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Understanding the Dynamics of Competition in Telecommunications Services in Zambia

by

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COMPETITION IN TELECOMMUNICATIONS
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1. Introduction

The telecommunications sector in Zambia has come a way long from a State Owned and
managed sphere dating back to pre-independence days in 1964 to 1998 when a private mobile
service provider was permitted to enter the market in this new product market that had hitherto
significant global impact. Since then, there has been phenomenal growth beyond the wildest
expectations of the time. This growth was facilitated by the realization that the State Owned
entity, Zambia Telecommunications Company Limited (Zamtel), which owned all the backbone
infrastructure and/or essential facilities, was not able to keep Zambia abreast with the high-tech
developments that had then already taken place in the global telecommunications market. The
process itself began with the change of Government in 1991, where the new Government adopted
market liberalization ideologies in which the State wanted to take a facilitator’s role in the
economy than be the main actor in the detail of market development and operations.

Following structural adjustment reforms under the auspices of the World Bank.IMF, the
Telecommunications Act was enacted in 1994 during which same year the Competition and fair
Trading Act was also enacted, with the Communications Authority of Zambia and the Zambia
Competition Commission subsequently established under the relevant legislations. Notably, the
preamble to the competition legislation provided the objectives of the law as, inert alia, “to
encourage competition in the economy by prohibiting anti-competitive trade practices; to
regulate monopolies and concentrations of economic power... to secure the best possible
conditions for the freedom of trade”, etc.

This paper gives an overview of the telecommunications industry in Zambia and the competition
issues surrounding this industry. I first highlight the interface between competition and
telecommunications regulation as we understand or have it in Zambia as well as the details of the
relevant product markets and the dynamics thereof before making the conclusions.

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through the ranks to his current position as Executive Director. He has 10 years experience in competition
law enforcement and has written a number of papers on the subject of competition law.
2. **Overview of interface between competition and telecommunications regulation**

The telecommunications industry is a high-tech and complex industry\(^1\). Principally, the Communications Authority of Zambia (CAZ) has the overall technical jurisdiction of regulation in the telecommunications industry in Zambia. On the other hand, the ZCC has overall jurisdiction in the sector as regards general competition and fair trading matters.

The function of ZCC appears to be clothed with economy-wide jurisdiction than the industry specific regulator in dealing with competition and fair trading matters. This is contained in Section 6(1) of the *Competition and Fair Trading Act* of Zambia, legislation, which states that:

> *It shall be the function of the Council to monitor, control and prohibit acts or behaviour which are likely to adversely affect competition and fair trading in Zambia.*

These matters include the following:

1. Mergers and acquisitions which have an anti-competitive effect (whether at vertical, horizontal or conglomerate level)
2. Horizontal agreements (e.g. cartels/price fixing and other trade agreements, bid-rigging, market allocation, refusals to deal etc)
3. Vertical agreements (e.g. exclusive dealing, price discrimination, below-production/market cost pricing, tied-selling, resale price maintenance, etc)
4. Abuse of dominant position of market power (by anti-competitive use of vertical agreements)
5. Consumer welfare and protection issues (e.g. excluding liability for defective goods, supply of defective products, deceptive and misleading conduct, false information, etc.)

The *Telecommunications Act* of Zambia expressly grants a functional authority to CAZ to deal with competition matters in the sector. Under Section 5(2)(c) and (h) of the Telecommunications Act, which states the Authority shall have the following functions:

> (c) to promote and maintain competition among persons engaged in commercial activities for or in connection with the provision of telecommunication services, and promote efficiency in the economy on the part of persons so engaged;

> (h) to enable persons providing telecommunication apparatus in Zambia to compete effectively in the supply of such apparatus both inside and outside Zambia.

\(^1\) Telecommunications experts appear to now be using a more integrated acronym “ICT” to refer to the industry, i.e. Information and Communication Technologies.
The issue of concurrent jurisdiction has been inferred from the two legislations but there is no formal mechanism at the moment to promote obvious cooperation in competition matters and much has been left to adhoc and informal arrangements. The Commission has continued to play an active advocacy role in the sector by publishing position papers as well as engaging in research work in collaboration with the Communications Authority.

3. **Understanding the market for telecommunications in Zambia**

The telecommunications market in Zambia has four principal product markets being the internet, mobile telephone and the landline (fixed/terrestrial). Added to this would be the international gateway, which for all intents and purposes is a part of the fixed/terrestrial product market. However, it is necessary to look at it differently in view of the special legal and other technical facts that affect this market in Zambia.

A number of things have been observed to have taken place in the telecommunications sector, which have helped revolutionise the industry in Zambia in recent years, as follows:

(i) The adoption of the ICT Policy which is pro-competitive, reflects an extensive consultative process, and provides a basis for revitalizing the sector. Zambia’s ICT Policy has been developed in close coordination with other sectors and in alignment with other national development plans.

(ii) the drafting of a legal framework (with assistance from the World Bank) which is comprehensive, and expected to improve the transparency and predictability of regulatory interventions

(iii) decision to liberalize the international gateway by removing prohibitive and anticompetitive measures in the international telecommunications segment in order to allow existing service providers to participate and compete alongside ZAMTEL

(iv) finalizing a universal access policy and strategy which aims at facilitating the widespread penetration and utilisation of ICTs within the Zambian society at all levels in both the rural and urban areas and provides for the establishment of a rural Telecommunications Development Fund (TDF)

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2 A detailed report on mobile telephony was submitted by the Zambia Competition Commission in a Report to the Committee on Communications, Transport, Works and Supply of the National Assembly of Zambia on the Telecommunications Industry (Mobile Cellular Service sub-sector) April, 2003

3 Information generously adapted from the paper: *A COMPETITION LAW PERSPECTIVE OF THE TELECOMMUNICATIONS INDUSTRY IN ZAMBIA* by Thula Kaira to the Paper submitted to the 1st ICT/Telecommunications Research Symposium organized by the Communications Authority of Zambia, 22 – 23 October, 2008, Holiday Inn, Lusaka.

4 ZAMBIA - Increased Access to Electricity & ICT Services, Document of The World Bank GEF Project brief on a proposed grant from the global environment facility trust fund in the amount of US$ 4.5 million to the Government of Zambia for an increased access to electricity & ICT Services Project {April 26, 2006}
Despite promising penetration growth rates, Zambia is still behind regional standards with regard to providing access to telecommunication services to its citizens. The sector is characterized by:

(i) Limited access to infrastructure services compared with regional benchmarks. With only 3 lines per 100 people, Zambia’s access rates remain well below the regional average of 5.86 lines in Sub-Saharan Africa, as well as below the rates of its neighboring countries.

(ii) Stagnating fixed line penetration rates: Zambia has one of the lowest fixed density levels in the SADC region.

One of the generally observed reasons for Zambia’s low teledensity has been the lack of readily available infrastructure to allow for a rapid expansion of the telecommunications industry. This is despite recent growth rates, Zambia’s teledensity is still low compared to its regional peers. Zambia has one of the lowest fixed density levels compared to the SADC countries\(^5\).

IP telephony is reportedly not allowed in Zambia yet but a policy on this may change in the future as this technology gets perfected. International voice telephony is the monopoly of the PSTN operator. Tele-density in Zambia, similar to other countries, is higher than average in urban areas. In four major cities, tele-density reaches 2.01 per 100 persons whereas in rural areas it is estimated at 0.09 per 100 (i.e. 9 telephone for every 10,000 people). By 2002, household penetration, on average, was approximately 5.63% while the average annual growth rate in teledensity of 3.7%, which was viewed as barely having kept pace with the population growth rate of 3%\(^6\).

The **relevant geographic market** is the areas where there is a concentration of the population and business, being principally the line of rail (i.e Copperbelt in the north through Lusaka in the central to Livingstone in the South). There is also the growing “New” Copperbelt. However, nation-wide coverage and expansion does appear to provide certain competitive advantages for the incumbents, as a nation-wide network is considered by the users of telecommunications service to be one of the decisive factors when choosing a service provider. In other words, telecommunications services have to offer the flexibility of mobility for the ardent user without the burden of having the necessary switching costs – which costs may be quantitative or qualitative.

**1.1.1 The Internet Product Market**

The Internet has been described as one of the most influential technologies of the century. This is because it has completely redefined the concepts of communication and information exchange. Many believe that the Internet will soon become like any other utilities such as water and electricity – a must have in every household. Zambia first became connected to the Internet in 1994 through a slow leased line to South Africa with

\(^5\) ibid

just about 250 users, many of whom were academicians and medical staff. Over these ten years, the Internet has changed dramatically and has become an exceedingly influential and indispensable tool to businesses and individuals alike. The three main challenges related to the growth of the internet in Zambia have been identified to be insufficient or less developed communication infrastructure, high cost of delivering internet bandwidth and high cost of computers and related communication accessories.

The growth of the internet is immensely dependant on the distribution of the national telecommunication infrastructure. This is not only limited to access of phone lines by businesses and households, but also on what is called telecommunication backbones. Zambia currently has seven licensed Internet Service Providers (ISPs) and the market would appear to be fairly open to other entrants, largely due to the large untapped and perhaps yet to be internet-enlightened market. Out of the seven, one is owned by the State Owned Zambia Telecommunications Company Limited (Zamtel), while the others are privately owned.

Internet is largely associated with the fixed landline although in recent times the so-called broadband has taken its toll. Statistics however still show that few Zambians are accessing internet through broad band:

### TABLE 1 - INTERNET MARKET SHARES AS AT 30TH JUNE 2008

<table>
<thead>
<tr>
<th>ISP</th>
<th>SUBSCRIBERS</th>
<th>DIAL UP</th>
<th>BROADBAND</th>
<th>SUBTOTAL</th>
<th>MARKET SHARE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. AFRICONNECT</td>
<td>0</td>
<td>1600</td>
<td>1600</td>
<td>9.6%</td>
<td></td>
</tr>
<tr>
<td>2. ZAMNET</td>
<td>4540</td>
<td>1222</td>
<td>5762</td>
<td>34.6%</td>
<td></td>
</tr>
<tr>
<td>3. ZAMTEL</td>
<td>6415</td>
<td>157</td>
<td>6572</td>
<td>39.5%</td>
<td></td>
</tr>
<tr>
<td>4. COPPERNET</td>
<td>655</td>
<td>586</td>
<td>1241</td>
<td>7.5%</td>
<td></td>
</tr>
<tr>
<td>5. UUNET</td>
<td>372</td>
<td>118</td>
<td>490</td>
<td>2.9%</td>
<td></td>
</tr>
<tr>
<td>6. MICROLINK</td>
<td>310</td>
<td>502</td>
<td>812</td>
<td>4.9%</td>
<td></td>
</tr>
<tr>
<td>7. REAL TIME</td>
<td>0</td>
<td>150</td>
<td>150</td>
<td>1%</td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>12,292</td>
<td>4,335</td>
<td>16,627</td>
<td>100%</td>
<td></td>
</tr>
</tbody>
</table>

Source: Communications Authority of Zambia

The majority of the internet subscribers are arguably institutional while the product market is yet to capture the individual household on a mass scale. Compared with regional countries, Zambia’s internet usage is not as it ought to be, with a total of only 20,000 out of a population of 11 million. For instance, the comparison with Zimbabwe shows the following:

### TABLE 2 - INTERNET USAGE AND POPULATION GROWTH

<table>
<thead>
<tr>
<th>YEAR</th>
<th>USERS</th>
<th>POPULATION</th>
<th>%PEN.</th>
<th>USAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>50,000</td>
<td>14,712,000</td>
<td>0.3%</td>
<td>ITU</td>
</tr>
</tbody>
</table>

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7 The Government has assisted in lowering the duties applicable to ICT equipment
<table>
<thead>
<tr>
<th>Year</th>
<th>Subscribers</th>
<th>Calls</th>
<th>Growth Rate</th>
<th>ITU</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>500,000</td>
<td>13,874,610</td>
<td>3.6%</td>
<td>ITU</td>
</tr>
<tr>
<td>2005</td>
<td>820,000</td>
<td>12,247,589</td>
<td>6.7%</td>
<td>ITU</td>
</tr>
<tr>
<td>2008</td>
<td>1,351,000</td>
<td>12,382,920</td>
<td>10.9%</td>
<td>ITU</td>
</tr>
</tbody>
</table>

A revolutionary broadband\textsuperscript{9} internet system is revolutionizing the internet expansion and penetration strategies. Generally, the global trend is that the market for broadband Internet access is still evolving and there is likely to be a witnessing off considerable innovation at both the applications level and in the network itself\textsuperscript{10}

1.1.2 The Mobile Cellular Product Market\textsuperscript{11}

The mobile telephony product market has grown tremendously in Zambia and Africa generally. Mobile telephony is actually the fastest growing segment of the telecommunications sector. As the table below shows, the mobile product market has far outgrown the fixed land line growth in Africa, from about 4 million subscribers in 1999 (when fixed landline had about 19 million subscribers), to about 65 million subscribers in 2005 (of which the fixed landline had about 30 million). Mobile telephony appears to have grown at the expense of the fixed landline because of the relatively easier set-up process than that of the fixed landline as well as the convenience and personal touch that is connected with a mobile phone. Further, a mobile phone offers a personal directory of contact details, the short messaging service, mobile internet and even payment system that the fixed landline does not appear to readily offer in the current technological set up, notably in Zambia. The mobile phone was also a status symbol when the product market was opened up in Zambia. A casual survey also reveals that even the low income bracket have developed a more sophisticated taste for expensive mobile handsets, although most subscribers use the phone largely for ordinary call sending and receiving and increasingly for sms. All these factors, amongst others, would appear to have contributed immensely to the growth and development of this product market in Africa.

In Zambia, the set-up costs for fixed telephone are relatively low, more so with the introduction of the prepaid TelZ fixed landline productive service. However, the historical lack of a focused market development strategy has seen this product market not grow as much as the mobile telephony segment. The following provides a synopsis of the African growth comparative synopsis of the fixed to mobile telephony:

\begin{itemize}
  \item \textit{Broadband(R)} solution is non-line-of-sight, zero-install, portable and mobile. It has never been easier. This means that a customer can buy the ‘Rabbit’ (the modem) at the store, take it home and simply activate it, like a cell phone.
  \item Why Competition Is Necessary in Telecommunications and How to Achieve It: The Experience of the Advanced Economies François Bar Michael Borrus Working Paper 102 September 1997 ©Copyright 1997, by the authors This paper was presented to Chinese policy-makers at a meeting organized by the US Information Technology Office (USITO), Beijing, China, September 24-25, 1997.
  \item For more details on the sector, refer to the report supra Note 2 for a ZCC position paper to Parliament
\end{itemize}
The total number of mobile subscribers worldwide has grown from 1.38 billion at the start of 2004 to over 2.12 billion at the end of 2005. During this period, Africa boasted the fastest growth rate of any region of the world except Eastern Europe, soaring from only a little over 60 million subscribers at the end of 2003 to break the 100 million barrier in 2005 and close out the year at approximately 113.5 million mobile subscribers, almost doubling the total size of the market in just 2 years\(^\text{12}\).

The Zambian market has received increasing competition since the entry of Zamcell, now Zain\(^\text{13}\) in 1999. The following figures show the market share trends:

<table>
<thead>
<tr>
<th>SERVICE PROVIDER</th>
<th>SUBSCRIBERS AS AT 31.12.07</th>
<th>MARKET SHARE</th>
<th>SUBSCRIBERS AS AT 30.06.08</th>
<th>MARKET SHARE</th>
</tr>
</thead>
<tbody>
<tr>
<td>ZAIN</td>
<td>1,956,976</td>
<td>78.9%</td>
<td>2,040,014</td>
<td>76.1%</td>
</tr>
<tr>
<td>MTN</td>
<td>262,186</td>
<td>10.6%</td>
<td>452,799</td>
<td>16.8%</td>
</tr>
<tr>
<td>CELLZ</td>
<td>261,225</td>
<td>10.5%</td>
<td>190,069</td>
<td>7.1%</td>
</tr>
<tr>
<td>TOTALS</td>
<td>2,480,389</td>
<td>100%</td>
<td>2,688,882</td>
<td>100%</td>
</tr>
</tbody>
</table>

Zain would appear to have registered phenomenal growth, having entered the market in 1999 after CellZ (the Zamtel Cellular) and MTN (then Telecel). An aggressive entry marketing strategy at the time when the GSM was being introduced, assisted by a less

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\(^\text{12}\) PortioResearch, *Opportunities in the African Mobile Sector*, [www.portioresearch.com](http://www.portioresearch.com)

\(^\text{13}\) ZAIN Zambia is the largest mobile phone operator in Zambia with more than 2.1 million customers as of 31 March 2008. Since commencing operations in December 1998, Celtel Zambia has extended its network across the country and now provides coverage to 71% of the population of Zambia. It has a market share of approximately 78%. Celtel Zambia offers a full range of voice services, international roaming, pre and post paid subscriptions, SMS, GPRS/EDGE, Blackberry and mobile internet to individual, corporate and SME customers (Source: Zain Zambia website: [http://www.zm.zain.com/en/about-us/investor-relations/index.html](http://www.zm.zain.com/en/about-us/investor-relations/index.html))
capitalized Zamtel Cellular and MTN would appear to have jolted Celtel (now Zain) to an unprecedented market growth from 0% at point of entry to about 80% 10 years later.

1.1.3 The Fixed Landline Product Market

The fixed landline (PSTN) would appear to be a natural monopoly in Zambia and is the preserve of the State owned Zambia Telecommunications Company (Zamtel) Limited. The evident lack of a proactive competition policy in this market is both a historical phenomenon as well as a cost-based rationale. Historically, the State-owned Post and Telecommunications Corporation (PTC) Limited was the sole supplier of telecommunications services in Zambia. With 100% funding from the State Treasury, PTC put up the key backbone infrastructure in the industry. The PSTN infrastructure has been a victim of, unfortunately, a seemingly systematic and sustainable vandalism from some members of the public – who may not have been properly educated as to the critical nature of such infrastructure to development. In addition, the PSTN would appear to have equally suffered from lack of an equally systematic and sustainable level of recapitalization. Overall, the high set-up costs ordinarily make this subsector not attractive to private entry. This has contributed to the lack of both production and allocative efficiencies in this product segment, notwithstanding the effective substitute that mobile telephony has brought with it.

According to research carried out for this paper, 55% of the respondents who own a mobile phone also have a fixed landline. The growth of the mobile market would appear to have surpassed the fixed landline growth.

Zamtel may need to also simplify the process of application for a fixed landline, which currently has the following requirements:

(i) Photocopy of NRC or valid passport of applicant if applied in person
(ii) Letter of Consent from Landlord if premises are rented
(iii) Road Sketch Map Location of premises
(iv) Work Permit in the case of foreigners
(v) Photocopy of Certificate of Incorporation of Registration if applied in company name
(vi) Official date stamp on the application together with a covering letter on headed paper if applied in company name
(vii) List of directors and identities if applied in company name
(viii) Photocopy of a valid passport or NRC of one of the company directors
(ix) All photocopies to be certified by a lawyer or Commissioner of Oaths
(x) Submit application Form (S) on the 3rd Floor Zamtel Sales Office Main Post Office

While the period on actual installation after passing through the process above has been made more faster, the process has compelled some firms to opt to use mobile service providers than to have a fixed landline.
1.1.4 The International Gateway Product Market

The international gateway market from Zambia has remained closed since liberalisation policies were promulgated from 1991. While there has been no explicit policy or regulation to bar private entry into this sector, it was only until 2002 that a formal public policy on the issue was enunciated through Statutory Instrument No. 19 of 2002. The SI imposed a licence fee then of US$12 million, which was a reduction from a previously proposed US$18 million\(^{14}\).

The amount may not be a hindrance to entry in and of itself if the returns on investment are higher. It has been argued in some circles that the US$12 million could be recouped within a year of operation, especially for a first-mover. On public policy grounds, there would appear to be genuine public policy concerns against the unhindered entry into the international gateway system from Zambia. One of the issues of concern has been the issue of national security implications. Such concerns are within the mandate of the relevant authorities in our country who are well versed with security issues. While other countries may have means of controlling such security issues in the face of liberalised international gateways, it may not necessarily be so in Zambia – hence this recurrent concern from the authorities\(^{15}\).

Lack of private sector entry has arguably led to high international call tariffs as well as notably, lack of investment in contemporary and more efficient high-tech in the international gateway system.

4. Conclusions

There is insufficiency of efficient infrastructure in the fixed telephony system as well as the international gateway in Zambia. This has led to higher costs of managing these systems and relatively higher tariffs. It appears clear from what is obtaining in the mobile telephony and internet product markets that allowance of private entry has spurred competition through innovative technological systems as well as higher consumer welfare gains in terms service delivery and pricing over the years. For instance, the price of the cheapest mobile phone handset has reduced from US$300 in 1998 to US$30 in 2009. Internet access has also drastically reduced to about US$1 per hour on average from US$10 about 10 years ago.

It is clear that the introduction of competition would as a natural consequence improve infrastructure and matters such as regulations governing co-location and interconnection become more pronounced, with the fear of competition to be replaced with the sphere of competition. Further, formal regulatory interface between the competition authority and the telecommunications regulator should be made more mandatory than voluntary in order to harness the requisite distinct competencies of these two institutions in fostering

\(^{14}\) Reports indicated that in Kenya, the fee was about US$ 25 million.
\(^{15}\) A detailed Position Paper on Liberalisation of the International Gateway was submitted to the Parliamentary Committee on Communications and Transport in March 2008 by the Zambia Competition Commission
more coordinated and beneficial monitoring of the sector as well as in the implementation of appropriate interventions

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