



RISKS AND OPPORTUNITIES OF LATE TELCO PRIVATISATION

THE CASE OF ETHIO TELECOM

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Steps and issues in the privatisation of the telecommunication sector in Ethiopia

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EXECUTIVE SUMMARY

This paper discusses some of the critical steps that the government of the Federal Democratic Republic of Ethiopia needs to consider during the privatisation of the fixed, mobile, Internet and data monopoly operator – Ethio Telecom. The announcement of the privatisation of Ethio Telecom is one of the most significant opportunities to have occurred in the ICT sector. A competitive telecommunications sector can serve as a major catalyst for changing the way that upwards of 100 million Ethiopians, of which more than half are youth, communicate and do business. Competitive broadband services have the potential to catalyse the growth in other sectors, in particular the computing and software segment, thereby creating more opportunities for employment and global competitiveness. Telecom infrastructure is also one of the main criteria for location selection by multinational companies. The privatisation of Ethio Telecom will signal the opening up of the economy, which in turn will accelerate foreign direct investment (FDI).

A wealth of experience on how to transfer telecommunications public monopolies into the hands of private operators suggests that well-executed privatisation provides opportunities for improvement in the financial performance and efficiency of the operator – further enabling it to deliver better quality of services to consumers. Privatisation could also lead to fiscal savings for the government by eliminating subsidies and optimising resource allocation.

In the case of Ethiopia, privatisation could have the far-reaching implication of putting the brakes on the government's reliance on the supplier credit scheme, as well as its over-dependence on equipment suppliers from China to expand communications services in the future. As well as reducing debt, network expansion through privatisation is likely to bring about improved revenue that will have a positive impact on the scope of public tax collection and the reduction of the national debt.

At the same time, privatisation raises a series of political, economic, employment, distributional, security and regulatory concerns. If not implemented correctly, privatisation could lead to limited investment, increased service tariffs or the continuation of the present poor quality of service levels. As privatisation is often followed by downsizing, the negative implications for employment would need to be contained.

The privatisation process includes the enactment of a telecom law, restructuring the incumbent to increase sales value, the design of the transaction, valuation of the incumbent's assets and development of criteria for tendering, followed by the execution of the transaction.

Evidence from mature and developing economies suggests that sequencing is a critical issue. Although privatisation is often prioritised on fiscal grounds, longer-term gains are best realised through the establishment of a national regulatory agency and the introduction of competition. The establishment of a capable and effective regulatory authority that promotes competition, deters anti-competitive practices, protects consumers, reviews and approves the tariffs in uncompetitive markets, and manages scarce resources (such as spectrum, right-of-way, and so on) is as essential as the privatisation process. During the last three decades, Ethiopia has developed neither a telecom policy nor regulatory capability in the telecom sector. As technical and policy capacity can only be acquired through years of education and work experience, there is no quick and easy fix to overcome the barriers in this area. The report recommends various ways of addressing this challenge at the beginning.

Privatisation in a broader sense should be seen as an ongoing process; therefore initiatives that begin before privatisation, including restructuring and building a competent regulatory body, need to continue after privatisation. Capacity building for regulating the communications sector in a privatised and liberalised environment is also essential.

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LIST OF ABBREVIATIONS

A4AI	Alliance for Affordable Internet
ACD	Average Call Duration
ASR	Answer-Seizure Ratio
Capex	Capital Expenditure
DCF	Discounted Cash Flow
EBITDA	Earnings Before Interest, Tax, Depreciation and Amortisation
ESOP	Employee Stock Ownership Plan
EV	Enterprise Value
EXIM	Export-Import
FCF	Free Cash Flow
FDI	Foreign Direct Investment
GNI	Gross National Income
ICT	Information and Communication Technologies
IPO	Initial Public Offering
ITU	International Telecommunications Union
LTE	Long-term Evolution
NCC	Nigeria Communication Commission
NRI	Network Readiness Index
NTRA	National Telecom Regulatory Agency
Opex	Operational Expenditure
RAMP	RIA African Mobile Pricing
SoE	State-owned Enterprise

1

INTRODUCTION

The government of the Federal Democratic Republic of Ethiopia has announced its intention to privatise the monopoly fixed line, mobile, Internet and data provider – Ethio Telecom. The transfer of a state-owned enterprise (SoE) such as Ethio Telecom from public to private hands, as stated by the prime minister, would involve the sale of the company shares to foreign and domestic private investors, with the government holding a ‘golden share’ that would allow it to outvote all other shares. The primary goal is to alleviate the chronic forex shortage facing the economy¹. This short-term goal needs to be carefully considered in the context of the longer-term gains of establishing strong foundations for the creation of a modern digital economy.

The announcement of the privatisation of the Ethio Telecom has raised much interest from multinational companies such as T-systems in Germany² and MTN in South Africa³. The government has begun the process of valuing Ethio Telecom’s assets⁴. A twenty-one person Privatisation Advisory Council was established by the prime minister in August 2018 to ensure that this process is transparent and accountable. In addition, the processes to develop sector law and to set up an independent regulator are also underway.

Ethiopia is one of the last countries in the world to reform its telecommunications sector, which has had severe economic implications for the country over the past three decades, due to the telecommunications reforms taking place across the rest of the world. The Ethiopian telecom sector, along with the financial sector, remains the least sophisticated in the African region. Judging by the progress that has taken place in neighbouring countries such as Kenya, Sudan and even

war-torn Somalia, the potential gains from the liberalisation and privatisation of the Ethiopian telecom sector will be extremely high. Although the large territory of the country and sparse population outside of major centres, along with a relatively low gross national income (GNI) per capita, are challenges, the enormous size of the population makes it a very attractive market. Privatisation is expected to improve the interdependence of the financial and communication sectors and, with this, to facilitate the integration of the country into the global economy, which has the potential to lift millions of Ethiopians out of poverty.

Despite this, due to years of isolationism, privatisation still has many detractors who fail to see the benefits of a dynamic and competitive market for Ethiopia’s economic and social development. Critics often argue that public ownership prevents the domination of multinational firms in the Ethiopian telecommunications arena and helps the government to provide universal communication services (although Ethiopia has one of the lowest Internet penetration rates on the continent, and therefore in the world). Rather than recognising the larger dividends that would result from an effectively partially privatised company, and from the corporate taxes of competitors who would grow the market and therefore the tax base for government, there is anxiety about the annual revenue of Ethio Telecom being lost or declining as a great source of revenue for the government. An analysis of the incumbent’s actual free cash flow (FCF) shows that this is not the case. Increased government revenue and better universal access could have been achieved through a well-regulated competitive telecommunications market.

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- 1 Wall Street Journal, Ethiopia opens the door to the *World with Unprecedented Privatisation Plan*, <https://www.wsj.com/articles/ethiopia-opens-door-to-the-world-with-unprecedented-privatisation-plan-1528275922>
 - 2 *Ethiopia’s Telecom Privatisation Grabs German’s T-Systems Attention*, <https://newbusinessethiopia.com/ethiopia-telecom-privatisation-grabs-germanys-t-systems-attention/>
 - 3 Reuters, MTN Says Ethiopia’s Telecom Market a ‘natural fit’ for the South African Firm, <https://www.reuters.com/article/ethiopia-privatisation-mtn-group/mtn-says-ethiopias-telecoms-market-a-natural-fit-for-south-african-firm-idUSL5N1T82JF>
 - 4 See <https://www.thereporterethiopia.com/article/govt-approach-big-four-consultants-ethio-telecom-valuation>

Today, Ethiopia needs well-functioning and quality broadband services to fuel its rapid economic growth. A competitive telecommunications industry can serve as a major catalyst for changing the way that upwards of 100 million Ethiopians, of which more than half are youth, communicate and do business. Competitive broadband services catalyse growth in other sectors, in particular the computing and software segment, creating more opportunities for employment and global competitiveness. Telecommunications infrastructure is one of the main criteria for location selection by multinational companies; therefore the privatisation of Ethio Telecom is expected to create conditions that should accelerate foreign direct investment.

A wealth of experience has already been accumulated about how to transfer public monopoly in the telecommunication sector into the hands of the private operators. The lessons that have been learned over the last four decades with regard to defining the privatisation objectives, identifying the preconditions, carrying out a smooth privatisation process and addressing issues of post-privatisation are essential to the success of the initiative.

Past experiences indicate that a well-executed privatisation process provides opportunities for improvement in the financial performance and efficiency of the operator, further enabling it to deliver better-quality services to its consumers. This process could also lead to fiscal savings for the government through the elimination of subsidies. In the case of Ethiopia, privatisation could have the far-reaching implication of putting the brakes on the government's reliance on the supplier credit scheme, as well as its over-dependence on equipment suppliers from China to expand communications services in the future. As well as reducing debt, network expansion through privatisation is likely to bring about improved revenue that will have a positive impact on the scope of public tax collection and the reduction of the national debt.

At the same time, privatisation raises a series of political, economic, employment, distributional, security and regulatory concerns. If not implemented correctly, privatisation could lead to limited investment,

increased service tariffs or the continuation of the current poor quality of service levels. As privatisation is often followed by downsizing, the negative implications for employment would need to be addressed. Other issues include potential conflicts of interest among different segments of the political elite on the process and proceeds of privatisation, and especially in reaching agreement on where to invest the sales proceeds.

A lack of policy and regulatory capability is another area of concern that will constrain the privatisation process in Ethiopia, particularly in terms of regulating the privatised company and sustaining liberalisation of the ICT sector after divestiture. The establishment of a capable and effective regulatory authority that promotes competition, deters anti-competitive practices, protects consumers, reviews and approves the tariffs in non-competitive markets, and manages scarce resources (such as spectrum, right-of-way, and so on) is as essential as the privatisation process. Ethiopia has developed neither a telecom policy nor regulatory capability in the telecom sector during the last three decades, and these aspects now have to be developed within a short period of time.

For privatisation to deliver sustainable benefits in the longer term, this process has to be well managed with stable government ownership. The privatisation process has to be transparent and fair to minimise the risks of corruption. Attention should be paid to implementing well-designed and sequenced reforms and building a good corporate governance structure with ongoing communication on the privatisation process. There is now considerable evidence on the importance of sequencing in reforming telecommunications markets. Although exclusive privatisations that extend the monopoly often deliver the short-term result of the highest sale prices, overwhelming evidence indicates that in the first round reforms, longer-term gains lie in establishing a national regulatory agency to oversee the reforms and to serve as an early proxy for competition in infrastructure-focused industries such as telecommunications, which are inherently imperfect competitive markets. Markets that have liberalised in advance of the privatisation process also produce fairer competitive- and consumer

welfare-enhancing outcomes in the longer term⁵.

This paper discusses the implication of privatisation in the telecom sector in Ethiopia by drawing on international practices. The next section presents the context of telecommunication industry in the country. Section 3 follows with a presentation of the opportunities and challenges of privatisation within the Ethiopian context. Section 4 reviews the critical determinants of privatisation, while Section 5 discusses sequencing issues, what comes first and what follows in terms of privatisation, regulation and competition. Some of the problems that need consideration during the privatisation process are outlined in Section 6, and Section 7 discusses post-privatisation issues.

5 See Wallsten S (2002) *Does sequencing matter? Regulation and privatisation in telecommunications reform*. World Bank Policy Research Working Paper No. 2817, <https://openknowledge.worldbank.org/bitstream/handle/10986/14813/multi0page.pdf?sequence=1&isAllowed=y>

2

THE TELECOMMUNICATIONS ENVIRONMENT

2.1 A SUPPLIER CREDIT LOAN FOR THE TELECOM SECTOR DEVELOPMENT

Ethiopia has seen substantial growth of the telecom sector over the last two decades due to government investment through a supplier credit loan from The Export-Import (EXIM) Bank of China. The \$3.1 billion loan was provided in two phases: US\$1.5 billion in 2006 and US\$1.6 billion in 2013⁶. While the terms of the loan have not been disclosed, China EXIMbank concessional loans typically carry a 2% interest rate with a five-year grace period and over a 10-year repayment period⁷. A Wall Street Journal report indicates that in the case of the first tranche, the repayment period was 13 years⁸. This implies that repayment of close to US\$4 billion for the first and second tranche has to be completed by 2031.

The first phase of the loan, which was implemented by the ZTE Corporation, was intended to build a 6 000

km nationwide fibre network, and expand mobile coverage to 7 million subscribers and fixed coverage to 3 million subscribers. This phase also aimed to introduce a 3G network and link 5 000 rural administrative blocks known as *Kebeles*⁹. The second phase aimed to expand the network with a focus on increasing mobile coverage to 90%, and also specifically to introduce a long-term evolution (LTE) network and to expand 3G services and the network to support over 45% of subscribers¹⁰. Expansion continued through 2017 using savings from the vendor financing scheme and additional resources available from the operator. By end of 2018, the number of mobile SIM cards had reached 41.1 million of which an estimated 36 million were active¹¹. Ethio Telecom has reported that 18 million SIM cards are currently unused and ready for redistribution¹². About a half of the mobile subscribers (18.8 million) are Internet users¹³.

6 Wall Street Journal, *Telecom Deal by China ZTE, Huawei Faces Criticism*. <https://www.wsj.com/articles/telecom-deal-by-china8217s-zte-huawei-in-ethiopia-faces-criticism-1389064617>

7 Brautigam D & Hwang J (2016) *China Africa Loan Database Research Guide Book*, <https://static1.squarespace.com/static/5652847de4b033f56d2bdc29/t/58ac6353f7e0ab024bcc665c/1487692628411/guidebook+draft+v.26.pdf>

8 Wall Street Journal, *Telecom Deals by China's ZTE, Huawei in Ethiopia Faces Criticism*, <https://www.wsj.com/articles/telecom-deal-by-china8217s-zte-huawei-in-ethiopia-faces-criticism-1389064617>

9 Lishan A (2010) *Ethiopian ICT Sector Review 2010*. Research ICT Africa, https://www.researchictafrica.net/publications/ICT_Sector_Performance_Reviews_2010/Vol%202%20Paper%209%20-%20Ethiopia%20ICT%20Sector%20Performance%20Review%202010.pdf

10 Reuters, *Ethiopia signs mobile network deals with ZTE, Huawei*, <https://www.reuters.com/article/ethiopia-telecoms-idUSL5N0EB36920130530>

11 Reuters, *Ethiopia signs mobile network deals with ZTE, Huawei*, <https://www.reuters.com/article/ethiopia-telecoms-idUSL5N0EB36920130530>

12 Ethio Telecom, *Mobile Device Portfolio of Ethio Telecom*, <http://www.ethiotelecom.et/mobile-devices-portfolio-on-ethio-telecom-network/>

13 <http://www.ethiotelecom.et/2011-efy-first-half/>

BOX I: IMPLICATIONS OF THE SUPPLIER CREDIT SCHEME TO TELECOM DEVELOPMENT IN ETHIOPIA

Ethiopia's fixed-line penetration was 1% in 2006 and mobile access was just 1.15%. At the time, the mobile phone was viewed as a luxury, but its rapid expansion in other countries and also the view among the Ethiopian elite that a mobile network is a 'cash cow' prompted the government to look for sources to expand the national network. The availability of supplier credit from The Export-Import Bank of China to the tune of US\$1.5 billion in 2006 was fortunate. China needed to generate demand for telecommunications equipment and also for a workforce that builds telecommunications infrastructure. The access to finance at this time coincided with the preparation for the Ethiopian Millennium in 2008, which also created the perfect momentum for accelerated mobile network expansion.

The first phase of network expansion saw the Chinese firm ZTE undertake the building of 6 000 km of national fibre backbone and the expansion of mobile reach. A World Bank investigation found that the Ethiopian government may have ignored its own procurement rules that require competitive bidding when it awarded the contract, which gave ZTE a monopoly on supplying telecommunications equipment for several years. However, an audit on the contract did not prove that the ZTE acted improperly¹⁴. The government later yielded to the pressure and involved two companies, ZTE and Huawei, to participate in the second phase of supplier credit contract in 2012. The second phase of the contract, with a loan amount of US\$1.6 billion, was instrumental in accelerating mobile penetration from 25% in 2012 to 41% in 2018. In addition to providing resources to expand the network, the scheme also created seasonal employment especially during the process of laying the 6 000 km fibre backbone across the country.

On the downside, the project did not generate the much-needed quality of service and network use required for national competitiveness. Despite network growth, Ethiopia remained at the bottom of major global indices such as the Alliance for Affordable Internet (A4AI) Affordability Drivers Index and the International Telecommunications Union's ICT Development Index. Ethiopia was ranked 60th out of sixty countries surveyed in the 2018 A4AI Affordability Drivers Index¹⁵.

Moreover, the supplier credit scheme has been criticised for:

- creating complete dependence on Chinese equipment suppliers, expertise and resources
- accumulating too much debt too quickly, which has contributed to the overall debt of state-owned enterprises and which in turn has made it difficult to sustain the national debt
- lacking an empowerment component in terms of the transfer of technology and knowledge, as a result of the dependence on Chinese technical expertise, which has meant that the desired economic spill-over effect, especially with regard to Ethiopia's ability to develop advanced skills and the capability to design, maintain and upgrade complex broadband networks, has not been achieved.

The reliance on the supplier credit scheme has also been criticised as one of the reasons for the perpetuation of the ignorance among officials in the handling of technical aspects relating to the industry. The telecommunications sector is still regarded as a means to generate income, control and national pride, rather than as a strategic resource in a modern economy. The privatisation and liberalisation of the sector is expected to remove the curtain of self-satisfaction and move the country towards creating affordable broadband access to provide and stimulate economic growth, competitiveness and social development.

14 Wall Street Journal, *Telecom Deals by China's ZTE, Huawei in Ethiopia Faces Criticism*, <https://www.wsj.com/articles/telecom-deal-by-china8217s-zte-huawei-in-ethiopia-faces-criticism-1389064617>

15 Alliance for Affordable Internet, *Affordability Drivers Index 2018*, https://a4ai.org/affordability-report/report/2018/#full_2018_adi_results_by_income_group

2.2 A CASH COW OR A LOW FREE CASH FLOW?

Ethio Telecom serves as a primary source of national revenue and, therefore, feeds the myth that a public monopoly outperforms the private sector. Ethio Telecom earnings have been growing over the years at annual rate between 7% and 31%. Although impressively high, this growth occurred off a very low base. Further, the analysis shows that this revenue did not track network expansion and the subscriber base. A lack of innovation also meant that Ethio Telecom's revenue did not increase on par with competitive markets in other countries. A comparative benchmark shows that operators in Kenya had a total of 45.6 million subscribers during the 2017/2018 fiscal year with a cumulative operators' revenue of US\$2.48 billion¹⁶. The largest market in Africa, Nigeria, had 169 million mobile subscribers in 2018¹⁷, with an estimated cumulative operators' revenue of US\$7.3 billion. These two markets compare well in terms of revenue generation. Ethio Telecom's revenue of US\$1.38 billion with 40 million subscribers is two and half times lower than the productivity of the Kenyan and Nigerian markets.

Telecom's revenue is the sum of all the wholesale and retail earnings during a given fiscal year. Operational

Table 1: Ethio Telecom revenue in 2017/2018 fiscal year

ETHIO TELECOM EARNINGS	REVENUE BIRR (BILLIONS)	REVENUE US\$ MILLIONS
Mobile	28.0	1.020
Internet	6.9	250
International	1.9	70
Fixed	0.6	20
Others (connections and devices)	0.6	20
Total	38.0	1.4

Source: Ethio Telecom Business Plan, 2018

expenditure (opex) includes product and service costs, network costs and personnel costs. Product and service costs include all the expenses directly and indirectly related to the products and services sold, as well as to developing and sustaining customer relationships. Network costs include network operations and maintenance, as well as the interconnection costs. Personnel costs include salaries, training and recruitment. Subtracting these operating expenses from the total

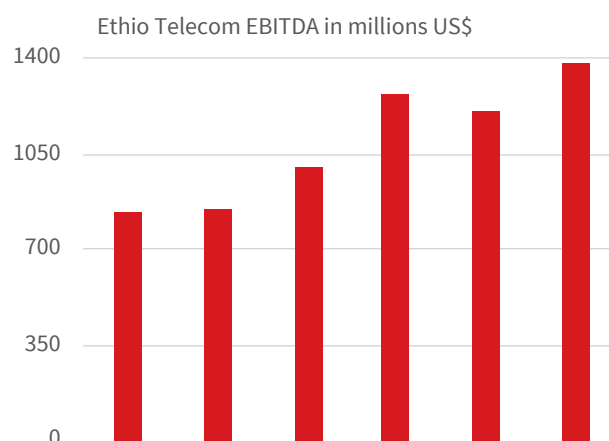
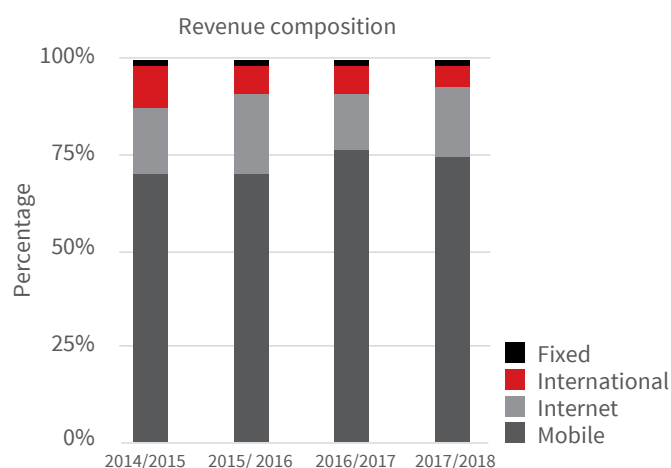


Figure 1: Ethio Telecom revenue composition and growth

Source: Ethio Telecom Business Plan, 2018

16 Communication Authority of Kenya, Quarter 4 statistics 2017/2018, <https://ca.go.ke/document/sector-statistics-report-q4-2017-18/>

17 National Communication Commission, Industry Overview, <https://www.ncc.gov.ng/stakeholder/statistics-reports/industry-overview#view-graphs-tables>

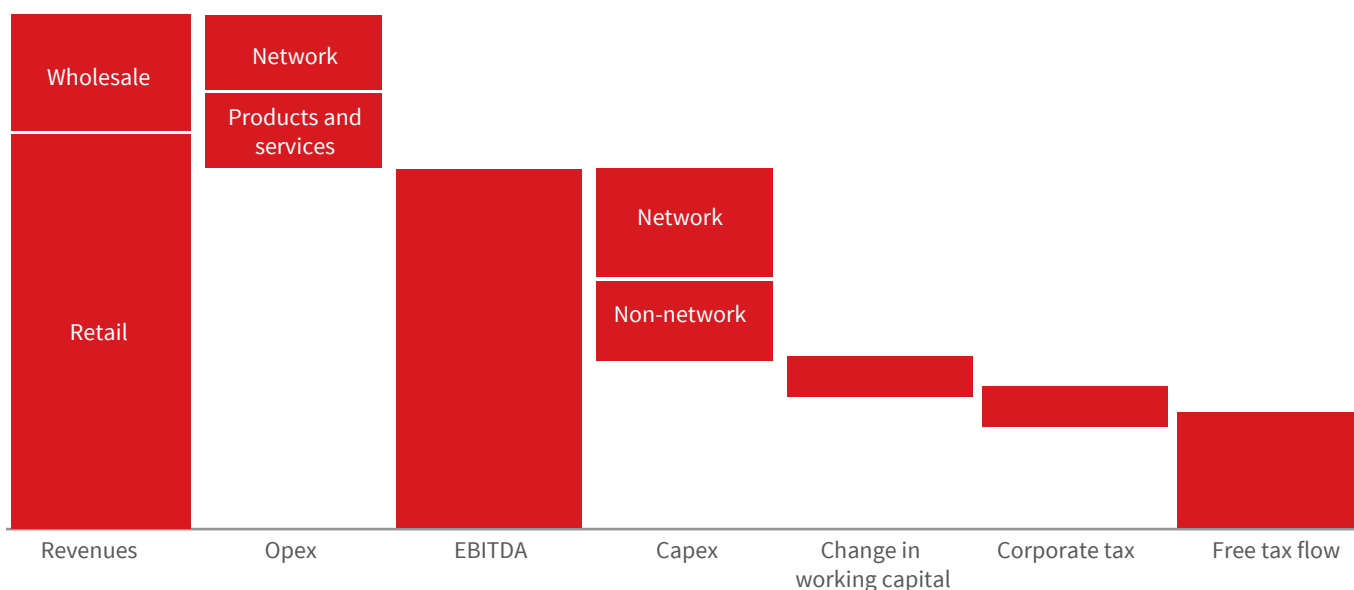


Figure 2: Breakdown of Telecom revenues and expenses

Source: Aude Schoentgen, 2015, *Valuation of telecommunications assets in sub-Saharan Africa*

revenue provides the earnings before Interest, taxes, depreciation and amortisation (EBITDA).

Ethio Telecom’s revenue (in birr) was Br38 billion (US\$1.4 billion) during the 2017/2018 fiscal year. Mobile revenue represents 74% of the total earning followed by the Internet that accounts for 18% of the revenue as shown in Table 1.

Ethio Telecom’s revenue has seen significant improvements in 2015 and 2017, but remains very low compared to the speed of network expansion and the number of subscribers.

Ethio Telecom’s EBITDA margin has hovered at about 67% since 2016. Therefore, in 2017, the EBITDA was about US\$938 million. Once the EBITDA is calculated, it is important to subtract the capital expenditure (capex), tax and change in working capital to arrive at an important profitability figure – the free cash flow (FCF).

The capex refers to capital expenditure on tangible and non-tangible assets, which are usually divided into ‘network’ and ‘non-network.’ The ‘network’ part includes all infrastructure development and upgrades¹⁸. In the case of Ethio Telecom, the infrastructure development and upgrades have been achieved through supplier credit debt; therefore, the annual

debt servicing and repayments need to be subtracted from the EBITDA.

The ‘non-network’ part mainly includes licences and IT – information technology for accounting, reporting and billing. This figure is generally low for Ethio Telecom. The change in working capital is the difference between current assets and current liabilities. The calculation of EBITDA minus capex, minus the change in working capital (receivables and payables), minus corporate taxes, gives the free cash flow (FCF).

The FCF is a measure of the actual financial performance of an operator and can be used to value the assets of the company. The absence of data on the network and non-network capex, changes in working capital and tax paid means an independent calculation of the FCF is not possible. The high annual debt payment and servicing, as well as the enormous depreciation and amortisation costs of aging equipment, implies that Ethio Telecom’s FCF is probably very low. Indeed, the FCF is the most important figure that the Ethio Telecom needs to report to parliament and the public. Reporting annual revenue is meaningless and misleading, especially during the valuation of the incumbent.

18 Schoentgen A (2015) Valuation of telecommunications assets in sub-Saharan Africa. PhD Thesis, Télécom ParisTech, Economics and Finance. <https://pastel.archives-ouvertes.fr/tel-01502810/document>

2.3 THE CONSEQUENCES OF PUBLIC MONOPOLY ON TELECOM DEVELOPMENT IN ETHIOPIA – A CROSS-COUNTRY COMPARISON

The ICT sector is no longer a narrow sectoral issue, but a national priority that casts policy shadows across the whole economy and society. Ethiopia is one of the last countries in the world to have a monopoly national telecommunications operator. With the liberalisation of the Myanmar market five years ago, only Cuba, Eritrea and Ethiopia have not implemented the first round reforms undertaken by other African countries from the 1990s.

Ethiopia's insistence on a monopoly telecom regime did not only reduce the financial gain that it derives from the sector, but has been one of the main reasons for the country falling behind all other countries in terms of its ICT sector development. Ethiopia is lagging far behind China, the country it tries to emulate. It has also not been able to catch up with Africa's most populated nations such as Egypt and Nigeria. Its neighbours Kenya and Sudan also have the highest ICT penetration among countries in Africa. Furthermore, Ethiopia has been

unable to meet the penetration of Mali and Rwanda, the two landlocked countries with comparable GDPs per capita. While the number of subscribers has increased in recent years, access has not translated into the improved effectiveness and efficiency of the incumbent.

- The ITU ICT Development Index (IDI) of 2017: This development index ranks Ethiopia at 170th, far below Mali and Rwanda, which are two countries with comparative GDPs to Ethiopia. Nigeria and Sudan's IDI is 1.5 times that of Ethiopia's, while Kenya's IDI is almost double. This implies that the ICT development efforts in Kenya are twice that of Ethiopia. China's development is close to four times that of Ethiopia¹⁹.
- Mobile penetration: Ethiopia's mobile penetration has improved substantially in recent years with SIM card penetration reaching more than 41% of the population. Ethiopia is far behind Africa's most populated countries, such as Egypt and Nigeria, which have introduced competition in the sector. Egypt and Nigeria each have four very active mobile operators. Egypt has Etisalat Misr, Orange Egypt, Telecom Egypt and Vodafone Egypt, while Nigeria has MTN Nigeria, Glo Mobile, Bharti Airtel and 9Mobile (Etisalat).

BOX 2: COMPARING APPLES WITH ORANGES

Ethio Telecom is often compared to MTN of South Africa with regard to the company with the largest subscriber base; but such a publicity comparison can be misleading²⁰.

MTN is a multinational, competitive private operator, while Ethio Telecom remains a national monopoly. MTN operates across three continents covering 217.2 million subscribers in a very competitive environment with a revenue in rands of R133 billion (US\$10.8 billion), while Ethio Telecom's revenue in birr remains at Br38.1 billion (US\$1.4 billion). MTN had a total of 18 931 employees in 24 countries, where Ethio Telecom had 12 228 employees in 2017. When compared by revenue per employee, MTN is five times more efficient than Ethio Telecom.

COMPARING APPLES TO ORANGES: MTN AND ETHIO TELECOM

THEME	ETHIO TELECOM	MTN
Company	National Monopoly	Multinational and competitive
Services	Fixed, Mobile, data	Mobile, data
Customer base	68 million	217.2 million
Revenue	US\$1.38 billion	US\$10.8 billion
Revenue/employee	112 855	570 492

19 International Telecommunications Union (2017) *ICT Development Index, 2017*. <http://www.itu.int/net4/ITU-D/idi/2017/index.html>

20 The Nerve Africa, Ethio Telecom Surpassed MTN to Become Africa's Largest Operator, <https://thenerveafrica.com/13470/ethio-telecom-surpassed-mtn-to-become-africas-largest-operator/>

Table 2: Comparison of ICT growth in Ethiopia with other countries

COUNTRY	ICT DEVELOPMENT INDEX (2017)	MOBILE PENETRATION (2017)	INTERNET PENETRATION (2017)	FIXED BROADBAND PENETRATION (2016)
Kenya	2.91 (138th)	94.3 %	89.4%	0.3
Sudan	2.55 (145th)	70.1%	29.5%	0.1
Egypt	4.63 (103rd)	106%	48%	5.2
Nigeria	2.60 (143rd)	84%	51%	0.01
Mali	2.16 (155th)	127%	65.3%	0.03
Rwanda	2.18 (153rd)	75.5%	33%	0.2
China	5.60 (80th)	107%	55.8%	22.9
Ethiopia	1.50 (170th)	65%	15%	0.6

Source: International Telecommunications Union

Table 3: Comparison of voice quality service in selected African countries

COUNTRY	ASR	ACD IN MINUTES
Ethiopia (Ethio Telecom)	32	3.6
Kenya (Safaricom)	45%	9
Mali (Orange)	53%	5.2
Nigeria (MTN)	48%	7.42
Sudan (Airtel, MTN)	40%	8

Source: Operators, Ethio Telecom

- Internet penetration: The Internet is delivered over the cellular network; therefore, literacy and the number of smartphones indicate the intensity of its use around the world. Ethiopia falls behind the rest of the world because its smartphone penetration is low, partly as a result of their high cost, but also due to lower mobile penetration rates compared to other countries. In 2017, Ethiopia had only 8.9 million mobile broadband subscribers.
- Fixed broadband penetration: Ethiopia fares better than its neighbours when it comes to fixed mobile penetration, but the penetration of fixed broadband network is generally insignificant in Africa. Fixed broadband is an indication of the maturity of the Internet market and especially in terms of its use in industry, government and the private sector. Fixed broadband services that indicate the intensity of network use are below 1% with about 70 000 subscribers²¹. However, this segment is likely see expansion after privatisation, resulting in real economic benefit.
- Quality of service: Data on Ethio Telecom Internet quality is largely unavailable, and especially relating to broadband Internet services. The Ethiopian Internet service is well known for its ongoing unplanned black-outs. A proxy of voice quality of service data shows that the answer-seizure ratio (ASR) that measures call success rates (that is, the percentage of answered telephone calls to the total call volume) was 32% in 2017²². The success of calls is typically subject to congestion, looping, jitter, echo and packet delay. In other countries, the ASR is usually more than 45%. Similarly, the average call duration (ACD), which measures the average length of an answered call made over the network, was 3.2 minutes. Again, this is lower when compared to other countries, which have an average ACD of 4 to 5 minutes.

21 Ethio Telecom, 2018–2019 Strategic Plan

22 Ethio Telecom Business Plan, 2017

2.4. ASSESSING POLICY OUTCOMES: BENCHMARKING ETHIOPIA'S PERFORMANCE AGAINST SELECTED AFRICAN COUNTRIES

A benchmark of Ethiopia's sector performance by the Research ICT Africa indicates that the lack of competition in the Ethiopian telecommunication sector has stifled innovation and the growth of the sector, and restricted investment on network expansion and upgrades. This lack of competition has limited the scope of use, with only 15% of the country's population using the Internet in 2017 (ITU 2017). In the prepaid mobile market, surveys provide the only method for eliciting unbiased and up-to-date penetration and usage levels. Research ICT Africa's nationally representative surveys carried out in 10 African countries between 2016 and 2018 found that there were, on average, two to three duplicate SIMs.

In the absence of household survey data, a comparison of international indices was done to benchmark Ethiopia's ICT sector performance with selected African countries. Ethiopia was ranked 120 out of 139 in the network readiness index (NRI) in 2016²³. The NRI provides a comprehensive measure of ICT sector performance, and comprises four sub-indices including the environmental indicator, which measures the political and regulatory framework and the business and innovation environment. The second sub-index assesses the country's readiness in terms of infrastructure and digital content development, affordability and skills. The third sub-index measures usage, while the fourth sub-index measures impact. Ethiopia only performs better than some of the smallest and least-developed economies in Africa: Uganda (121), Zimbabwe (122), Mozambique (123), Cameroon (124), Tanzania (126), Eswatini (Swaziland) (129) and Madagascar (135). In the ITU ICT Development Index (IDI), Ethiopia performs even more poorly, with a ranking of 170 out of 176 countries. On the GSMA Mobile Connectivity Index, the country scores 37.7 – only 17.7 points above the lowest MCI (0–20).

While such indices might provide an indication of performance in relation to other countries, and even identify some areas of weakness or strength, they cannot

explain the reasons for this. It is impossible therefore, from these indices to specific remedies other than generalised statements of 'best practice'. For example, in the NRI, Ethiopia performs better than Tanzania, despite Tanzania having one of the most competitive markets in the region, which for many years has been effectively regulated and that has higher Internet penetration than other less-developed countries such as Rwanda and Tanzania (RIA 2018).

To better understand this, as well as to identify bottlenecks in the sector and to establish the impact that privatisation of the national telecommunication operator will have on the sector, the results of a benchmarking exercise are provided in the next section. The failure of many reforms in developing economies can be attributed to the lack of institutional endowments to implement reforms and the low levels of human development necessary to exploit the potential of the telecommunication technologies. In the case of Ethiopia, these first round reforms of the telecommunication sector were never implemented. There was no independent authority to regulate the sector, the public utility was never privatised, and the market was not liberalised. The outcomes of these decisions are assessed by benchmarking Ethiopia against Nigeria, a country that also has a large population, as well as some of the better performing African countries with differing market structures, namely, Ghana, Kenya and South Africa. Ethiopia is also benchmarked against countries in the low-income bracket, namely Benin, Rwanda and Tanzania. Finally, Ethiopia is benchmarked against Lesotho, Namibia and Swaziland, which have monopoly or duopoly markets.

As the values for different indicators come from different quantitative and qualitative systems, and often are not reducible to a single figure or value, the concept of a traffic light has been deployed in order to indicate the relative status of the country on a particular indicator (together with a descriptor of the benchmark used to assess the status). The areas requiring policy intervention are then evident at a glance. The colour 'green' is used to indicate a performance that

23 World Economic Forum, Network Readiness Index, <http://reports.weforum.org/global-information-technology-report-2016/networked-readiness-index/>

is better than the benchmark used – a national figure or triangulation of documents, stakeholder interviews and indicators or the benchmark average – on that particular indicator. An ‘amber’ colour is used to signify a performance that is average or not moving swiftly in a negative or positive direction, which will alert policymakers to the need for improvement. A ‘red’ light is used to indicate performance that is below the average score of the benchmarked countries, or that the country is on a downward trend from a once positive position. It identifies an indicator that needs immediate attention and intervention.

The benchmarking exercises use the ITU statistics, which tend to inflate penetration levels in prepaid mobile market primarily due to the use of multiple SIM cards. However, these statistics enable the use of a comparative dataset, as there are no RIA indicators for Ethiopia. For example, the ITU statistics, which use supply-side data counting active SIM cards, show that 162% of South Africans own a mobile phone. This is an indication that some people own more than one phone or own a phone that can accommodate two SIM cards. The RIA After Access Survey 2017 shows that despite the higher penetration levels reported by ITU, only 85% of South Africans own a mobile phone. The recent announcement by Ethio Telecom to redistribute

18 million unused mobile numbers indicates that the actual number of mobile subscribers, Internet users and fixed line connections are very low in Ethiopia – an outcome that is attributed to a lack of competition and which demonstrates that the country does not perform well against any of the benchmarked countries. Ethiopia only performs well in the fixed line indicator against low-income countries, which is evidence that government intervention in the market and the lack of competition have led to undesired outcomes.

The usage indicator measures the consumption of mobile services such as mobile voice and the Internet. It also assesses the intensity of use, an important determinant of digital inequality. The average bandwidth use of the population can be determined by dividing aggregated traffic or bandwidth figures for the country by the size of the population. However, this again masks inequalities in use between high and low Internet users. The average bandwidth for those connected, however, provides some indication of the intensity of use in the country, which is determined by the other indicators assessed here: price, quality of service, and so on. Content is a difficult indicator to assess, due to the global nature of the Internet. Supply-side, big data analysis by global platforms can demonstrate to which sites national traffic is going, but understanding

Table 4: Benchmarking Ethiopia against Ghana, Kenya, Nigeria and South Africa

ACCESS	COUNTRY-LEVEL INDICATOR	TRAFFIC LIGHT	COMPARISON AVERAGE	SOURCE
Mobile phone ownership	60%	●	113%	ITU, 2017
Individual using the Internet	15%	●	33%	ITU, 2017
Landlines per 100 inhabitants	1%	●	2%	ITU, 2017

Table 5: Benchmarking Ethiopia against Benin, Rwanda and Tanzania

ACCESS	COUNTRY-LEVEL INDICATOR	TRAFFIC LIGHT	COMPARISON AVERAGE	SOURCE
Mobile phone ownership	60%	●	73%	ITU, 2017
Individual using the Internet	15%	●	15%	ITU, 2017
Landlines per 100 inhabitants	1%	●	0,2%	ITU, 2017

Table 6: Benchmarking Ethiopia against Lesotho, Namibia and Eswatini (Swaziland)

USAGE	COMPARISON AVERAGE	TRAFFIC LIGHT	COUNTRY-LEVEL INDICATOR	SOURCE
Average revenue per user in USD (blended ARPU) per month	2.38	●	5.48	GSMA, 2018
Facebook penetration	4,2%	●	15,9%	Internet World Stats, 2018

Table 7: Benchmarking Ethiopia against Ghana, Kenya, Nigeria and South Africa

USAGE	COMPARISON AVERAGE	TRAFFIC LIGHT	COUNTRY-LEVEL INDICATOR	SOURCE
Average revenue per user in USD (blended ARPU) per month	2.38	●	4,43	GSMA, 2018
Facebook penetration	4,2%	●	17,7%	Internet World Stats, 2018

the reasons why users go to specific sites can only be ascertained from demand-side data. The extent of local content and more specifically the use made of it are difficult to determine. Although there are limitations to this measure, local content is assessed by the number of Facebook users, since Facebook is largely locally generated content.

Average revenue per user (ARPU) is an important metric for the performance of the mobile telecommunications sector, although careful consideration is required when using this indicator. In mobile voice markets, as they move from inception towards saturation, ARPUs start off high, as high-income early adopters come online, but decrease as the ‘long tail of low-income users’ comes online, and average usage drops accordingly.

With blended ARPU, although voice ARPU comes down, data ARPU goes up as higher-end users’ demand increasingly consumes data-intensive video products. As more users who cannot afford to use data intensively come online, ARPU tends to decline. The other problem with this indicator in prepaid mobile markets is that the measure is not per unique subscriber but per active SIM card. With the phenomenon of multiple SIM-ownership in many markets, ARPU becomes much diluted.

Compared with the other benchmarked countries, Ethiopia’s SIM penetration rates are low although, since the market is at still at early adoption stage, with

only high-income users using the telecommunication services, ARPUs should be high. The benchmarking exercise, however, shows that ARPUs in Ethiopia are even lower than ARPU’s of the small markets in Lesotho, Swaziland and Namibia. This indicates that the monopoly in Ethiopia is not effective and has failed to develop innovative products to generate demand for telecommunication services. This is also evidenced by lower mobile phone penetration and low Internet use.

The effect of high prices on communication service use is also evidenced when Ethiopia is compared to best-performing countries and similar low-income countries. Prices in Ethiopia are higher than the average price of 1GB in the benchmarked countries except in Swaziland, a country that is also running a monopoly. The use of social media in Ethiopia is low compared to all benchmarked countries, further explaining the low ARPU’s in Ethiopia. This is further evidence that prices and competition are critical drivers of communication services, with more competitive markets likely to have higher adoption rates and greater intensity of use of communication services. While privatisation of the national telecommunication market is a significant step in the right direction, there is evidence that opening up the market to competition is necessary to stimulate demand with relevant affordable services and content.

Price serves as a measure of the competitiveness

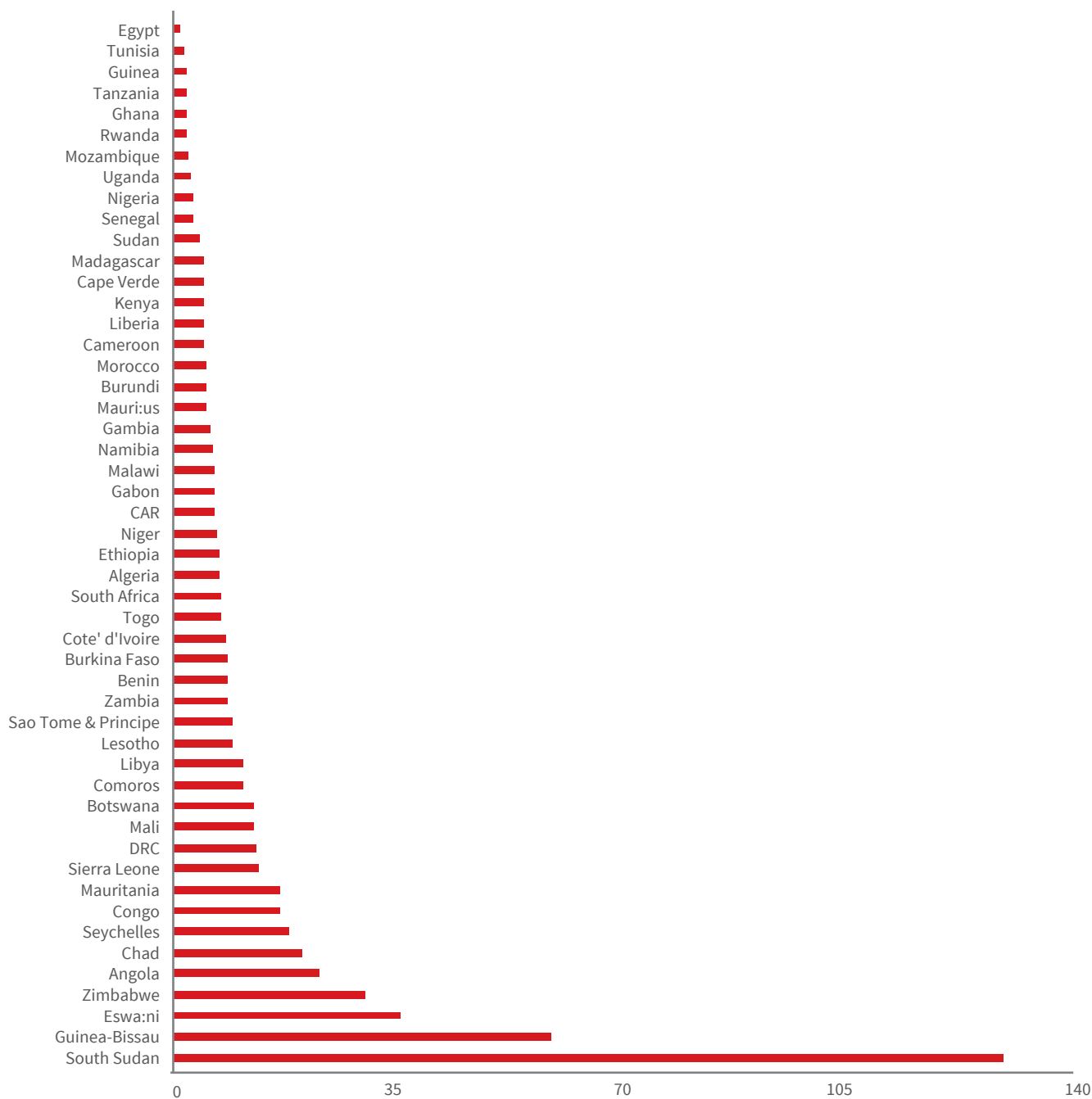


Figure 3: Price for 1GB monthly use of data

Source: RIA African Mobile Pricing Index

of the market and the degree of consumer welfare. If mobile prices are high in comparison to the benchmarked countries, then the causes of these high prices need to be assessed. The mobile voice and SMS market has matured, and prices are steadily declining as consumers demand more Internet services. The mobile data market, on the other hand, is far more volatile. In countries where both voice and data service costs are high, there are usually significant obstacles to increased access and usage.

The Research ICT Africa Mobile Access Pricing (RAMP) data shows that the price of Ethio Telecom’s 1GB monthly prepaid data bundle has remained constant since 2015. Ethiopia’s price of US\$7.25 for a 1GB monthly data bundle is high in comparison to benchmarked countries, except for those countries that have few operators in their markets.

One of the factors contributing to high prices is a lack of competition in the market. The benchmarking exercise shows that the price of 1GB data in Ethiopia is

Table 8: Benchmarking Ethiopia against Ghana, Kenya, Nigeria and South Africa

AFFORDABILITY	COMPARISON AVERAGE	TRAFFIC LIGHT	COUNTRY-LEVEL INDICATOR	SOURCE
Mobile prepaid 1GB basket (USD)	6.05	●	3,93	RIA, 2017

Table 9: Benchmarking Ethiopia against Lesotho, Namibia and Eswantini

AFFORDABILITY	COMPARISON AVERAGE	TRAFFIC LIGHT	COUNTRY-LEVEL INDICATOR	SOURCE
Mobile prepaid 1 GB basket (USD)	6.05	●	10.37	RIA, 2017

higher than the same basket in Lesotho, even though Lesotho has a small population and high roll-out costs for telecommunication infrastructure. However, the price of 1GB data in Ethiopia is lower than the 1GB data price in Eswatini, which is a country that also has only one operator.

In 2017, Ethiopia's gross national income (GNI) per capita was US\$1 730, so the monthly cost for 1GB Internet access was about 5% of the GNI. Ethio Telecom has slashed the broadband price by half in 2018, making it more affordable. However, the final price of US\$3.6 for 1GB data is still higher than the 2% target set by the ITU Broadband Commission²⁴.

Ethiopia can fast-track the development of its telecom infrastructure through privatisation and the introduction of competition to achieve the access and affordability comparable to benchmark countries with more mature markets, such as Ghana, Kenya, Nigeria and South Africa. Privatisation by itself will not be sufficient to achieve network expansion, quality of services and affordability; however, the anticipated competition that it is expected to initiate will lower network costs and improve consumer choices, thereby having a significant impact on the country's social and economic development.

24 Broadband Commission for Sustainable Development, 2025 target for connecting the other half, <https://broadbandcommission.org/Documents/publications/wef2018.pdf>

3

OPPORTUNITIES PRESENTED BY THE PRIVATISATION OF ETHIO TELECOM

With a population of more than 100 million people, and an estimated customer base of 40 million active mobile users, the scope for the expansion of the communications system in Ethiopia is very high. While detractors have compared the privatisation of Ethio Telecom to ‘selling off the cash cow’ or a ‘loss of national identity’, the benefit of privatisation will outweigh the present monopoly communications environment. Privatisation will help the incumbent operator to expand its network and create opportunities for foreign direct investment, as well as serve as a vehicle for attracting new capital and technology into the country. Some of the expected benefits from the privatisation of Ethio Telecom are listed below:

- **Fiscal adjustment:** The withdrawal the government from the financing of the telecommunications sector will undoubtedly reduce the public debt burden. Ethiopia’s overall debt is estimated to be about US\$29 billion in 2018, of which US\$12.1 billion (over a third) has been received from China over the last 15 years. About a fourth of the Chinese loan (US\$3.1 billion) was made to Ethio Telecom²⁵. Privatisation is expected to halt the need for additional supplier credit loans and reduce excessive expenditure by the incumbent, thereby helping to reduce foreign exchange shortages. Privatisation revenues will also help to slow down the public debt growth rate and enlarge the tax base, especially when competition is introduced.
- **Foreign investment:** Privatisation, accompanied by competition, will help Ethiopia’s government to attract foreign investors that can deliver infrastructure

services to improve consumer choices. In addition to significant technological injections, which are likely to improve the breadth and scope of the telecommunications services, the privatisation of the telecommunications sector is expected to generate much interest from non-telecom related companies that rely on efficient broadband access, including those involved in business process outsourcing industries.

- **Managerial quality:** Improvement of management quality will also be a likely outcome of the privatisation process, because a new private company will bring in managers with extensive technical and management experience from around the world. The government of Ethiopia has pursued various options to improve the efficiency of the Ethio Telecom, including making changes to the top management and outsourcing, with limited results. A two-year management contract between France Telecom and the government of Ethiopia, entered into in 2010 to improve and modernise Ethio Telecom’s overall business outlook by implementing a new organisational structure, did not lead to the desired efficiency²⁶. Privatisation is expected to improve the management quality in the incumbent.
- **Workers’ productivity:** Ethio Telecom’s productivity, measured by the revenue per employee, is lower than comparable companies in the region. The revenue per employee of Kenya’s Safaricom is more than three times that of Ethio Telecom’s²⁷. This implies that privatisation can increase productivity, especially if employee ownership of the company is assured

25 Eom J, Brautigam D & Benabdallah L (2018) *The path ahead: The 7th forum on China-Africa cooperation*. <https://static1.squarespace.com/static/5652847de4b033f56d2bdc29/t/5b84311caa4a998051e685e3/1535389980283/Briefing+Paper+1+-+August+2018+-+Final.pdf>

26 Ezega, Ethio Telecom terminates the contract of France Telecom, <https://www.ezega.com/News/NewsDetails/3423/Ethio-Telecom-Terminates-Contract-with-France-Telecom>

27 In 2017 Safaricom sales was US\$2 billion and it had 5434 employees. Ethio Telecom had 1.38 billion in sales and had 12,228 employees

through employee stock ownership plans (ESOPs). The implementation of performance-based pay schemes, wage structure improvements and increased employment flexibility are other avenues to increase productivity, which in turn can lead to higher labour and total factor productivity levels.

- **Pricing and access:** With effective regulation, privatisation can also be used to expand networks and affordable access. If accompanied by increased competition, privatisation can lead to a drop in prices, as well. Although prices may rise if they were previously below cost-recovery level, they are expected to drop with competition.

If not managed appropriately, privatisation could increase corruption and sector dominance by undesirable groups of companies, pushing private rather than public interests. Detractors of privatisation in Ethiopia have consistently argued that the private sector can exploit their monopoly power and ignore the extensive social costs. International experience, however, shows that newer wireless technologies and service obligations through universal access strategy can mitigate the challenges of ‘cherry picking’ by the private sector. Governments can include service obligations in the contract, devise pro-poor initiatives such as free public WiFi or introduce innovative subsidy schemes to give a

greater share of the benefits to the poor. To address the universal access challenges, the government needs to:

- move away from private monopoly of the incumbent to competition
- develop the ongoing broadband plans and strategies concerning coverage and network with the objective to meet the social and economic requirements of the country
- develop alternative universal access strategies and regulations that will provide complementary free public access, for example, public WiFi
- set investment targets to ensure access and provision of services to population groups and geographical areas that have been underserved
- permit micro operators, and regional and community networks, to operate where services have not reached or are not competitive by enabling secondary use of spectrum and cheaper technological solutions than GSM.

The effect that Ethio Telecom’s privatisation may have on employment is another issue that needs consideration. Although the lay-off of low-skilled workers is generally inevitable, good labour policies, social safety nets and employee stock ownership can mitigate the harmful impact that privatisation can have on the workforce.

BOX 3: SEVEN TOUCHSTONES OF ETHIO TELECOM’S PRIVATISATION

Ethio Telecom’s privatisation should be designed to meet the following goals:

- **Fiscal improvements:** Halt the dependence on supplier credit loans, reduce the foreign debt burden, promote access to capital to upgrade the network and increase the government tax base.
- **Efficiency:** Improve the efficiency and the performance of the telecom company by creating management autonomy and improving corporate governance.
- **Competitive ICT ecosystem:** Use privatisation to build a highly competitive telecom market and ICT ecosystem that drives the local ICT sector, youth employment and technology transfer.
- **Access and affordability:** Use privatisation and its proceeds to increase access to affordable universal broadband services for all, which will have a snowball effect on competitiveness in other sectors.
- **Workers productivity, quality of service and innovation:** Leverage privatisation to improve quality of service to consumers and to introduce new services and innovative technologies.
- **National security and privacy of citizens:** Use privatisation as a means to help safeguard national security and uphold the privacy of citizens.
- **Participation:** Encourage the Ethiopian people to become more involved and to play a bigger role in the ownership and management of the telecom business in the country.

4

PRECONDITIONS AND DETERMINATES OF PRIVATISATION

Experience from around the world shows that a series of activities often accompanies an announcement to privatise a national telecom operator. Pre-conditions, especially sector law, a regulatory framework and an appropriate privatisation process are essential for achieving a positive impact. The main ingredients of successful privatisation include:

- ongoing communication of the objectives and the process of privatisation to ensure that it is transparent and accountable to members of the public, the private sector and the Ethio Telecom employees
- putting in place complementary policies and laws to drive the privatisation process and liberalisation of the sector
- restructuring the telecommunications company
- gradually introducing competition into different segments of the telecommunications market
- establishing an independent regulatory agency and building regulatory capacity for the regulator and decision makers.

4.1. COMMUNICATION AND TRANSPARENCY

For the privatisation programme to be sustainable, it needs to be correctly understood by all. Communication and stakeholder engagement at the beginning of the privatisation and implementation stage is crucial to ensure that the general public and all other stakeholders are aware of the objectives and the stated outcomes. The government needs to make substantial efforts to engage members of the public, various political parties, employees, business leaders, potential investors and consumers about the privatisation objectives and process. A successful privatisation process will require that the government:

- identify and communicate the goals that it wishes to pursue through the privatisation process, including universal access, reduction of debt, quality of service, innovation and technology
- inform and engage with the members of the public and employees on employment concerns, investment of privatisation proceeds, regulation and ongoing sector reform.

Transparency in the privatisation process and accountability of the market valuation are also essential because privatisation is generally prone to various mishaps ranging from manipulation by extractive political institutions and elites to corruption. This requirement implies that communication should not be something added on, but rather a fundamental aspect of the process that necessitates careful and thorough analysis, as well as ongoing assessment of the implications of the messages on the different stakeholders²⁸.

4.2. ESTABLISHING COMPLEMENTARY POLICIES THAT SUPPORT PRIVATISATION

The privatisation of Ethio Telecom is expected to be one of the most significant privatisation initiatives undertaken by the government. The importance of telecommunication for economic and social development makes the sector and the privatisation process highly significant. Therefore, assessment of the following laws that affect privatisation will be essential.

I) SECTOR LAW THAT PAVES THE DIRECTION OF TELECOMMUNICATIONS IN THE FUTURE

Ethiopia initiated telecom laws with the establishment of a sector regulator, the Ethiopian Telecommunications

28 Calabrese D (2008) *Strategic communication for privatization, public-private partnerships, and private participation in infrastructure projects (English)*. World Bank Working Paper No. 139. Washington, DC: World Bank. <http://documents.worldbank.org/curated/en/824981468150316436/Strategic-communication-for-privatization-public-private-partnerships-and-private-participation-in-infrastructure-projects>

Agency (ETA), through Proclamation 49/1996, and a commercial entity, the Ethiopian Telecommunications Corporation (ETC), which was later rebranded as Ethio Telecom through Regulation 10/1996. However, the government reversed the proclamation with the establishment of the Ministry of Communications and Information Technology (MCIT) in 2010, which absorbed the regulator as one of its departments. The closing of the MCIT in 2018 led to a sectoral policy, legal, regulatory and institutional vacuum.

With ICT no longer merely a sector issue, but rather one that cuts across the economy and society, and with the rest of the world planning for the Fourth Industrial Revolution, it is important to begin the privatisation process within the context of a clear vision expressed in a digital policy for the country, which will include the establishment of sector law and the communication sector regulator.

The sector law, among others, will provide the rules that govern the following:

- The establishment of a national regulatory authority, including the institutional arrangements between the state, the national regulatory authority (NRA), and industry and parliament if they are to have selection powers or functions of the leadership and oversight relating to the institution's performance
- The processes of appointment and removal of the decision makers, regardless of whether they constitute a board or a council, work permanently or part-time, or who they account to and how they do this
- The duties, functions, governance, management, staffing, financing, accounting and reporting that can be used as the basis of the institutional design
- The regulation of the communications services in accordance with policies and laws including licencing, licence categories, ownership and obligations, licence fees, data protection and the obligation to provide essential services such as emergency services
- Economic regulation including the introduction of fair competition in different segments, interconnection and access, and prevention of dominance
- The procedures regarding tariffs and their approval, as well as ensuring cost-based interconnection and termination rates
- Access agreements and access to electronic networks
- The sharing of co-locations and infrastructure
- The assignment and management of the radio frequency spectrum

- Numbering and other resources
- Regulation of the postal services
- Technical standards and type approval rules on equipment and appliance
- The regulation of content services
- The regulation of emerging IT issues
- Consumer protection
- Universal access to broadband services
- Dispute resolution for electronic communication
- Electronic monitoring
- Legal provision for dealing with offences
- Other Ethiopian issues such as right of way, unbundling, and so on.

The sector policy and law need to include the broadcasting and the postal sector regulatory issues. The core themes that need to be covered in broadcast regulation include:

- the licensing and registration of public service, community, subscription and commercial broadcaster
- the competition and the marketplace
- signal distribution
- broadcast frequency planning and allocation
- the role of community and commercial broadcasters
- ownership and control
- accuracy, authenticity, objectivity and fairness in broadcasting
- decency and good taste, law and order, morality and social aspects in broadcasting
- consumer protection and programming for children
- mechanisms and systems to promote internal and external diversity
- political programming
- advertising
- the film and music industries
- station identification and monitoring
- broadcasting human resources development
- promoting a safe online media environment including countering false information
- the roles and obligations of the public broadcasting operators
- a governance framework for the public broadcasting operators
- funding, audits and annual reports of the public broadcasting operator
- the exemption and liability of the public broadcasting operator.

In the postal sector, the law needs to cover the following aspects:

- Licencing of postal services including the licence categories
- Management of postal codes and an address database
- Provision of financial services
- Integrity and confidentiality of correspondence
- Postal tariffs, fees and philatelic materials
- Prohibited postal articles
- Liability for lost or damaged postal articles
- Roles and obligations of the postal operator
- A governance framework
- Funding, audits and annual reports of the postal operator
- The exemption and liability of postal operator.

II) CAPITAL MARKET LAW

Ethiopia does not have a well-developed capital market to transact stocks (equity) and bonds (debt instruments) in the secondary markets. The development of the capital market is an essential ingredient in the privatisation process. To date, the privatisation process in Ethiopia has been conducted in the form of 'private placement' to the highest bidder, with limited information being available to the public. A law governing the capital market and the development of a capital market are essential.

III) REVISION OF THE COMMERCIAL CODE

Ethiopia's Commercial Code of 1960, which provides the underlying regulations for companies, may also have to be revisited to ensure that the private telecommunications company has strong corporate governance and meets obligations such as reporting and auditing requirements as a shareholding company. Ethiopian company law does not have adequate legislative provisions on governance issues related to the separation of supervision and management responsibilities, and on the composition, independence and remuneration of the board of directors in share companies²⁹. Furthermore, there is a need for rules to govern both foreign and local investors to ensure that deceitful

individuals do not use the privatisation process as a cover for hiding their corrupt and unethical practices.

4.3. THE RESTRUCTURING OF ETHIO TELECOM

Restructuring of Ethio Telecom before privatisation will also be an essential step to ensure that the incumbent adheres to private sector management principles, values, and practices. The restructuring will help with attaining:

- an improved organisation with better decision-making processes
- accountability and performance of the employees, especially in delivering the quality of services
- workflow streamlining and innovation to increase the revenue per employee.

An effective restructuring programme will also increase the likelihood of ensuring a successful privatisation process in terms of the value realised and post-privatisation performance.

4.4. A GRADUAL INTRODUCTION OF COMPETITION

Telecommunications development across the world has seen two significant approaches, with one favouring a rapid and comprehensive reform process, while the other supports a more gradual process where privatisation is accompanied by a gradual introduction of competition. Some countries that have opted for privatisation without liberalisation have created private monopolies that did not improve the sector further. As one of the first African countries to do so in 1996, with the partial privatisation of Telkom, South Africa is a case in point. The short-term gains from extending the monopoly for five years to maximise strategic equity partner pricing cost the country dearly in the longer term with high communication prices and limited network extension. With the penalties for not meeting roll-out obligations set at less than the cost of doing business, the rapacious dominant strategic equity partner SBS further disconnected 1.5 million lines for non-payment during

29 Tura HA (2012) *Overview of corporate governance in Ethiopia: The role, composition and remuneration of boards of directors in share companies*. <https://chilot.files.wordpress.com/2012/10/corporate-governance-in-ethiopia.pdf>

Table 10: Short- and medium-term competition targets

SERVICES	CURRENT	POTENTIAL FOR COMPETITION	SCHEDULE
Internet and data	Monopoly	Yes	Short term
Value-added services	Monopoly	Yes	Short term
Fixed services	Monopoly	Yes	Medium term
Mobile services	Monopoly	Yes	Short term
Last mile and local network services	Monopoly	Yes	short to medium term
National backbone services	Monopoly	Yes	Short to medium term
International gateway	Monopoly	Yes	Short to medium term

their final years, leaving the country at the end of the exclusivity period with fewer people connected than there were at the beginning of the period, and with the bulk of the profits repatriated to the United States³⁰. Further, the anti-competitive culture inculcated in the dominant operator meant that the incumbent company was left facing the biggest penalty at that time from the Competition Commission, and having to implement behavioural remedies that resulted in functional separation. It is therefore essential to introduce competition into the sector along with the privatisation process and, with the correct choice of strategic equity partner, to ensure that Ethio Telecom has the strategic resources, human resources and technological resources to compete fairly and effectively.

Telecom systems include underlying physical backbone networks, transmission networks such as wireless services, and applications such as over-the-top services. Some of these segments can be opened for competition in the short term, while others can be opened up more gradually. Therefore, the privatisation process needs to be accompanied by a schedule for opening up these different aspects of telecommunications services.

4.5. REGULATION AND REGULATORY CAPACITY BUILDING

Effective privatisation and the introduction of competition require a robust regulatory environment. A strong and independent national regulatory agency with a

transparent and accountable framework can help to address the negative impact of corruption during the privatisation process. Regulation can also serve as a proxy for competition until the market is fully liberalised. Other national security concerns, such as the amount of foreign involvement, can be addressed through regulation too. Furthermore, regulation can also address technical standards and interoperability aspects, as well as the expansion of services to underserved areas.

Regulators need to be independent of both state and industry in order to implement policies and laws effectively. For this reason, the leadership should be appointed through an appropriate committee of Parliament, to whom they should account and who should have oversight of their performance (though a specialised parliamentary committee). In the absence of expertise in this area, the first council of the regulator could be appointed by a committee of public nominated experts, to ensure that it reflects the necessary range of technical, financial and technological expertise, and possibly headed by a judge or other independent official. This regulatory agency should be bound by administrative practices of transparency and accountability. The council members should be competent, non-political and professional, as well as highly experienced experts in the relevant economic, accounting, engineering and legal principles, and also familiar with good telecommunication regulatory practices, cyber policy and governance.

30 Gillwald A (2005) Good intentions, poor outcomes: Telecommunications reform in South Africa. *Telecommunications Policy*, Elsevier 29(7): 469-491

Ethiopia needs to establish an independent body to regulate the converging telecommunication and broadcasting sectors that underlie the Internet, which is governed at the global level. The postal sector, as another form of communications infrastructure, is often included in the communication regulator, and if its functions are integrated into modern communications systems, it can perform an important strategic function in a modern, digital economy. The new regulator should operate within a statutory framework that fosters competition. It should be subject to substantive and procedural requirements that ensure integrity, independence, transparency, and accountability. The sector law, as discussed above, should define the regulatory frameworks, including the institutional relationship between the state and specialised agencies established through delegated state powers, which include the independence, legitimacy, capacity and competencies required of the leadership and staff in the institution as a whole, as well as governance and source of funding. With regards to the powers of the national regulatory agency, the law must:

- provide the regulatory body with the power to regulate the sector effectively, such as national jurisdiction

- over the licensing, operations and rights of way
- define the institutional arrangements and powers between the state, parliament and the regulatory body
- specify the processes required to appoint and remove the leadership and management of the organisation within a flexible institutional framework adaptive to the changing situation
- provide the regulatory body with the power to issue licenses, regulate tariffs, assign spectrum and numbers, hear complaints, adjudicate interconnect problems, define and monitor universal service, enforce standards, and so on.
- provide for the autonomous funding and staffing of the regulatory body
- provide the regulatory body with the power to impose penalties for violations
- provide the regulatory body with the power to implement and enforce national cybersecurity/crime laws and dispense justice
- repeal old Acts that have been in force, such as Proclamation 49/1996, which reference any of these issues.

Table 11: Scope of Regulation in Communications, Postal and IT Sectors

TELECOMMUNICATIONS	POSTAL SECTOR	BROADCASTING
<p>Technical regulation</p> <ul style="list-style-type: none"> • Numbering • Quality of service • Network and equipment type Approvals • Co-location • Right-of-way • Spectrum management 	<p>Technical regulation</p> <ul style="list-style-type: none"> • Postal code system • Quality of service • Addressing systems 	<p>Technical regulation</p> <ul style="list-style-type: none"> • Spectrum allocation • Signal distribution • Logical channel numbering • Type approval of broadcasting equipment • Technical rules of broadcasting
<p>Economic, competition and consumer regulation</p> <ul style="list-style-type: none"> • Licensing • Interconnection/termination rates • Tariffs • Consumer affairs • Public safety • National emergency and security • Dispute resolution • Universal access (fund, policy, and strategy) • Statistics and knowledge • Market review, dominance, remedies (separation, wholesale regulation) 	<p>Economic and consumer regulation</p> <ul style="list-style-type: none"> Licensing Tariffs Consumer affairs Dispute resolution Universal service (fund, policy, and strategy) Statistics and knowledge 	<p>Economic and consumer regulation</p> <ul style="list-style-type: none"> • Licensing • Tariffs • Consumer protection and empowerment • Monitoring compliance with licence and content requirements • Capacity development, • Children and public safety • Statistics and knowledge • Market review, ownership, control and dominance remedies

The experiences of regulators in other countries, such as Egypt’s National Telecommunications Regulatory Authority (NTRA)³¹ and Nigeria’s National Communications Commission (NCC)³², suggest that a typical regulatory agency for a large country like Ethiopia can have over 500 staff. Ethiopia needs to establish the regulatory agency with at least 100 core experts at the beginning. The regulator needs to have a complement of staff comprised of engineers, economists, lawyers, statisticians, and social and development scientists. From the start, areas of focus must include remuneration levels that guarantee recruitment and retention of high-calibre professionals, as well as ongoing skills and capacity-building programmes.

The regulation of the telecommunications industry involves a wide range of aspects from spectrum management to the regulation of consumer affairs and tariffs. Postal regulation involves the postal coding and addressing systems, quality of services, setting tariffs and ensuring consumer protection. The regulation of the broadcasting sector will also ensure that the content

is of a sufficiently high quality and standard, and that it serves to further the interests of cultural cohesion, diversity, and social and economic development.

The range of regulation in the sector is shown in Table 11.

The IT sector is unique in that the regulatory issues do not fall within the realm of technical and economic regulation, but instead involve a wide range of organisations and stakeholders. This provides an environment that is conducive to collaborative regulation involving competent ministries rather than regulation by the NRA.

The different aspects of the ICT sector, including over-the-top, Internet of things, cloud computing, machine to machine communication, Industry 4.0 (robotics, artificial intelligence) and blockchain, involve a wide range of stakeholders outside the confines of the communication, postal and broadcasting regulator. Therefore, it is essential to involve competent ministries such as the Ministry of Industry (in the case of Industry 4.0), the Ministry of Science and Technology (in the case

Table 12: Collaborative regulation in the IT sector

ICT ISSUES	EXAMPLES OF CONCERNED STAKEHOLDERS
<ul style="list-style-type: none"> • Digital signatures • Cybersecurity • Data protection 	<ul style="list-style-type: none"> • Justice, Law and Order Sector • (e.g. Ministry of Peace) • National Regulatory Authority • Academia and research
<ul style="list-style-type: none"> • Green technologies 	<ul style="list-style-type: none"> • Ministry of Science, Technology and Innovation • National Environmental Protection • National Regulatory Authority • Academia and research
<ul style="list-style-type: none"> • Duties and taxes 	<ul style="list-style-type: none"> • Ministry of Finance and Economic Development • Ministry of Revenue • National Regulatory Authority • Academia and research
<ul style="list-style-type: none"> • New areas of governance (technologies operating remotely outside of national sovereign jurisdictions, across borders, global platforms) • Over-the-top • Internet of things • Machine to machine communication • Industry 4.0 (robotics, artificial intelligence) • Blockchain 	<ul style="list-style-type: none"> • Ministry of Trade and Industry • Ministry of Finance and Economic Development • Ministry of Science, Technology and Innovation • National Regulatory Authority • Academia and research

31 See <http://www.tra.gov.eg/en/SitePages/default.aspx>

32 See <https://www.ncc.gov.ng/>

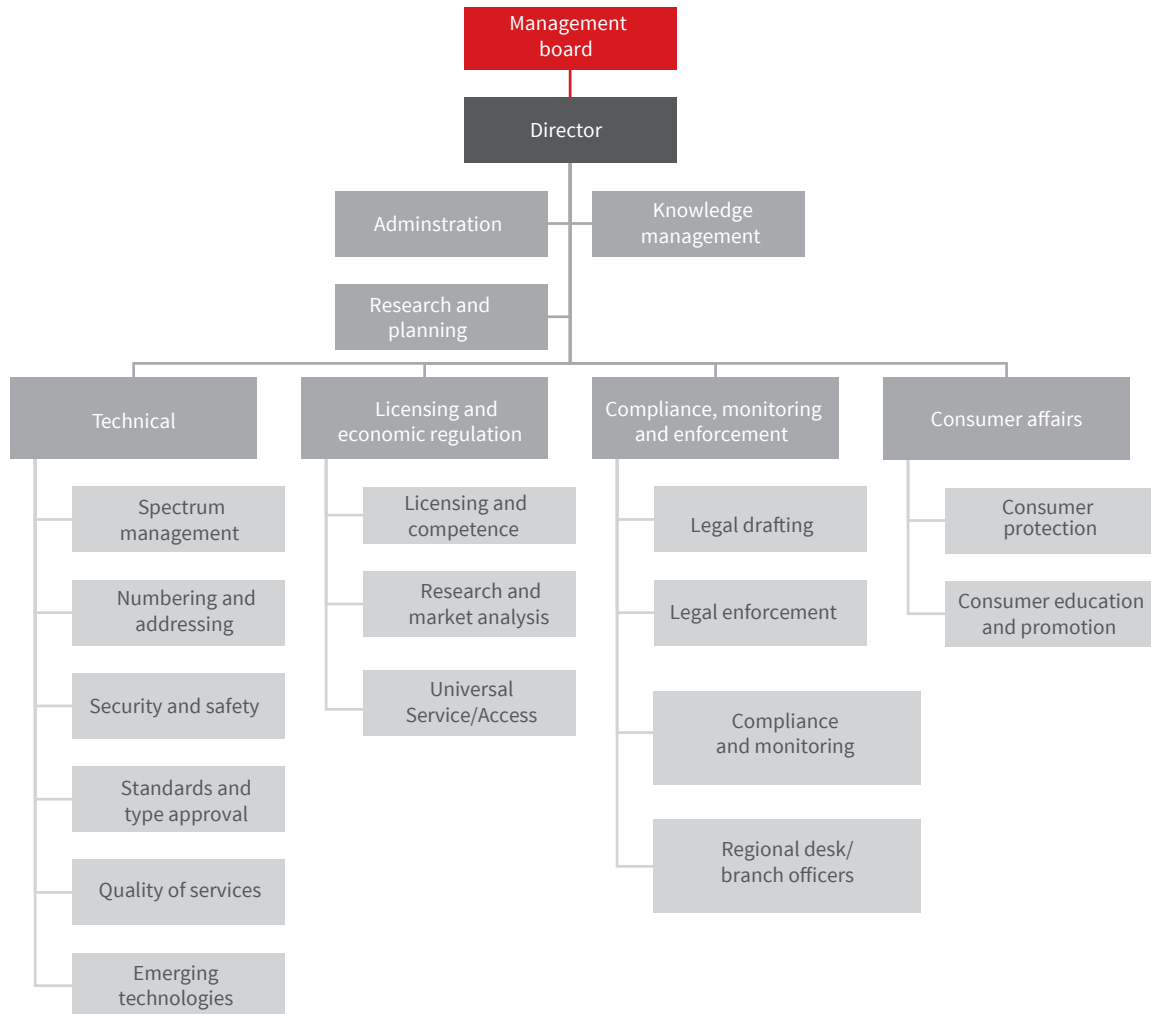


Figure 4: A Typical Structure of a Regulatory Body

of innovation) and the Justice, Law and Order Sector (JLOS) (in the case of data protection and cybersecurity). This will help to ensure that the cross-cutting nature of the ICT sector is preserved from the beginning to avoid conflicts of interest that often stifle ICT sector development in African countries. Table 12 shows the collaborative regulation in the IT sector.

In the beginning, it is important that the NRA establishes four essential divisions:

- **The technical division** will oversee all technical regulation including the management of spectrum, numbers, technical standards, quality of service measurement, including type approvals, and domain names and IP address space.
- **Consumer affairs** will cover, from a consumer perspective, the quality of service of postal, IT and telecommunications services, including customer care and call services, and aspects such as security, confidentiality and prices, and will also handle all consumer issues including consumer protection and complaint handling.
- **The legal, licence, compliance, monitoring and enforcement division** will follow up on the implementation of all regulations, as well as coordinate

Table 13: The Main preconditions and requirements for privatisation

NECESSARY PRECONDITION	REQUIREMENTS
Strong public communication of the objectives	Communication of the objectives and privatisation process using evidence-based communication and consultation
Complementary national digital policy and laws	An ICT sector policy that promotes convergence and a competitive information and communication technology ecosystem A well drafted and publicly discussed sector law, a well-functioning capital market, revisiting company law and other laws for the protection of consumer and employee rights
Restructuring of the incumbent	A strong institution increases sales proceeds and helps the transition from monopoly to privation
Introduction of competition and liberalisation of the sector	A timetable for competition in various layers
Developing a regulatory framework	Enacting the sector law, establishing a regulatory body and building capacity

with other divisions and agencies, and ensure that the required regulations and standards are implemented nationwide.

- **The economics and markets/competition division** will supervise the implementation of tariffs, inter-connections and related issues. This division will deliberate on the aspects of network expansion, including universal access and coverage. It will also be responsible for doing sector research and analysis, as well as undertaking reviews of the markets in order to determine dominance and to propose remedies.

Figure 4 illustrates the typical structure of a regulatory body.

Capacity building is critical to the success of the new regulatory body. The absence of such capacity in Ethiopia means the new agency may have to engage international experts or subcontract some of its functions, for example, monitoring of performance.

Table 13 summarises the main preconditions for successful privatisation.

5

SEQUENCING PRIVATISATION, REGULATION AND COMPETITION

Proper sequencing of regulation, privatisation and competition is an essential aspect in the reform of the Ethiopian communications sector. The announcement for the privatisation of Ethio Telecom needs to be accompanied with a careful sequencing of regulation, competition and privatisation. Experience to date shows that privatisation without a good regulatory institution can simply strengthen a private monopoly, without the public interest imperatives of a public utility. Competition, which potentially could have a negative impact on the price commanded for the incumbent, has been seen to produce positive longer-term impact on consumer welfare³³.

Some countries started the process by granting the privatised telecommunications firm a multi-year exclusivity period to operate as a monopoly for a number of years (see note 33 above on South Africa for the negative consequences of this). The exclusivity period is typically granted to increase the sale price of the firm and thus government revenues. Experience suggests that granting a long exclusivity period can stifle innovation and access.

Privatisation, with a shorter or no exclusivity period in some contestable segments, such as mobile cellular operation and Internet services provision, can help the operator and the market to be more dynamic. This means that the privatisation process should be accompanied by a restructuring of the market in order to unbundle the local loop and long-distance in the fixed network from the mobile and value-added services. Enabling mobile operators to build out their own backhaul networks will also contribute to broadband network extension.

This next section presents three scenarios for sequencing the privatisation process.

SCENARIO 1:

ESTABLISH SECTOR LAW → RESTRUCTURE → PRIVATISE → REGULATE

The announcement of the privatisation of Ethio Telecom is accompanied by the government creating a sector law and the sale of the incumbent with some restructuring. With the recent appointment of a new chief executive officer for the incumbent and the subsequent internal restructuring of Ethio Telecom, the government appears to favour a light restructuring before privatisation and with the introduction of regulation. This scenario involves:

- drafting a sector law;
- restructuring the incumbent to make it more efficient and effective and also to increase its sales proceeds;
- responding to customers' needs by improving the quality of services;
- introducing new services;
- developing the skills and productivity of Ethio Telecom employees;
- implementing the valuation and privatisation of the incumbent operator; and
- establishing a regulator to monitor the privatised company.

While this scenario looks appealing to the current management of the Ethio Telecom and other critics of competition, the lack of regulatory capacity and the absence of a timetable and prospect for liberalisation will likely lead to the replacement of a public monopoly with a private monopoly. There will be limited gain in terms of investment and services expansion, operational efficiency, quality of service, and pricing and universal access, as strategic equity partners seek to maximise

33 Wallsten S (2002) *Does sequencing matter? Regulation and privatisation in telecommunications reform*. World Bank Policy Research Working Paper No. 2817. Washington, DC: World Bank. <https://elibrary.worldbank.org/doi/pdf/10.1596/1813-9450-2817>

the returns on their investments prior to competition. Studies show that the restructuring of the sector and the establishment of a regulatory body before privatisation have been positively correlated with successful privatisation in the telecommunications sector³⁴.

SCENARIO 2:
ESTABLISH SECTOR LAW → SET UP A
REGULATORY INSTITUTION → RESTRUCTURE
→ PRIVATISE

This scenario advocates for building a capable regulatory institution before privatisation. The core tasks under this model include:

- enacting a telecommunication law that paves the way for liberalisation and establishing an independent regulator
- establishing a competent regulatory body through recruitment of highly skilled staff, training, and twinning with other regulatory institutions early on
- capacity building for policymakers
- restructuring Ethio Telecom to establish an entrepreneurial management method and good corporate governance, and to make it more efficient and effective
- improving customer services, employee skills and productivity
- privatising to attract new capital, obtain external skills/technology transfer and reduce public debt.

The establishment of a regulatory body before privatisation will help the regulator to establish the rules for the privatised company. It also creates opportunities for learning the techniques of regulation from peer regulators and through other capacity-building mechanisms. As, in many cases, regulation is a learning process, privatising in a situation of an imperfectly implemented regulatory framework will prevail at the beginning, but

thereafter the absence of a timetable for the competition will make the privatisation process ineffective.

SCENARIO 3:
ESTABLISH SECTOR LAW → BUILD
REGULATORY INSTITUTION RESTRUCTURE →
PRIVATISE → INTRODUCE COMPETITION

The third and most ideal scenario involves the establishment of a sector law and the building of a regulatory body, while at the same time restructuring Ethio Telecom, followed by privatisation and the gradual introduction of competition especially in contestable segments such as the provision of mobile and Internet services. This model begins with the development of laws that set the stage for possible market entry and competition. The core activities under this model include:

- developing a legal framework for liberalisation of the telecommunications sector and the establishment of an independent regulatory institution
- defining the detailed framework for industry structure to open different segments such as value-added services, Internet services, mobile services and so on, for competition
- restructuring Ethio Telecom to allow an entrepreneurial management method, good corporate governance for greater efficiency and effectiveness, and to maximize the value
- improving customer services, employee skills and productivity
- privatising to attract new capital, obtain external skills/technology transfer and reduce public debt
- introducing competition in contestable segments such as mobile, Internet and value-added services and gradually opening up other segments such as local networks and international gateways.

34 Estrin S & Pelletier A (2015) *Privatisation in developing countries: What are the lessons of experience?* https://assets.publishing.service.gov.uk/media/57a08977ed915d3cfd000264/Topic_Guide_Privatisation_Nov.pdf

Table 14: Pros and cons of sequence options

SEQUENCING OPTION	PROS	CONS
Establish sector law à Restructure à Privatise à Regulate	Easy to carry out to reduce public debt and obtain the proceeds from the sale. Appeals to the incumbent	The absence of competition and regulation means the process could potentially lead to a private monopoly.
Establish sector law à Set up regulatory institution à Restructure à Privatise	Ensures the private monopoly is regulated. Ensures a smooth privatisation process.	The absence of competition will likely make the privatisation process ineffective.
Establish sector law à Build regulatory institution à Restructure à Privatise à Introduce competition	Provides opportunities for the development of a comprehensive sector law Improves regulatory capability and independence. Introducing competition will increase access, quality and affordability	The absence of experience in drafting sector law and resistance to competition may make the process protracted.

This model argues that the legal framework and a capable regulatory body should precede the privatisation initiative. This should be carried out in tandem with the restructuring of Ethio Telecom. The laws should be drafted to promote a liberalised communication sector to ensure that competition drives the future of network penetration and access, innovation and service quality, and pricing in this sector.

Table 14 shows the advantages and disadvantages of the different sequence options.

6

STEPS FOR THE PRIVATISATION OF ETHIO TELECOM

The final sale of Ethio Telecom will require establishing a legal framework for privatisation, restructuring the incumbent to increase its sales value, designing the transaction, valuing the assets of the incumbent and developing criteria for tendering. This would then be followed by the execution of the transaction.

6.1. THE DEVELOPMENT OF A TELECOMMUNICATIONS ACT

As discussed above, the sale of Ethio Telecom needs to begin with the development of a legal framework that provides the legal basis for privatisation and further liberalisation of the sector. Among others, the telecommunications law will address the rationale for privatisation covering aspects of private participation, universal access, privacy and security, and affordability. From the privatisation perspective, the law, among others should:

- define the shares, ownership, and classes of shares and rules governing the transfer of assets and liabilities
- define the amount of the golden share to be held by the government
- outline the status of new employees
- identify institutional arrangements and governance processes, including the appointment and competence of the board of directors.

The telecommunications law is also expected to repeal the Council of Ministers Regulation No. 10/1996 that established the Ethiopian Telecom Corporation (ETC), which was later rebranded as Ethio Telecom, and the subsequent Proclamation 49/1996, which expanded the ETC's duties and responsibilities.

6.2. THE RESTRUCTURING OF ETHIO TELECOM

Restructuring as discussed above is an essential prerequisite of the privatisation process. Restructuring involves reorganisation of the incumbent using modern management techniques and improvement of its

decision-making process in preparation for private shareholding and for competition. It would also mean the introduction of accountability, performance and operating procedures associated with private sector efficiency, as well as good governance. As part of the restructuring process, the incumbent can also align its workforce to operate under and adhere to the same labour laws as the private sector. This can be achieved by involving external advisors or consultants, or by working directly with peer private sector companies.

6.3. THE VALUATION OF ETHIO TELECOM

The restructuring and the definition of criteria for the bids should be preceded by a proper valuation of Ethio Telecom's assets. Valuation has been approached in many different ways in previous telecom privatisation processes carried out in various countries. A sound approach that combines systematic analysis and multiple methods is advisable to optimise the market value of Ethio Telecom. Methods that could be used for valuation include the following:

- **Discounted cash flow (DCF) method:** This method estimates operating costs, revenues, and growth. The method is based on the time value of money. It assumes that the value of an asset is equal to the sum of its future free cash flows (FCF) to be generated by the asset and discounted at an adequate rate that corresponds to the cost of capital. This method is widely used in the valuation of telecom companies in Africa. Typically, a DCF valuation is conducted over the licence duration, and the enterprise value (EV) is set for negotiation with a potential bidder, who will pay an acquisition premium. The acquisition premium is an additional amount the investing operator is willing to pay over the enterprise value to ensure that it will win the bid.
- **Relative valuation method:** This method uses a benchmark of similar assets that were sold recently to calculate the ratios of business selling prices against many financial performance metrics. The

ratios of selling prices to financial performance figures are known as valuation multiples. Such multiples include PE (price-to-earnings), price-to-free cash flow, enterprise value to earnings before interest, tax, depreciation and amortisation, and price-to-cash flow. Proportional analyses can be done by comparing the value of Ethio Telecom to other similar companies. The sale of some African telecom operators over the last decade can be used as a guide, but it may be difficult to find companies that have a similar customer base to that of Ethio Telecom in 2019.

- **Balance sheet method:** This method values the business according to the replacement value of the network assets. The balance sheet method is often used to determine the minimum price that the seller is willing to accept and serves as the rough guide to the value of the business. This method does not evaluate the earning potential and is therefore seldom used for valuing a telecommunications company.

Experience shows that different asset valuation methods result in significantly different valuation figures for the same assets. It is therefore advisable to combine multiple methods of valuation to ensure that the actual market value is not set too high to deter investors and too low to reduce the social and economic gains of privatisation. Under-pricing of Ethio Telecom will erode the capital base and the capacity of a business to remain financially viable, while over-pricing will result in monopoly rents being extracted. Experiences in countries such as Turkey suggest that valuation should be arrived by combining at least three internationally recognised methods³⁵.

This implies that the government needs to collect real-world data to ensure that the valuation is fair both for the investors and for the country. In practice, the valuation level acceptable in the marketplace will depend on how the regulatory reforms and the restructuring of Ethio Telecom have been carried out. In a country with as large a communications deficit as Ethiopia, demand side valuation of network investments, spectrum

valuation and consumer welfare will remain important public interest policy considerations.

6.4. DESIGN OF TRANSACTIONS

Various methods can be used to dispose of state assets. Methods such as direct sale or tender, private placement, and initial public offering (IPO) have been used to privatise state-owned enterprises in different countries. In some countries, blocks of shares were sold at discounted prices to trade unions and civil servants who deserve restorative justice. The privatisation transaction should not only focus on private placement or direct sale of the incumbent, but should also satisfy sectoral and political goals such as economic improvements in terms of halting the country's dependence on supplier credit, efficiency, and quality of services, access, and affordability.

In the case of Ethiopia, the absence of a capital market and other preconditions makes a direct sale or private placement of Ethio Telecom the most viable option. The direct sale transaction should specify ownership characteristics including foreign ownership shares, the government's share, domestic participation requirements and other possibilities including the participation of banks, technology firms, employees and management. The nature of the transaction and the timetable should also be specified.

6.5. DEFINITION OF CRITERIA FOR ACCEPTABLE BIDS

Once the transaction is approved, the criteria for acceptable bids should be established. The critical considerations for accepting bids should include the following:

- the financial strength of the participant
- the technological and innovation capability including contributions that the investor may bring to the privatised company
- organisational stability and profitability
- advanced management practices in running a large telecom company
- experience with the operation of a

35 OECD (2009) *Privatisation in the 21st Century: Recent Experiences of OECD Countries*. <https://www.oecd.org/daf/ca/corporategovernanceofstate-ownedenterprises/48476423.pdf>

telecommunications company, including acquiring public telecom companies and improving their operation afterwards

- a willingness to commit management efforts, staff and expertise to the privatised company
- capital commitments to expand and upgrade the network
- the price that the bidder is willing to pay for the company.

6.6. THE TRANSACTION

Finally, to complete the transaction, the government needs to issue requests for bids and conclude the transaction. The process involves issuing the bid document with all the necessary guidelines, restrictions and timing, clarifying issues including tariff structure, tax

and repatriation of capital, answering bidders' questions and evaluating the bids. This is a complex process with bankers, investors and operators generally having far more experience than the government. It is therefore vital for ensuring best long-term outcomes that independent expertise or technical assistance is brought on board for the negotiation process with the bidders and the conclusion of the transaction.

Experience indicates that the direct sale of state-owned enterprises often results in mispricing, bidder collusion, abuse of investment incentives and corruption –all of which make bargain hunters the winners in the privatisation process. The government therefore needs to ensure that the valuation and transactions are credible and that the final objectives of privatisation satisfy the desired financial, social and economic goals.

SIX QUESTIONS TO ASK ABOUT THE PRIVATISATION PROCESS:

- Was the legal framework for privatisation in place?
- Did the government reorganise and restructure the incumbent to improve efficiency and effectiveness, and to increase the realised value?
- Were alternative valuation methods used to arrive at a fair value for Ethio Telecom's assets?
- Were future shares for the government, the private sector and other groups such as employees identified?
- Were the criteria established for acceptance of bids?
- Were the necessary bid documents and tendering procedures put in place?

IMPLICATIONS FOR POST-PRIVATISATION AND CONCLUSION

Privatisation in a broader sense should be seen as an ongoing process. Therefore, initiatives that began before privatisation including restructuring and building a competent regulatory body must continue after privatisation. An intensive post-privatisation process is expected to involve a further restructuring of Ethio Telecom and an improvement in corporate governance.

The lack of experience in the privatisation of the telecommunications sector and inadequate capacity to regulate the sector means that the government may have to adopt a managed transition where the regulatory capacity is built, and strong corporate governance of the privatised company is established gradually. Regulation at the beginning has to focus on horizontal and vertical separation of the incumbent network in order to pave the way for market entry of other players, especially in the contestable segments of the market such as Internet service provision and value-added services.

Further, the government may wish to licence a second national operator. This brings the issues of interconnection, pricing and infrastructure sharing forward. It also necessitates regulation of access to the public domain (radio spectrum, land, the right of way, and so on) to ensure that the private sector builds and operates a network industry on a competitive basis. It also involves defining the 'public service' dimension aspect of delivering universal access to broadband services.

Accompanying reforms in the capital market, the strengthening of the rule of law and property rights, reducing transaction costs, and implementing proactive industrial, technological and trade policies will also be essential to sustain the privatisation process and to establish a competitive communication market that drives economic and social development.

CONCLUSION

The announcement of the privatisation of Ethio Telecom has generated much interest and have improved the prospects of a competitive ICT sector in Ethiopia. The privatisation process will not only address the debt burden of the state-owned enterprise, but will also create a dynamic ICT ecosystem, which in turn will create more jobs and innovation.

Privatisation alone is not sufficient to bring about improvements in the telecommunications sector. Experiences from around the world show that a series of activities should accompany the announcement to privatise the incumbent operator. The main ingredients for successful privatisation include:

- ongoing communication of the objectives and the process of privatisation to ensure that it is transparent and accountable to the public, the private sector and the Ethio Telecom employees
- putting complementary policies and a sector law in place to drive the privatisation process and liberalisation of the sector
- restructuring the telecommunications company and market
- establishing an independent regulatory agency with a plan for regulatory capacity building for the staff and decision makers
- introducing competition in the different segments of the telecommunications market
- implementing an innovative valuation process and a proper sequencing of regulation, competition and privatisation, all of which are also important.

8

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