Policy for an increase in Internet usage in Zambia

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Background

While surrounded by neighbors struggling with conflicts, such as   Angola and the Dem ocratic Republic of Congo, Zambia co ntinues to m aintain a peaceful environm ent. However, political and economic instability of the region has had an effect on Zam bia's own growth. Despite the peace, Zambia continues to struggle with problem s such as poverty, HIV/AIDS, poor   agricultural growth, gender inequality, and a weak democratic process.[1]

Zambia's Copperbelt plays a vital role in its economy. The mining and ancilliary industries are focused in the province. However problems have led to the closure of many mines. The manufacturing and tourism industries are also important in Zambia.[2]
The dependence on mining has prevented Zambia from diversifying its industries. The negative effects are leaking into the education and health sectors. Such problems make investing in Zambia less attractive to outside investors.[1]

Figure 1: map of Zambia and neighbors

Fortunately the development of Zambia's mining industry led to the early introduction of information technology. The Telecommunications Act, set up in 1994, placed Zambia in a leading role as an African country in the use of information and communication technology. After the Act, the Communications Authority of Zambia (CAZ) was created. One of the roles of the CAZ was to issue telecommunications service and supplier licenses. Another function of the CAZ was to oversee the growth of the telecommunications industry of Zambia. However there has not been major improvement in the industry or in the creation and implementation of ICT policy.[1]

One aspect of ICT that needs more focus is the internet. There needs to be an increase in fiber optic cables accessible in Zambia, an increase in private investors, and an increase in computer and internet literacy. The New Partnership for Africa's Development (NEPAD) Council, a non-political, independent non-profit organization founded by young African professionals and experts and in which all 50 African countries are represented, also believes that there is a need for a fiber optic backbone for Africa.

The NEPAD Council argues that fiber optic technology is needed more than satellite communications technology because it allows high bandwidth transmission between countries and continents which is also important in order for African states to reach the same level of information technology as the rest of the world. Two advantages of fiber technology over satellite are the real time transmission and very low bit error rate it provides.[3]

Uses

An improvement in internet technology could lead to changes in education, industries such as telecommunications, mining, power, and banking, and the government. Also such growth would attract outside investors who would add even more to the economy. With greater possibilities for communication, it could help with the development and growth of small business.

According to an exercise conducted to assess Zambia's readiness for ICT development, people are reasonably ready for the implementation of ICTs in education, the workplace, and everyday life.[1]

At the present time, schools hardly use computers. However in adult education, there is more usage, but it is rather limited since networking is low. A greater network of fiber optics could allow easier access to the internet and access to greater technologies. Universities could increase the use of their computers and communicate more with other universities and institutions. Secondary schools would also be able to increase their use of computers and teachers and students could begin to implement the technology into their teaching and learning methods. A greater network could also help develop improved educational systems for Zambia.

With an increase in this aspect of telecommunications, the telecommunications industry would benefit greatly. More companies could be formed and current companies would be able to expand and create more jobs. According to the Sida survey, since mining is a high-tech industry, it must need ICT for corporate and communication systems. Therefore an improvement in ICT would help mining companies communicate within the country and globally. The power and banking industries are the same. An improvement in internet technology could vastly improve the efficiency of their daily operations.[1] Since the government is another major user of ICT, the internet could help improve communication between departments and officials. In fact, the medical field could also benefit because doctors would be able to better communicate their knowledge of patients, information from studies and research, and information about disease and public health.

Entrepreneurs would also benefit because they could invest in such businesses as internet cafes and internet clusters and start up companies that could provide the service, hardware, and maintenance. Some business owners could begin their own businesses that could reach distant places in Zambia and the world. If the infrastructure of Zambia's fiber optic network improved, outside investors would find Zambia to be an attractive market in which to invest. So entrepreneurs could also team up with outside investors to expand their businesses. According to NEPAD and Booz, Allen, & Hamilton, an infrastructure is the main requirement of foreign investors.

Implementation Plan

The government of Zambia needs to provide much more money to add more fiber optic cables to Zambia. There already are companies interested in expanding the network. For example railway operators in Southern Africa have already decided to create a broadband fiber optic link from Tanzania through Malawi, Zambia, Namibia, and South Africa.[3] The government of Zambia should not ignore the importance of the internet and a fiber optic backbone. While it may not have all of the money needed, which seems to be in the order of 100 to 200 million US dollars, it can certainly increase its focus on improving Zambia's internet technology.[1]

Also in the new policy, it should be specified that there cannot be a monopoly such as Zamtel. According to the Sida survey, Zamtel, a private telecommunications company, should not be unwilling to share its monopoly privileges. Zamtel needs new owners and managers who would be able to withstand outside pressures. The situation needs to be changed so that other investors, Zambian and foreign, can be involved with the company.[1]

Zambia's government should also give incentives to private investors who invest in such internet related businesses as internet cafes and internet clusters or computer and internet education companies or programs. Also a program should be implemented that encourages an increase in the licensing of these internet and computer education programs.

Another aspect of the plan is that schools need to have an increase in their budgets to allow the use of computers and the internet. In order for the teachers to be able to use computer and internet technology, they would also have to be trained. A system needs to be put into place so that a small group of teachers can teach other teachers who will then teach their students. Then whenever there is an improvement in the technology, the teachers will have to attend the classes again and continue with their education.

Also a huge one-time investment for computer literacy training of thousands of office professionals would greatly improve their efficiency and have beneficial effects on the economy.

Challenges

Since there are very few individuals trained in ICT, it would be difficult to implement all these changes and increase the amount of internet and computer use. However, incentives can be offered to individuals who study abroad to come back to Zambia and create and implement education programs.

Another challenge would lie in providing the hardware. Initially, refurbished computers could be brought into Zambia. But soon afterwards Zambia would have to be

able to make its own computers or be able to afford importing from perhaps other African countries.

Fall-back Options

An alternative to the fiber optic cables could be the use of dialup internet. However that would not be ideal because land telephone lines would also have to be added to unconnected areas.

Summary and Conclusions

An overall push towards an increase in internet use is needed from the government of Zambia. In order to reach the goal, the government of Zambia will have to approach it from different fronts. First, an increase in the number of fiber optic lines will have to increase in order to allow for greater bandwidth. Then education programs will have to be implemented so that the internet can actually be used. Another part of the plan will be the incentives for entrepreneurs to start businesses focusing on internet and computer education, use, manufacturing, and service.

Bibliography

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