tool. While some South Africans do have access to viable online options, including e-trading, the country’s infrastructure as a whole is outdated. Even e-trading that occurs in South Africa is years behind the United States, both in tools used and the fact that information is not yet traded freely and openly in South Africa. Surprisingly, it was South Africa’s economic recession that most bolstered Information and Communication Technology (ICT) growth. However, future growth has been held back from the previously mentioned factors and South Africa must find its way around these issues. Only then will South Africa be able to achieve the economic growth it needs, and become a player in the global market.

Factors

Government Control

In 2003, South Africa had only one fixed line provider for telecommunications services and much of that was a result of its government control. This is because the Republic of South Africa’s Constitution includes some of the “strongest protections of freedom of expression, right to information and privacy in the world.” (Privacy International, 2003).

The first Internet law was the Electronic Communications and Transactions Act of 2002, which covered the most basic of foundations. One of the most important, and controversial, provisions of the Act was that it gave complete control over the “.za” domain to a government appointed body called the Domain Name Authority. (Privacy International, 2003). Another controversial provision of the Act was one which gave the Minister of Communications the authority to “declare any database to be critical and to set standards for the administration of that database.” (Privacy International, 2003). The problem here is that such databases could include private medical databases, insurance records, and “even the .za zone file which administers the .za domain.” (Privacy International, 2003). Other controversial provisions include the creation of Cyber Inspectors. These are citizens who are trained and “given the power to aid law enforcement in criminal and civil investigations, as well as being granted the power to inspect and confiscate computers, determine whether individuals have met the relevant registration provisions was well as search the internet for evidence of criminal actions.” (Privacy International, 2003).

Another Legislative Act, The Regulation of Interception of Communications and Provision of Communication-Related Information Act of 2002, raised similar issues and concerns of Internet Service Providers over personal privacy ramifications for the ISPs themselves, the subscribers to these services and the customers. (Regulations of Interception of Communications, 2002). These issues are important because people will not use the internet if they feel their personal privacy is not secure. Like many other government regulations in South Africa, the above two Legislative Acts were written at a time of dispute between the Internet community and the Government. The conflict revolved around whether or not the Government should regulated the internet. Therefore, many of the provisions are compromises between the Internet community and the Government and are very much ineffectual. An example of this lies in a new drive to formalize and structure the .za Domain Name Authority.
Currently the processes used by this agency, as a result of the power given by the Act, are ambiguous and weak on the structure of issuing licenses and countering cyber crime. The .za Domain Name Authority is leading this new drive to help create structure in their work of licensing local internet website registrars, managing and administering the domain system, and working with arbitration and dispute resolutions. The goal is to focus on creating regulation and accountability for the Internet Service Providers and to implement a formal and structured industry that is more in line with the international trends. (Mochiko, 2010).

**Usability**

In 2003, when the Internet began to take off in South Africa, there was only one true Internet Service Provider (ISP). However, today, the market for ISPs is very competitive. The Internet Service Providers Association (ISPA) is the Industry Representative Body for ISPs in South Africa and currently represents more than 150 ISPs. (ISPA, 2010).

<table>
<thead>
<tr>
<th>Numerical Value</th>
<th>World Rank</th>
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<tbody>
<tr>
<td>Population</td>
<td>49,052,489</td>
</tr>
<tr>
<td>Population Growth Rate</td>
<td>.0281%</td>
</tr>
<tr>
<td>Literacy of Total Population</td>
<td>86.4%</td>
</tr>
<tr>
<td>Internet Hosts</td>
<td>1.73 Million</td>
</tr>
<tr>
<td>Internet Users</td>
<td>4.187 Million</td>
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(CIA World Factbook: South Africa)

However, even though ISPs are numerous, they still face issues in South Africa. Some issues include the high cost of bandwidth and carrier services (discussed later in this paper), the continual investment in an incomplete infrastructure, a very competitive market, inhibiting legislation, lack of education among the potential users (literacy of the citizens), and limited technical support, to name a few. (Stucke, 2002).

While many of the above issues are discussed at length in other parts of this paper, the lack of education or literacy in both computer use and in general is a very big problem in South Africa. Literacy is measured by the number of people, 15 years-old or over, that can read and write. However, South Africa only has a literacy rate of 86.4%. (Central Intelligence Agency World Factbook). If the potential users cannot read, they cannot use a computer. If they have never been taught how to use a computer, they will not be inclined to try. As a result of this lack of training, there are even few people available who have the ability to provide technical support for the computer and internet systems.

However, organizations like ISPA have worked to combat the computer literacy issue by providing specialized training to teachers, who can then take what they have learned and go teach others. (ISPA 2010). As mentioned in the next section, some services are available to train computer users to expand their skills into areas like Online Trading. Even projects, like Project Literacy that is dedicated to adult learning, are making a difference in this area because learning to read is the first step to computer literacy. (Project Literacy, 2010). In 2010, South African President Jacob Zuma announced in his state-of-the-nation address that 2010 would be “a year of action.” (Nyanda, 2010). Shortly after, in a speech for the launch of the Zibambeleni Telecentre in Mudan, the Minister of Communications discussed how South Africa would make this statement a reality. General Nyanda, the South African Minister of Communications, spoke about the government taking a “deliberate bias toward rural development.” (Nyanda, 2010). Specifically he stated that “[t]his includes making people in the most remote and rural communities of our country understand how a computer for instance, can improve their living conditions.” (Nyanda, 2010). Initiatives like the Mudan Telecenter that General Nyanda was speaking at, allows communities to get access to the Internet and computer training. As previously mentioned in this paper and as stated by General Nyanda during that speech: “Computer training is a critical tool in the quest to bridge the digital divide and towards the creation of a knowledge economy.” (Nyanda, 2010).
E-Trading

Online trading has become a mainstay in the financial sector in developed countries, and South Africa, while still developing, is also joining this trading revolution. However, South Africa is a long way from the standards and usability we enjoy in the United States. Problems facing this revolution include lack of available information, inferior trading tools, and high transactions fees. (Dingle, 2009).

Online trading began in South Africa in the 1990s but grew exponentially in 2003, during a bull market run. However, it was the down economy like the current recession (2009) that caused many people to become more interested in the market and turn to online trading. Online trading allows for convenience, allowing investors to make “on-the-spot” decisions and execute them immediately instead of having to call your broker. The Internet allows investors to act quickly, be flexible, and make investments for cheaper costs. (Dingle, 2009).

A major problem facing South Africans who wish to trade online is the lack of information available to make decisions. Information is not traded as freely and opening as it is in the United States, which makes online trading difficult, as online trading relies on investor being able to gather information that their broker would usually have gathered for them. (Dingle, 2009).

As a result of the lack of freely available information, trading tools have not developed to the sophistication as currently available in the United States. In the United States, information is fed directly to the public from Wall Street and that allows companies like Google to provide free internet trading tools using that information. But South Africa does not yet have the level of freely available information that would allow these types of tools to be developed. Most people turn to online trading because of it is convenient, however, cost is still a huge factor for many investors (especially the young). The JSE, Johannesburg Stock Exchange, charges settlement costs way above that of any United States exchange. This high rate still prevents many would-be investors from entering the market. (Dingle, 2009).

The online trading base in South Africa consists mostly of the under 35-age group and the over 50-age group. The over-50 age group consists of retired men from high-powered jobs who use online-trading as a hobby while the under 35-age group is mostly young men who trade small amounts often. There is a gap of 35- to 50-year olds who don’t online trade in any significant amount, but most have attributed this fact to a lack of money and time. However, the base of people trading online in South Africa is still small and therefore courses have become available to teach citizens how to trade online, as well as instructional websites where these learners can practice their skills with fake money. (Dingle, 2009).

The future of the South African financial sector is in online trading and more of South Africa’s citizens are beginning to turn there. The economic recession only helped this revolution by attracting traders who saw undervalued shares and wanted to capitalize on them without the hassle of a broker. Online banking is about seizing control of your own portfolio and that is what many South Africans are looking to do. However, to truly blossom to its full potential, South Africa will have to institute a system of freely available information, trading tools that capitalize on that information, and instate lowered settlement costs for trades. (Dingle, 2009).

Payment Options

South Africa has been behind the eight-ball with regards to payment options outside of local banks. As it has been for centuries, the only want to transfer money in South Africa was through a local bank if you were lucky enough to have a bank account. Many, however do not. Those that do not have bank accounts are forced to transfer envelopes of money to and from places using a middleman.

An option that was not available in South Africa, actually illegal, is PayPal. PayPal is seen as one of the easiest ways to transact and yet South African people were not allowed to use it unless they have an offshore banking account and didn’t really live permanently in South Africa. (Theobald, 2010) As recent as March of 2010 however, First National Bank of South Africa and PayPal have decided to form a partnership that will allow South Africans to sell to PayPal customers and move the proceeds gained to their FNB accounts. (FNB, 2010) In his statement regarding this partnership, Michael Jordaan, FNB chief executive said “Our agreement with PayPal also enables international businesses and individuals to transact with South African service providers via a secure and convenient payment service”, adding that it would also help South Africans join the e-commerce world.
FNB is a division of First Rand Bank Limited, which is listed on the South African stock exchange (FSR). (First, 2010) FNB has over 6.6 million customers in South Africa and Africa combined. FNB is also a national supporter for the 2010 FIFA World Cup games.

FNB customer can now open a PayPal account and link it to their FNB account and receive payments in twenty-one different currencies! (FND, 2010) FNB has agreed that they will convert the currencies to South African Rand when the money transfers. This partnership has already received approval from the Exchange Control Department of the South African Reserve Bank.

It appears that the only downside to this recent partnership is that only those people who have FNB accounts can use PayPal. (Ambrose, 2010) However, the fact that FNB has successfully launched the PayPal application before the Soccer World Cup starts, this will likely bring a lot of success to the project as a lot of vendors and tourist related trades can advertise globally and accept PayPal payments. (Ambrose 2010)

In response to the recent partnership with FNB and PayPal, Captec, another large bank in South Africa, has announced that it will launch a mobile banking application. (Blaine, 2009) Although no timeline has been announced as to when this product will be introduced, Captec has confirmed the application is in the works.

Although the partnership with FNB and PayPal and Captec’s talk of a mobile banking solution alleviates some of the issues with available payment options, South Africa still has yet another hurdle. Unfortunately, only eleven million of South Africa’s forty-nine million people have a personal bank account. (Mawson, 2010) The reason that financial services are not readily available in rural areas is that rolling out banks and services is expensive and therefore many places operate on a cash basis. (Standard, 2010). However, there are approximately thirty million prepaid cellphone accounts and therefore, banks hope to introduce mobile banking to South Africa.

Recently, MobileMoney, Mowaly, and Pocit have been launched to reach the mobile community of South Africa. Further, Nedbank announced that it teamed up with Vodacom to bring M-Pesa (mobile money transfer solution) to South Africa. (Battle, 2010). Vodacom is a South African subsidiary of Vodafone Group Plc, which is the world’s leading mobile telecommunications company. (Overview, Vodacom, 2010). Shameel Joosub, Vodacom’s managing director stated “M-PESA has a successful track record in other markets. With the backing of Nedbank and Vodafone, as well as the power of the public’s trust in the Vodacom brand, all of the signs are there that M-PESA is going to revolutionize the way South Africans transfer, share and spend their money.” (Belic, 2010). NedBank Group Ltd. is South Africa’s fourth largest banking group and another sponsor of the World Cup 2010. (Overview, Nedbank, 2010). M-PESA, in essence will allow the unbanked, to bank.

The M-PESA application was piloted in Kenya and received extreme success and support. (Theobald, 2010). The services are offered through more than thirteen thousand agents (usually small shops) and approximately more than ten million Kenyans use the service. M-PESA has been called a philanthropic effort as it has yet to make a profit. Its implementation is due largely in part from the support of the Bill & Melinda Gates Foundation and the UK’s Department for International Development. (Theobald, 2010).
In addition to the M-PESA launch, South Africa’s Standard Bank is planning to launch a person-to-person money transfer system called Instant Money, singing a deal with retail group Spar. (Standard, 2010). This is not Standard Banks first stab at cellphone banking, however. Standard Bank first attempted to implement MTN banking which did not gain much support. (Theobald, 2010). The new service plans to be available in 850 Spar retail outlets nationwide. The system allows for people to send money to anyone in South Africa via cellphone. The capabilities for mobile banking will allow people of South Africa to transact easier online and without bank accounts.

Another option that has been around for people of South Africa without banking accounts is Net1. On March 31, 2010, Net1 announced a three month extension to its existing South African Social Security Agency (“SASSA”) contract. (Net1, 2010). This three month extension is meant to allow negotiations between Net1 and SASSA to continue without interruption of the service Net1 provides. Net1 provides a universal electronic payment system, UEPS, as an alternative payment system to developing economies. UEPS allows people who do not personally have a bank account or even access to a bank account to enter into secure online transactions with each other as well as other entities (i.e. merchants). What is unique about this system is that it allows parties to transact offline without immediate access to a centralized computer like other payment systems. Net1 allows offline transacting with another cardholder as long as a portable offline smart card is available.

**High Telecommunication Costs and Bandwidth**

High telecommunication costs has been a major issue in South Africa, preventing many people from operating on the internet. For centuries Telkom was the only provider of bandwidth via undersea cables. (Dingle, 2009).

In 2009, however, a high-capacity undersea fibre optic cable was built by Seacom. (Capacity, 2009). Because this is the first true competition to the Sat-3 cable it promises to cut costs for both internet and telephone users. In 2009 it was estimated that due to this new cable, the international bandwidth in South Africa would increase hundredfold.

BCS group has secured direct access to 3 100Mbps of capacity on the new Seacom undersea cable for twenty years. BCS group states that Seacom bandwidth will cost less than a third of the current Sat-3 cable.

In October, 2009, construction began on the East African Submarine Cable (Eassy) running up the coast of Africa. (Dingle, 2009). Eassy was to be the second undersea cable after Seacom’s completion. This project was represented by an international consortium including Telkom, Vodacom, MTN, and Noetel. Noetel’s executive head of technology, Angus Hay, stated “Our participation in the international cables forms a critical part of our strategy to provide South Africans with access to true broadband and to ultimately connect them to the rest of the world.”
In a study conducted by World Wide Worx, it was determined that internet access in South Africa showed international bandwidth at a lowly 80Gb in 2008. This number was split from between the owner of the current Sat-3 cable, Telkom, and the West African Atlantis-2 cable. (Capacity, 2009).

The study also stated that the capacity would rise to 10 terabits/s by the end of 2011 (120 times the 2008 capacity). The reason for this increase, as noted in the study, is that they will be including the upgrade that is to be done to the Sat-3 existing cable, and the addition of the three new cables coming into operation at the end of 2009 and possible two more in 2010, and finally, the newly signed West and Southern Africa (WACS) cable agreement.

The confirmed new cable list is as follows:
- Seacom: East and Southern Africa: 1,28Tb/s; June 2009
- GLO-1: West Africa-640Gb/s; 2009
- TEAMS: East and Southern Africa-120Gb/s; September 2009
- EASSy: East and Southern Africa-1Tb/s; June 2010
- MainOne: West Africa-1,92Tb/s; 2010
- WACS: West and Southern Africa-3,8Tb/s; 2011.

Because of this bandwidth improvement, online retailing is ready to increase. (Dingle, 2009). The fact that there are still around 700,000 people in South Africa still on dial-up will add to the buyer market as soon as they upgrade to broadband.

This is good news for personal internet users but what, if any, relief is there for business internet users. (Dingle, 2009). MTN business has recently increased the amount of bandwidth it provides to its customers without causing an increase in the price. MTN business says that its client can claim up to 50% extra bandwidth.

Regionalization: The Continent Of Africa

In order to foster economic growth and development in Africa, regionalism must be reached. (Economic, 2009). In 1963 the Organization for African Unity (OAU) was established to integrate African economies, solve conflicts within those countries, bring development, and improve the standard of living. Resulting from this, several subregional groups were formed as well. In 1991 the Abuja Treaty was signed which promised to create a continent-wide African Economic Community (AEC) by 2027.

“. . . regional integration, when designed and implemented within a broader development strategy to promote economic diversification, structural changes and technological development, could enhance productive capacities of African economies, realize economies of scale and improve competitiveness and serve as a launching pad for African economies’ effective participation in the global economy.”

“It is now largely accepted that one of the effects of globalization has been to increase the mobility of human and financial resources, which tend to flow to economies with the highest rates of return. Moreover, technological spillovers resulting from regionalism lead to increase in productivity and the reduction of production costs, further attracting more investment, and hence, factor accumulation. The combination of the effects of regional economic integration on efficiency and accumulation lead to the recognition that regional integration can have a positive effect on economic growth.”

Almost all African countries have accepted regionalism, having more regional organizations than any other continent. The Lagos Plan of Action (LPA) was adopted in 1980, responding to poor economic situations in Africa. The LPA proposed a strategy to pursue the following goals: (a) high and sustained economic growth; (b) transformation of the economic and social structure; and (c) maintenance of a sustainable resource base.

The AEC stands to be the most promising footprint for Africa’s economic growth. The idea is to have “a common currency, full mobility of the factors of production, and free movement of goods and services among African countries.” Following this, in 2001, the African Union (AU) was established, launching the New Partnership of African Development (NEPAD). NEPAD deals with essential regional public goods and promotion of trade and investments within Africa.
Currently, of the 53 countries, 27 are members of two regional groups, 18 are members of three regional groups, and 1 is a member of four regional groups. There are only seven that remain in one regional group block. Therefore, it is evident that, with minor exceptions, the countries of Africa are working diligently to regionalize their continent.

Africa is not only attempting growth internally, but externally as well. Some African countries have proposed external partnership including the following: (a) multilateral partnerships in the framework of the World Trade Organization (WTO); (b) the African, Caribbean and Pacific Group of States (ACP)-European Union (EU) partnership, through economic partnerships agreements (EPAs); and (c) a growing number of bilateral initiatives in support of African development, such as the African Growth and Opportunity Act (AGOA, United States), the Tokyo International Conference on African Development (TICAD, Japan), and initiatives from China, India, and Brazil. All of these partnerships will increase Africa’s ability to be reached in the global economic market.

Although all of these efforts have been made in Africa, the regional initiatives have fallen short given the hard economic times and extreme poverty of most areas of Africa. Intraregional trade is still much lower compared with Asian and Latin America. Lack of structure and organization could be another cause. Regardless of the treaties made, the EPAs made, etc, Africa cannot regionalize without organization or an overarching plan for the regionalization.

Other challenges to regionalization include dependence on member countries for export of primary commodities, strict origin rules, bureaucratic and physical hindrances (road charges, transit fees, and administrative delays at ports and borders).

Regardless of the hindrances, Africa continues to move toward developing regionalism within the continent.

**Conclusion**

South African could be considered a leader in the continent of Africa, as it is one of the most developed counties in terms of information and communications infrastructure. However, South Africa remains a developing nation, a long way from the internet saturation enjoyed by developed nations like the United States. Factors such as the high levels of government control, the lack of usability, lack of freely available information and high transaction fees in the financial sector, a lack of true online payment options, high overall telecommunication costs, and serious bandwidth issues, are among the current problems facing South Africa today. While South Africa has come a long way since 2003, when the Internet began to grow exponentially for the first time, not all of the problems have been fixed. Not only does South Africa need to work to build a fully supportive information and communications infrastructure, it needs to work within its region to foster economic growth and development. Further development of South Africa and the countries that surround it will only benefit its citizens in the years to come, and help South Africa to become a player in the e-commerce global community.
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